

March 2026



*Corey J Beitler's*

# *"Distelfink Airlines"*

*An Online Aviation Newsletter*

## ***Calibre Wings 1/72 Scale Convair B-58 Hustler***



***Airbus A321LR***

***Bond Bread Famous Airplanes & Aviators Pinback Button Set***

***Corgi 1/72 Scale Carrier Deck Set-F4U-1D Corsair***

***Northrop T-38A Talon***

***Boeing 717-200***

***Amelia Earhart's "Little Red Bus"***

*The die-cast model aircraft manufacturer Calibre Wings recently released this stunning replica of the Convair B-58 Hustler in 1/72 scale. The B-58 has the distinction of being the world's first supersonic bomber, capable of speeds over Mach 2, and is considered one of the iconic American strategic bombers of the Cold War.*

## FROM THE EDITOR'S DESK

### ***B-58 Model, Cochran's T-38, Earhart's Vega, A321LR, Aviation Pinback Buttons***

Greetings Everyone:

Welcome to the March edition of "Distelfink Airlines". I hope everyone has been doing well! The newsletter continues to do well with readership, averaging over 2,000 readers a month from locations worldwide. Recently, the newsletter reached readers in three new locations: Cape Verde (Cabo Verde), American Samoa, and Libya. I am glad to see so many people being brought together by reading about airplanes and aviation in my newsletter!

The featured content for this edition takes on something different with a look at the 1/72 scale die-cast model of the Convair B-58 Hustler from Calibre Wings. This model is a stunning replica of the world's first supersonic bomber, capable of speeds over Mach 2, and one of the most iconic American strategic bombers of the Cold War. This model was announced a few years ago and limited to 1,500 units; it sold out almost immediately. After some production delays, the model was finally released early this year. This exceptional replica of the B-58 Hustler features a significant amount of die-cast construction, optional position landing gear, opening cockpits, a metal display stand, and much more. The feature looks at the model in detail and also highlights a little bit about the B-58 Hustler's operational history. Also, as part of this feature, thanks to longtime friend and reader of Distelfink Airlines, Fast Eddie Leuter, there are some pictures of the real B-58 Hustler "Cowtown Hustler" on display in the National Museum of the United States Air Force, which is the aircraft the model replicates. A special thank you to Fast Eddie for helping out with some pictures of the B-58 to make this feature more complete. Also, special thanks to the National Museum of the United States Air Force for the wonderful photo they sent me of "Cowtown Hustler" for this newsletter feature.

In honor of Women's History Month, two aircraft flown by famous American female aviators are featured in the newsletter this month. In the "Museum Aircraft Spotlight" section, the Northrop T-38A Talon in the National Air and Space Museum's collection is featured. This T-38 was flown by Jacqueline Cochran to achieve several world records in 1961. The "One Last Thing" section features a Lockheed Vega 5B, flown by Amelia Earhart. During her flying career, Amelia Earhart owned four different Lockheed Vegas and leased two others. The Vega featured in this newsletter edition was used by Earhart in 1932 to fly two of her record-breaking flights. Both of these aircraft are on display in the National Air and Space Museum's flagship location in Washington, D.C.

In honor of St. Patrick's Day this month, the "Aviation Sightings" section features an Airbus A321LR operated by Aer Lingus. Aer Lingus is the national flag carrier airline of the Republic of Ireland and uses a stylized shamrock as its logo. The Airbus A321LR is a long-range variant of the popular Airbus A321neo family of aircraft.

Finally, "Aviation Memorabilia" features some cool pinback buttons produced as promotional advertising items by Bond Bread in the 1930s. The buttons feature images of aircraft used in historic record-breaking flights and highlight the famous aviators who completed those flights. These pins were a recent find at a great price and are a wonderful addition to my aviation memorabilia collection.

Thank you again for reading "Distelfink Airlines" and supporting my aviation photojournalism efforts. 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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*The long-range variant of the Airbus A321neo family of narrow-body, twin-engine commercial aircraft designed and manufactured by Airbus.*

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### **Bond Bread Famous Airplanes & Aviators Pinback Button Set**

*This set of pinback buttons was issued in the 1930s by General Baking Company to promote its Bond Bread brand and commemorate some of the famous airplanes, aviators, and record-breaking flights of the 1920s and early 1930s.*

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### **Corgi 1/72 Carrier Deck Set-F4U-1D Corsair**

*This set from the die-cast model and toy manufacturer's World War II Collection: Diorama series featured a model of an F4U-1D Corsair fighter and several accessories to create an aircraft carrier flight deck diorama.*

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*The die-cast model manufacturer's excellent replica of the world's first supersonic bomber, capable of speeds in excess of Mach 2, and one of the most iconic American bombers of the Cold War.*

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*This narrow-body, twin-engine, commercial airliner is known for its exceptional reliability, low operating costs, and suitability for operations on high-frequency, short-haul routes with quick turnaround times.*

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## One Last Thing:

### **Amelia Earhart's "Little Red Bus"**

*This Lockheed Vega Model 5B was flown by the famous American female aviator in 1932 on two of her record-breaking flights.*

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# Airbus A321LR



*An Aer Lingus Airbus A321LR on approach to the Washington Dulles International Airport in Virginia after a flight from Dublin, Ireland. This Airbus A321LR is one of eight in the Aer Lingus fleet, which consists entirely of Airbus narrow and wide-body aircraft.*

The Airbus A321LR is a narrow-body, twin-engine, commercial airliner designed and manufactured by Airbus. The A321LR is a variant of the Airbus A321neo (an acronym for “new engine option”) developed from the Airbus A321 and A320neo family of aircraft. The A321neo is the longest-stretched fuselage variant of the A320 series, typically seating 180 to 220 passengers in a two-class layout and has a range of 3,000 to 4,000 nautical miles (5,556 to 7,408 km). The A321neo cruises at 518 miles per hour (837 km/h) and can fly at a ceiling of 39,500 feet (12,040 m). The A321neo family of aircraft includes the A321neo, the A321LR, and the A321XLR.

The original Airbus A321 (now A321ceo “current engine option”) was introduced into service in 1994 with the German airline Lufthansa. In 2010, after the A321 had proved to be a success, Airbus announced the A321neo as an improvement and replacement for the A321. Targets for improvement with the A321neo were increased range, payload capacity, and fuel efficiency per passenger. The A321neo was fitted with sharklets on the wings as standard and powered by new CFM International LEAP 1A or Pratt & Whitney PW1100G-JM turbofan engines. The timeline from design and development to the first flight took only six years. The first A321neo entered service in 2017. Quality control and development problems with the PW1100G-JM engine delayed the aircraft’s entry into service for operators who selected the Pratt & Whitney engine option. The A321LR, a long-range variant fitted with additional fuel tanks, entered service in 2018, one year later. A new variant with an even greater operational range of 4,700 nautical miles (8,705 km), the A321XLR, entered operational service in late 2024. As of April 2024, over 6,300 A321neo aircraft have been ordered by 85 customers, of which 1,339 have been delivered.

Aer Lingus, the flag carrier airline of the Republic of Ireland, operates the Airbus A321LR pictured here. The airline was founded by the Irish Government in 1936 and privatized between 2006 and 2015. Aer Lingus is now wholly owned and a subsidiary of International Airlines Group (IAG). Aer Lingus operates 62 aircraft and flies to 97 destinations worldwide. Dublin Airport serves as the primary hub for the airline, with Cork Airport serving as a focus city. This Airbus A321LR is one of eight operated by Aer Lingus, whose all-Airbus fleet also includes Airbus A320-200, A320neo, A321XLR, A330-200, and A330-300 aircraft.





# Bond Bread Famous Airplanes & Aviators Pinback Button Set



*During the 1930s, General Baking Company issued this set of six pinback buttons to promote its Bond Bread brand and honor historic record-breaking flights, airplanes, and aviators from the 1920s and early 1930s. These pinback buttons are difficult to find as a complete set and in good condition.*

A pinback button, pin-back button, pin button, button badge, or simply a pin-back or badge is a button or badge that can be temporarily fastened to a garment using a safety pin or pin fastened from wire, a clutch, or other mechanism. The fastening mechanism anchors to the back side of a metal-shaped disk, which is either flat or concave, leaving an area on the front side to carry an image or message. Pinback buttons are often associated with campaign buttons, which are used to endorse candidates during political campaigns. Pinback buttons were introduced in the United States in 1896. Later innovations in pinback button design included inserting transparent celluloid film into the button to protect the finish from scratches and introducing a metal pin anchored to the back of the button to attach it to a garment. Initially used almost exclusively for political campaigns, pinback buttons later became popular for companies as a giveaway item for promotional and advertising purposes.

Bond Bread was a brand of the General Baking Company. During its existence, the General Baking Company produced advertising items to promote its Bond Bread brand. These items included ink blotters, matchstick covers, recipe booklets, and pinback buttons. In the 1930s, the General Baking Company issued this series of six pinback buttons to promote its Bond Bread brand and honor some of the historic record-breaking flights, airplanes, and aviators of the 1920s and early 1930s. Each pinback button featured an image of an aircraft used on a record-breaking flight. The illustration also noted the aviators who made the historic flight and the achievement of the flight. To promote the Bond Bread brand, each pinback button also featured a notable attribute of Bond Bread. Notable aircraft featured on the pinback buttons include the Fokker F.VIIb/3M "Friendship". Amelia Earhart flew aboard this aircraft as a passenger during a flight across the Atlantic Ocean in 1928. Also featured is the Lockheed Vega, "Winnie Mae", which Wiley Post and navigator Harold Gatty flew around the world in eight days in June 1931. Another notable aircraft featured on the buttons is the Ford 4-AT-B Tri-Motor, "Floyd Bennett", which was used by Commander Richard Byrd to complete the first flight over the South Pole in November 1929.

This set of pinback buttons is difficult to find complete and in good condition. It is common to find individual buttons from this series in collections of vintage pinback buttons and advertising memorabilia. Due to their small size, which makes them easy to store, this series of pinback buttons is a great item of aviation memorabilia for anyone interested in famous aircraft and aviators from the late 1920s or early 1930s.





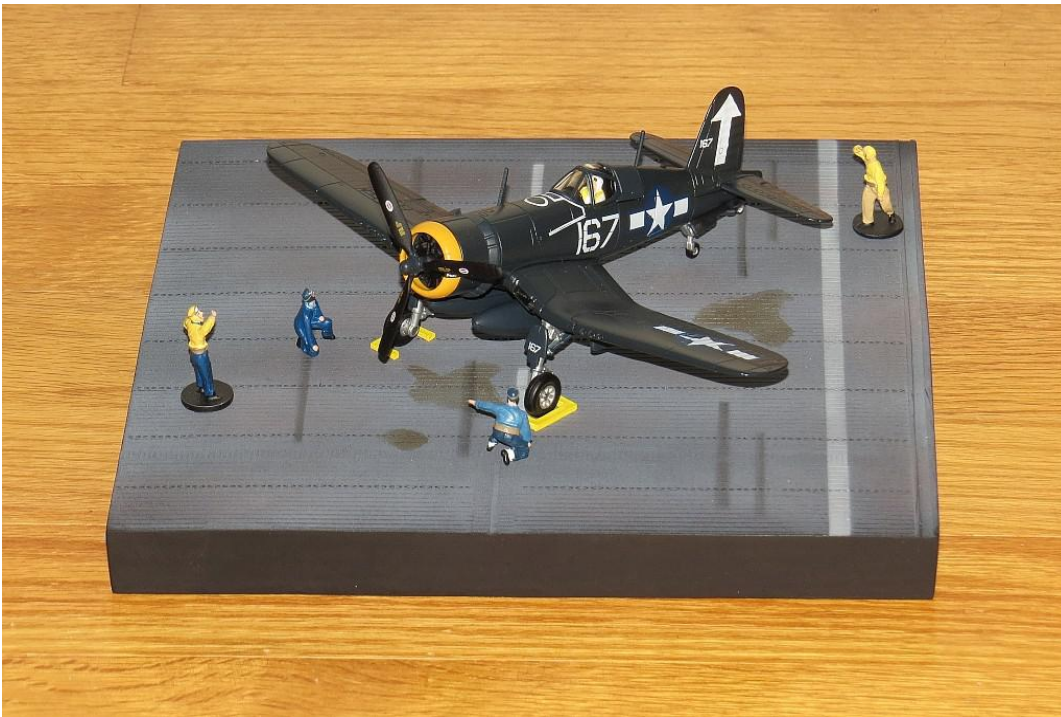
Each pinback button features an image of a historic aircraft, the names of a famous aviator or aviators, and information on a record-breaking flight on the front side, in addition to advertising for Bond Bread. Each pinback button should have a paper insert in the back stating that it is one of a series of six.



This button in the series is unique as it features a French aircraft, the Breguet 19 TF Super Bidon "Point d'Interrogation" (Question Mark). This aircraft was flown by Dieudonné Coste and Maurice Bellonte from Paris to New York on September 1-2, 1930, following in Lindbergh's footsteps, but traveling west to east instead.



### Corgi 1/72 Scale Carrier Deck Set-F4U-1D Corsair



*In 2006, Corgi produced this 1/72 scale model of a Vought F4U-1D Corsair in the colors of the aircraft flown by Lt. Cdr. Roger Hedrick of VF-84 when he was serving aboard the U.S.S. Bunker Hill in February 1945. Unlike most Corgi die-cast aircraft models, this release of the Corsair was part of a World War II Collection: Dioramas series. Officially called the Carrier Deck Set-F4U-1D Corsair, the set included the model, a carrier flight deck display base, four hand-painted metal figures, and a pair of landing chocks to create a miniature diorama for a desk or bookshelf.*

The Vought F4U Corsair was an American fighter aircraft that saw service in World War II and the Korean War. Designed as a carrier-based fighter, the Corsair initially entered service in 1943, and by 1944, the aircraft served in large numbers with the U.S. Navy and U.S. Marine Corps. By V-J Day, September 2, 1945, Corsair pilots had amassed a stunning 11:1 kill ratio against Japanese aircraft, and the Corsair had established itself as one of World War II's most successful naval fighter-bomber aircraft.

The design and development of the Corsair began in 1938 when the U.S. Navy Bureau of Aeronautics requested proposals from American aircraft manufacturers for a new carrier-based fighter aircraft. Vought responded with the XF4U-1 prototype, an aircraft designed by a team including chief designer Rex Beisel, project engineer Frank Albright, aerodynamics engineer Paul Baker, and propulsion engineer James Shoemaker. The new aircraft was powered by a Pratt & Whitney R-2800 radial engine that developed 2,000 horsepower. This engine drove an aluminum three-blade propeller

from Hamilton Standard spanning just over 13 feet (3.96 m). When the prototype XF4U-1 flew for the first time in May 1940, the airplane had the most powerful engine and largest propeller combination ever installed on a fighter aircraft. To accommodate such a large propeller, the XF4U-1 had a wing bent in a gull shape on both sides of the fuselage. This innovative wing design gave the propeller ground clearance and reduced drag where the wings joined the fuselage.

At the time of the proposal, the U.S. Navy was strictly concerned about speed. As a result of the start of World War II in Europe, and anticipating being involved in the conflict in the future, the U.S. Navy requested several changes to the XF4U-1 prototype, including heavier armament of three .50 caliber machine guns in each wing. The addition of these guns required removing the fuel tanks that were located in the wings. To replace the lost fuel capacity, a 237-gallon (897 L) fuel tank was installed between the engine and the cockpit. So the Corsair maintained its sleek fuselage profile, the cockpit had to be moved three feet aft of its original position.



Moving the cockpit's position further aft had unfortunate consequences. Visibility from the cockpit was problematic, especially during takeoff and landing. The early production Corsairs also had vicious stall characteristics, powerful torque and propeller effects at low speed, and cowl actuators that leaked oil onto the windshield, further compounding the cockpit visibility problems. The most significant problem with the early models of the Corsair was their long and stiff landing gear, which caused the aircraft to bounce significantly when landing. Due to these problems, the U.S. Navy felt the Corsair could not be landed safely on an aircraft carrier deck.

The flaws did not deter the U.S. Navy from accepting the Corsair for service. Early production Corsairs were diverted to the U.S. Marine Corps, which began using them from land bases in the Pacific theater in early 1943. U.S. Marine Corps pilots engaged the enemy with Corsairs for the first time on February 14, 1943, while flying from Guadalcanal. As Vought continued to work to solve the Corsair's problems, the U.S. Navy decided to fill its carrier-based squadrons with the Grumman F6F Hellcat. The Hellcat was slower than the Corsair, but it could be landed easily on an aircraft carrier deck. The Hellcat filled in until late 1944, when the U.S. Navy finally

cleared the Corsair for aircraft carrier operations.

The introduction of the Corsair into the Pacific theater had an immediate impact on the war. The F4U's speed and powerful armament allowed pilots to engage Japanese aircraft only when the advantage favored them. In the last months of World War II, Corsairs were used for ground-attack missions to support U.S. Marines as the island-hopping campaign drove toward the Japanese home islands. By the time World War II ended in 1945, the U.S. Navy and U.S. Marine Corps credited Corsair pilots with destroying over 2,100 enemy aircraft. In addition to the U.S. Navy and U.S. Marine Corps, variants of the Corsair were also operated by the British Royal Navy and the Royal New Zealand Air Force.

During World War II, U.S. Navy and U.S. Marine Corps pilots flew over 64,000 operational sorties with Corsairs. Of those sorties, over 54,400 were from runways and over 9,500 were from aircraft carrier flight decks. Only 189 Corsairs were lost in combat, with a further 1,435 lost in non-combat accidents. Demand for the Corsair was so great during World War II that, in addition to Vought, Goodyear Aircraft Corporation and Brewster Aeronautical Corporation were contracted to build the fighter under license.



*The 1/72 scale die-cast F4U-1D Corsair model features an authentic color scheme and accurate markings representing the aircraft flown by Lt. Cdr. Hedrick. The model's features include a rotating propeller, a detailed pilot figure in the cockpit, optional position landing gear, and removable external fuel tanks. For collectors who lack the space to display the model with the included diorama base, a display stand is also included with the model, which has a much smaller footprint on a desk or bookshelf.*





The 1/72 scale Vought F4U-1D Corsair model can also be displayed on the display stand using the optional landing gear pieces to display the aircraft as if it were flying. One of the minor criticisms of this model is the fit issues with the parts. The tailwheel and external fuel tank pieces fit loosely on the model and can fall off when the model is handled. Fortunately, in the case of the external fuel tank pieces, these parts are optional, and the model can be displayed without them being installed.

The Corsair returned to the decks of U.S. Navy aircraft carriers and U.S. Marine Corps airfields during the Korean War. During the conflict, Corsairs were primarily used in the ground-attack role to support Allied ground forces on the front lines. In 1954, Vought manufactured 94 F4U-7 Corsairs for the French Navy, which used them during the Indochina campaign in the late 1940s and the early 1950s. These Corsairs would be the last of over 12,500 examples of the fighter produced from 1942 to 1953.

This 1/72-scale die-cast and plastic model of a Vought F4U-1D Corsair and the corresponding diorama accessories, the Carrier Deck Set-F4U-1D Corsair, was released in 2006 as part of the World War II Collection: Dioramas series of models produced by die-cast toy and model manufacturer, Corgi. Unlike most of the die-cast model vehicles produced and sold by Corgi, the World War II Collection: Diorama series featured additional accessories such as display bases and figures that allowed the model to be placed in a diorama recreating a historic scene from World War II. In the case of the Carrier Deck Set-F4U-1D Corsair, the set included the die-cast model of the Corsair, a detailed aircraft carrier flight deck display base, four hand-painted metal figures

representing aircraft carrier deck crew, a set of landing chocks, and a display stand so the model can be displayed as if it were in flight. The Corsair is painted to represent the aircraft flown by Lieutenant Commander (Lt. Cdr.) Roger Hedrick of VF-84 when it was stationed aboard the *U.S.S. Bunker Hill* in February 1945. Lt. Cdr. Hedrick scored three kills in this aircraft on February 25, 1945, over the Japanese home islands. Lt. Cdr. Hedrick finished the war with 12 confirmed kills.

The 1/72 scale F4U-1D Corsair model included in this set is typical of most of Corgi's die-cast aircraft models, being made primarily of die-cast with plastic detail parts. The model is decorated with an accurate paint scheme and features optional parts to display the model with its landing gear extended or retracted. The model also features a pair of external fuel tanks, which can be placed on or off the model depending on the collector's preference. As mentioned previously, this model includes several additional accessories to display it in a carrier flight deck diorama. The model and its accessories come in a sturdy and colorful box, which includes an information panel inside the lid detailing the history of Lt. Cdr. Hedrick as the commander of VF-84 as well as the technical specifications of the F4U-1D Corsair.



One of the most positive attributes of the Corgi Carrier Deck Set-F4U-1D Corsair is the additional diorama accessories. The carrier flight deck diorama base is made of sturdy resin and painted with accurate colors and markings. The diorama base also features realistic weathering and other signs of use, such as tire skid marks and oil stains. The metal hand-painted figures representing the flight deck crew are accurately painted and provide a sense of realism to the diorama when added to the flight deck display base with the model.

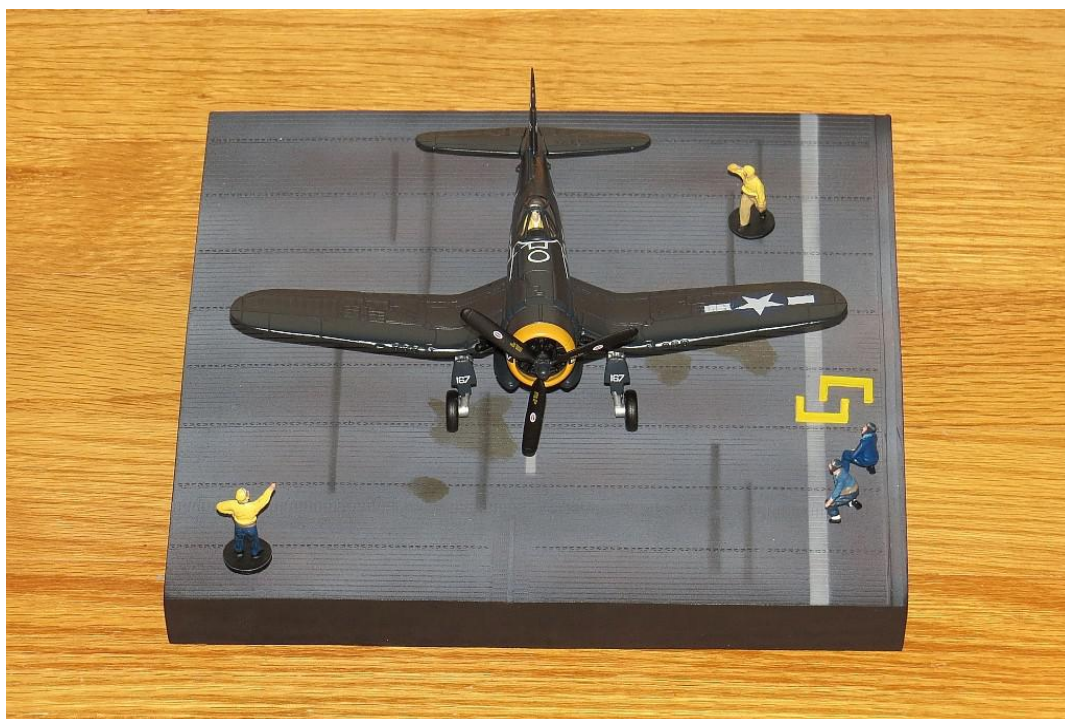
Another positive aspect of this model is the inclusion of the optional traditional display stand. The stand is made of sturdy plastic and has a solid base and arm to support the model of the F4U-1D Corsair. The simple display stand included with the model gives collectors with limited space the ability to display their Corsair in the confines of a smaller space in a home or office, or in a collection with other models using similar display stands.

There are a few elements of the Carrier Deck Set-F4U-1D Corsair that could have been improved. On the Corsair model, the fit of some of the parts is problematic. The external fuel tanks do not fit tightly on the model. As a result, simply bumping the model can dislodge these parts. The landing gear parts have similar fit is-

sues. In addition, the Corsair model lacks some of the finer details found on more recent die-cast model releases, such as a canopy that can be positioned open or closed. An open or closed canopy option would have been ideal for the Corsair model in this set since it is intended to be displayed on the flight deck base.

Although the diorama accessories included with the Carrier Deck Set-F4U-1D Corsair are excellent, a minor issue with them is that the two crouching figures tend to fall over if they are bumped or the diorama is moved. These figures should have been sculpted including a base, similar to the two standing figures, which do not have this issue. Since the figures are metal, paint chips can occur if they frequently fall over. The landing chocks provided with the set also seem large in size from a scale perspective.

Corgi's World War II Diorama series Carrier Deck Set-F4U-1D Corsair is an incredible and unique combination of a detailed die-cast model paired with additional accessories in one package, allowing a collector to recreate a realistic flight deck diorama on their desk or bookshelf. The Carrier Deck Set-F4U-1D Corsair would be enjoyed by anyone interested in World War II, the F4U Corsair fighter, or naval aviation.



*The highlight of the Carrier Deck Set-F4U-1D Corsair diorama set was the carrier flight deck diorama base and the four hand-painted metal figures of the flight deck crew. These items are highly detailed and well-painted, with the diorama base even featuring realistic tire skid marks and oil stains. When combined with the die-cast 1/72 scale Vought F4U-1D Corsair model, these items create a realistic diorama scene that takes collectors back in time to World War II aircraft carrier flight deck operations in miniature form.*



# ***Calibre Wings 1/72 Scale Convair B-58 Hustler***



*The die-cast model aircraft manufacturer's excellent replica of the world's first supersonic bomber, capable of speeds in excess of Mach 2, and features a high-quality paint finish, accurate markings, and several interchangeable parts to represent multiple aircraft configurations.*

*The Calibre Wings 1/72 scale B-58 Hustler is an excellent model of the iconic Cold War strategic bomber. The model features incredible details, including accurate markings, recessed panel lines and rivets, opening cockpit hatches, and interchangeable parts, such as landing gear, ordnance, and engine exhaust nozzles, allowing the model to be displayed in several operational configurations.*





*The new Calibre Wings 1/72 scale B-58 Hustler die-cast model is a replica of the B-58A Hustler, “Cowtown Hustler”, on display in the National Museum of the United States Air Force, located at the Wright-Patterson Air Force Base in Dayton, Ohio. (Image courtesy of Ty Greenless/National Museum of the United States Air Force).*

The Convair B-58 Hustler is a supersonic strategic bomber and was the first bomber built capable of speeds over Mach 2. The B-58 Hustler was designed and built by Convair, a division of General Dynamics. The B-58 Hustler was developed during the 1950s for the U.S. Air Force and Strategic Air Command (SAC) as an aircraft to bomb targets deep within the Soviet Union, flying at high enough altitudes and supersonic speeds to evade interception by Soviet fighter aircraft. As early as 1949, the Air Research and Development Command (ARDC) at the Wright-Patterson Air Force Base in Ohio began studies contemplating the concept of a supersonic, long-range, manned bomber aircraft. Instead of issuing specific requirements, researchers on the ARDC challenged aircraft manufacturers to devise their own solutions to address some of the design problems of such an aircraft, including engine layout, fuel capacity, and payload. The studies into such a bomber caused debate among top officials within the U.S. Air Force. Some officials were keenly interested in such an aircraft and its potential. Other officials ex-

pressed concern that such an aircraft could be developed for supersonic operations due to the expense required to build it and the higher fuel consumption needed for sustained supersonic flight.

Several defense contractors, including Boeing, Douglas, Curtiss, Martin, North American Aviation, and Convair, submitted proposals for such a project. Most of the proposals submitted were straightforward and expensive. Convair’s proposal was considered one of the most advanced designs, with a delta wing configuration for the two-man aircraft powered by three General Electric J53 turbojet engines, with one engine located under each wing and one placed in the tail. The delta wing configuration was ideal for supersonic flight and permitted good internal volume for the aircraft’s systems and fuel. One of the unique features of the design was the aircraft’s consumables, including the weaponry and most of the fuel, being stored in an external pod. In 1951, the proposal was modified slightly, switching to a two-engine configuration and adding a third crewmember to operate the defensive systems.



In 1951, the U.S. Air Force selected the Convair MX-1626 and Boeing MX-172 design studies to advance to the next stage of development. During this time, Convair took advantage of engine developments by General Electric to replace the two large J53 engines with four smaller J79 engines, which were optimized for supersonic flight. The design was also reprofiled aerodynamically. The revised design proposal was submitted to the U.S. Air Force as MX-1694. In 1952, the U.S. Air Force deemed Convair's proposal superior and issued a production contract for its proposal, now designated the B-58 Hustler, in 1953.

Unlike prior military aircraft, the B-58 program was the first weapons-system contract. Under this new system, Convair acted as the prime contractor for all the program elements. Convair was required to design or subcontract everything associated with the B-58's operation, even the training manuals. The initial contract for the B-58 called for two XB-58 prototypes, 11 YB-58A preproduction aircraft, and 31 mission pods for testing and evaluation purposes.

The first XB-58 prototype was rolled out in August 1956. The program was kept under high security before rollout, and no unauthorized person knew of the XB-58's shape and basic configuration. The first flight occurred in November 1956, and the prototype exceeded Mach 1 in December of that year. The testing and evaluation period for the B-58 Hustler program was a long and difficult one, lasting until April 1959. The B-58 was finally ready for operational service in March 1960.

The Convair B-58 Hustler had several design features considered revolutionary for its time. The delta wing configuration was well-suited for high-altitude, high-speed flight. To protect the aircraft's critical systems against the heat generated by supersonic flight while cruising at Mach 2, the crew compartment, wheel wells, and electronics bay were pressurized and air-conditioned. The B-58 was one of the first aircraft to use extensive applications of aluminum honeycomb panels, which bonded outer and inner aluminum skins to a honeycomb of aluminum or fiberglass.



*The B-58 Hustler was powered by four General Electric J79 axial-flow turbojet engines equipped with afterburners. These engines were optimized for supersonic flight and could propel the B58 Hustler to speeds above Mach 2, or twice the speed of sound. (Image courtesy of Fast Eddie Leuter)*



An unusual feature of the B-58 Hustler was its ejection seats, which were designed to function as escape capsules. The ejection seats featured an enclosing clamshell and their own oxygen supply. The design of these ejection seats allowed B-58 Hustler crew members to eject from the aircraft at high altitudes and speeds. (Image courtesy of Fast Eddie Leuter)



Another revolutionary feature of the B-58 Hustler's design was its state-of-the-art systems, which were divided between a pilot/aircraft commander, radar navigator/bombardier, and a defense systems operator seated in pressurized, separate, tandem cockpits. The cockpits featured electronic controls in wraparound dashboards with knobs, lights, buttons, and automated voice messages and warnings from a tape system that was audible through helmet sets. The voice of actress and singer Joan Elms was used for these automated warnings.

A novel feature of the crew compartment was the ejection seats. The ejection seats were actually escape capsules, which featured a clamshell that enclosed the seat with an attached oxygen cylinder. These ejection capsules permitted the crew to eject from altitudes up to 70,000 feet (21,000 m) at speeds up to Mach 2. The capsule was buoyant, and each crew member could use the clamshell portion of the capsule as an emergency life raft. During testing of the ejection capsules, live bears and chimpan-

zees were used, with these ejection capsules being certified for use in 1963.

The B-58 Hustler also featured advanced weapons systems for the era. The Sperry AN/ASQ-42 bombing/navigation system combined a sophisticated inertial navigation system with the KS-39 star tracker (astro-inertial navigation system) to provide a heading reference, the AN/APN-113 Doppler radar to provide ground speed and wind speed data, a search radar to provide range data for bomber release and trajectory, and a radar altimeter. The AN/ASQ-42 was estimated to be ten times more accurate than any previous bombing/navigation system.

The bomber was equipped with a radar-aimed 20 mm T171 rotary cannon in its tail for defensive purposes, which was remotely-controlled through the Emerson MD-7 automated radar fire-control system. The system automatically computed aiming, velocity, heading differential, and range compensation. The defense systems operator only had to lock on the selected target blip on his scope to fire the gun.





*To keep the B-58 Hustler's profile as sleek as possible, the cockpits for the three crewmembers were separate and arranged in a tandem layout. The pilot sat in the front cockpit, the navigator/bombardier in the second cockpit, and the defensive systems operator in the rear cockpit. This photo also shows the two-component pod (TCP) mounted to the underside of the aircraft, which held most of the B-58's fuel and ordnance. (Image courtesy of Fast Eddie Leuter)*

Offensive armament usually consisted of a B39 or B53 nuclear bomb, along with fuel tanks, stored in a streamlined MB-1C pod under the fuselage. Consistent fuel leakage issues with the MB-1C pod resulted in it being replaced with the two-component pod (TCP), which placed the nuclear weapon in an upper section and the fuel in a lower pod, which could be jettisoned in an emergency. B-58s were later retrofitted with two tandem stub pylons under each wing root along the centerline pod to carry four additional B43 or B61 nuclear weapons. Although the U.S. Air Force looked at flying the B-58 Hustler on conventional strikes, the bomber was never equipped to carry conventional weapons. The LA-331, a photo reconnaissance pod, was also installed on B-58s. Several other specialized pods for electronic countermeasures or cruise missiles were proposed, but never adopted.

The B-58 Hustler entered service in August 1960. One month later, a single B-58 Hustler won the annual SAC Bombing Competition at the Bergstrom Air

Force Base. It proved itself superior to the Boeing B-47 Stratojet and Boeing B-52 Stratofortress, securing first place in both low-level and high-level bombing exercises. Crews selected to fly B-58s came from other bombing squadrons. Due to the handling characteristics of the new delta-winged aircraft, new B-58 pilots flew F-102 Delta Dagger fighters as conversion trainers before moving on to the TB-58A trainer. The B-58 Hustler was challenging to fly, and its crews were constantly busy. Crews also found the B-58's cockpits to be cramped and claustrophobic.

Despite its exceptional performance, from almost the start of B-58 Hustler operations, senior U.S. Air Force officials were critical of the bomber's high cost. Not only was the B-58 Hustler expensive to acquire, but the aircraft required specialized maintenance equipment and personnel. Compounding the high cost of the aircraft was its high accident rate. SAC leadership was never enthusiastic about the B-58, with many officials critical of its high cost, small size, and its need for frequent aerial refueling to complete its mission.



Two SAC bomb wings flew the B-58 Hustler during its operational career, the 43rd Bombardment Wing (which later transitioned to the 43rd Airlift Wing) based at Carswell Air Force Base in Texas, from 1960 to 1964, and Little Rock Air Force Base in Arkansas from 1964 to 1970; and the 305th Bombardment Wing, based at Bunker Hill Air Force Base (later Grissom Air Force Base) in Indiana, from 1961 to 1970. The 305th Bombardment Wing was also responsible for training B-58 crews. Eight preproduction YB-58As were converted into TB-58As for training purposes, with several other B-58s converted to test aircraft to evaluate equipment, such as new radar suites and weapons systems.

The B-58 also served as a high-speed reconnaissance platform. Designated the RB-58A, these aircraft carried the Hughes Aircraft AN/APQ-69 side-looking airborne radar and the Goodyear AN/APS-73 synthetic aperture radar in the ventral pod. These radar systems could scan up to 80 nautical miles (148 km) on either side of the aircraft. Ten MB-1 pods were

also modified to carry a KA-56 camera in the nose of the pod. This camera captured high-resolution imagery on five-inch film.

By the time the B-58 Hustler's early design problems were rectified and SAC's interest in the aircraft had solidified, the U.S. Air Force and the Department of Defense had already determined the aircraft was not a viable weapons system. During the B-58's development, high-altitude Soviet surface-to-air missiles were developed, negating the B-58 Hustler's high-altitude advantage. The solution to this new threat was to fly at low level. Unfortunately, the B-58 could not fly at supersonic speeds at low altitudes in thicker air, and its already questionable range was reduced further flying at these altitudes. In 1969, the Department of Defense decided the B-58 fleet would be retired by 1970. The high sustainment cost of the fleet was given as the reason for its retirement. Except for a few aircraft preserved for museum display, the remaining B-58s were withdrawn from service and stored until 1977, when they were sold to Southwestern Alloys, which scrapped the aircraft.

*Due to its high operating costs and accident rate, the B-58 Hustler was only in operational service for 10 years. When the B-58s were withdrawn from service, most were put into storage and later scrapped. The B-58 Hustler "Cowtown Hustler", due to its successful record-breaking flights in 1962, was preserved for display at the National Museum of the United States Air Force. (Image courtesy of Fast Eddie Leuter)*



During its operational career, the B-58 Hustler set several 19 speed records. In 1963, a B-58 Hustler flew from Tokyo to London via Alaska. The B-58 flew a distance of 8,028 miles (12,920 km), with five aerial refuelings, in 8 hours, 35 minutes, and 20.4 seconds, averaging 938 miles per hour (1,510 km/h). This record remains the longest supersonic flight in aviation history. The B-58 Hustler also won several aerospace trophies, including the Bleriot Trophy, the Harmon Trophy, and the Mackay Trophy.

Despite its short service life of 10 years and small production run of 116 aircraft, the B-58 Hustler became one of the iconic bomber aircraft of the Cold War. Its sleek design and futuristic look intrigued Americans, and the B-58's "sonic boom" became a familiar sound as it passed overhead. Fortunately, the B-58 was never needed for its intended purpose, dropping nuclear weapons in combat.

Calibre Wings is a die-cast model manufacturer of military aircraft, primarily in 1/72 scale. A relative newcomer on the die-cast model manufacturing

scene, Calibre Wings models are made of die-cast and plastic components and noted for their high level of detail. Calibre Wings die-cast model aircraft feature realistic panel lines, opening cockpits, accurate markings, detailed ordnance loads, and optional position landing gear parts. During its brief time on the die-cast model market, Calibre Wings has produced several 1/72-scale die-cast aircraft models, including replicas of military aircraft such as the Grumman F-14 Tomcat, Lockheed Martin F-16 Fighting Falcon, and the Mikoyan MiG-31 Foxhound.

In August 2022, Calibre Wings announced an ambitious project to produce a die-cast model of the B-58 Hustler in 1/72 scale. A prototype of the new model appeared in 2023. In April 2025, the model was announced as available for preorder directly from Calibre Wings dealers. Initially planned for a production run of 1,000 units, demand during the preorder period was so high that Calibre Wings increased the production run to 1,500 units. Initially planned for a ship date of October 2025, production issues pushed back the ship date to late January 2026.



*The Calibre Wings 1/72 scale B-58 Hustler die-cast model comes in a special commemorative wooden box. Inside the wooden box, foam inserts protect the model, its corresponding accessories, and the display stand. The box also has a protective outer cardboard sleeve, which features commissioned artwork of the B-58 Hustler exclusive to this model's release.*



*Calibre Wing's 1/72 scale B-58 Hustler is an excellent model, with many noteworthy features. The model includes opening cockpits and detailed crew stations. Another interesting feature of the model are the parts that replicate air intake covers for the engines, which allow the B-58 to be displayed as if it were parked on the ground at a military installation. Parts replicating open and closed exhaust nozzles for the engines are also included with the model.*



The Calibre Wings 1/72 B-58 Hustler is a model of B-58A Hustler #59-2458. This B-58A, nicknamed "Cowtown Hustler", flew from Los Angeles to New York City and back on March 5, 1962. The flight set three speed records and won the crew the Bendix Trophy and the MacKay Trophy in 1962. This B-58A is now on display in the National Museum of the United States Air Force at the Wright-Patterson Air Force Base in Dayton, Ohio. Unlike most Calibre Wings die-cast aircraft models, the B-58 Hustler comes in a large wooden commemorative box including a cardboard sleeve featuring exclusive artwork of the B-58 Hustler in flight commissioned for the release of the model.

Calibre Wings released the B-58 Hustler, the standard retail version, and an exclusive version, which was only available directly through the Calibre Wings website. The website exclusive version of the model is exactly the same as the retail version, except that it includes an additional pitot tube that matches the color scheme of the pitot tube currently

installed on the B-58 Hustler, "Cowtown Hustler", on display in the National Museum of the United States Air Force. The website-exclusive version of the model also featured a small replica of one of the B-58's ejection seats in closed capsule configuration.

The Calibre Wings B-58 Hustler is an impressive model with several positive attributes. The model is made of die-cast metal and plastic, with over 85 percent of the model constructed of die-cast metal. The high content of die-cast metal lends the model a nice weight when handled. Another positive attribute is the model's stunning paint quality. Natural metal finishes on model aircraft can be a nightmare for die-cast model aircraft manufacturers, as paint imperfections are difficult to conceal with these types of finishes. Calibre Wings did a great job on the finish of this model. The B-58 has minimal paint imperfections and features different color tones and shades to simulate the different metals used throughout the actual aircraft. The model also features excellent recessed panel lines and rivet details throughout, giving it an additional sense of realism.





*Although an excellent model, one of the criticisms of the Calibre Wings 1/72 scale B-58 Hustler is the shape of the engine nacelles. The shape of the nacelles is incorrect when compared with the real aircraft. Another criticism of the model is areas of overspray due to the different colors of paint used throughout the model. These issues are minor compared to what is overall a stunning model of the B-58 Hustler.*

The Calibre Wings B-58 Hustler also has an impressive amount of detail. The J79 engines on the model feature detailed intake and afterburner sections. The model features optional exhaust nozzle parts, and the B-58 Hustler can be displayed with its exhaust nozzles in the open or closed positions. Due to the packaging requirements for this model, the engines are packed as separate parts and must be attached to the model for display. The engines snap into their proper position on the model easily and are just as simple to remove if the model needs to be placed into its box for storage.

Another excellent feature of the Calibre Wings B-58 Hustler is the design of the landing gear and ordnance. Most die-cast model aircraft use plastic tabs or pegs to insert landing gear and ordnance parts onto the model. These pegs and tabs often become stressed over time, can be difficult to remove, and sometimes break off. Calibre Wings uses magnets to attach the landing gear and ordnance parts to their models. The magnets hold the parts in place just as

well as pegs and tabs, and make the parts easier to remove from the model if desired. As a bonus with this model, small display stands are included for these items, so the ordnance and two-component pod can be displayed as standalone items if desired.

Finally, the Calibre Wings B-58 Hustler has several additional features that help make the model a premium offering. The model's metal display stand features an adjustable arm with a creative "Remove Before Flight" pin. The model also comes with a special collector card noting that it is a limited edition and the production number of the unit. The B-58 Hustler also features accurate national insignias and squadron markings printed as high-quality tampon graphics. The company did an exceptional job recreating and printing the smaller warning and access panel stenciling that is present throughout the model. Lastly, the model features opening and closing cockpit hatches. Opening the hatches of the cockpits reveals detailed instrument and flight control displays. The cockpits also feature replicas of the capsule ejection seats.



The Calibre Wings 1/72 scale B-58 Hustler is a well-executed model with several positive attributes. However, with any die-cast model airplane, there are a few elements of this model that could have been improved for this release or addressed in future releases of the model.

One of the greatest inaccuracies with this model is the shape of the engine nacelles. The inaccuracy of the shape of the engine nacelles compared to those found on the actual aircraft was pointed out several times when production samples of the B-58 model were displayed by Calibre Wings at toy shows a few years ago. Unfortunately, it seems that Calibre Wings either could not or did not want to spend the time to redesign the engine nacelles and correct their shape. When compared to photos of the actual nacelles on surviving B-58s in museums or with scale drawings, the shape of the model's nacelles is inaccurate. The inaccurate shape of the nacelles is especially noticeable when viewing the aircraft from its side profile.

Although the B-58 Hustler model is excellent, the

cockpits lack the detailed appearance found in other Calibre Wings models. An unfortunate aspect of this model is that no pilot figures are included to place in the cockpits. The lack of pilot figures for the cockpit is an unusual omission from Calibre Wings, which usually includes pilot figures with its models. Hopefully, in the future, Calibre Wings can address this by designing seated pilot figures that can fit into the cockpits on this model. A ground ladder platform to display next to the model would also be a welcome accessory for the B-58 Hustler.

The display stand is another unfortunate aspect of this model. Due to the design of the display stand and where it inserts into the model, the two-component pod included with the model cannot be installed on it when the B-58 is displayed on its stand. This is also a curious design element of this model, as the two-component pod was an important part of the B-58 Hustler's payload and was normally fitted to the aircraft. Fortunately, the two stub pylon rails and the B61 nuclear bombs can be fitted to the model when it is displayed on the stand.

*The Calibre Wings B-58 Hustler includes a display stand, which allows the B-58 to be displayed as if it were in flight. When the model is attached to the display stand, the two-component pod cannot be attached to the underside of the model. This is an unfortunate aspect of the design of this model, as the two-component pod was a significant part of B-58 Hustler operations and was usually fitted to the aircraft during flight operations.*



A secondary issue with the display stand for the B-58 Hustler is its design. Although the stand is constructed of metal and can easily support the weight of the model, the stand only attaches to the model through a single metal peg. This design leaves little margin for error for the model falling off the stand if it is accidentally bumped while it is mounted on the stand. For this model, due to its size and weight, a display stand, which featured a cradle-type structure at the top of the arm to hold the model, would have been a better design option.

The choice of some of the accessories included with the Calibre Wings B-58 Hustler is also questionable. The wooden box that the model comes in gives the B-58 Hustler a premium touch, but the box added a high additional cost to the model above its already expensive price point. Most die-cast model aircraft collectors store their boxes in closets, sheds, attics, basements, and garages, so in most situations, the wooden box will never be seen. The wooden box, in many respects, seems unnecessary.

It is also unfortunate that the closed ejection capsule seat replica and additional pitot tube were only available with models sold directly by Calibre Wings. These pieces most likely had a low manufacturing cost and could have easily been included with the entire model production run. These additional pieces, as well as seated pilots for the cockpit, would have been appreciated by collectors.

Finally, although quality control on the Calibre Wings B-58 Hustler is overall good, there were some minor issues with a few models purchased by collectors. Some collectors have reported areas of significant paint overspray and scratches on their models. Other collectors have reported issues with wings being loose. Finally, there have been reports of a forgotten magnet inside the two-component pod. Some collectors report that this piece will not stay attached to their models. Fortunately, all of these reported issues seem to be isolated incidents, and the reception of the Calibre Wings B-58 Hustler has been mostly positive among die-cast model aircraft collectors.



*Another unfortunate aspect of the metal display stand's design is that it uses only a single peg at the top of the arm as its attachment point to the model. For a large and heavy item such as the B-58, this attachment point means the model could fall off the stand if it is ever bumped with any type of significant force.*



*Due to its uniqueness and exceptional details, the Calibre Wings 1/72 scale B-58 Hustler is an excellent addition to any die-cast model airplane collection. The B-58 Hustler also makes a great display piece for a diorama. In this diorama, a B-58 Hustler awaits its next mission on the ramp at a military installation while some crew members discuss some preflight details.*



On the review sample of this model, there were some minor quality control concerns. One concern was that the piece replicating the closed nose landing gear doors was an extremely tight fit on the model. Sanding this piece down slightly on its inner sides improved the fit of this part, making it easier to install and remove. Another concern with the review sample of the model was that a small piece broke off the back of the two-component pod either during the manufacturing process or in shipping. Fortunately, this broken piece was found in the box, and a drop of super glue fixed it.

The excellent detail and the large size of the Calibre Wings B-58 Hustler make it a great model to display in a diorama. For the diorama display shown above, the B-58 Hustler is positioned on a display base from Three Wire Design. Although this company is no longer in business, there are several other model accessory manufacturers, such as Coastal Kits, that make similar display bases for model aircraft dioramas. Since the B-58 Hustler is a larger 1/72-scale

aircraft, a larger size base is ideal. The base is installed in a simple picture frame for a professional appearance. To finish this small diorama, some 1/72-scale standing pilot figures from Calibre Wings are discussing their next mission in the B-58 Hustler. These figures are actually sold as U.S. Navy pilots for the manufacturer's F-14 Tomcat models, but their green uniforms look accurate enough in this scale to fit the part for this scene.

The Calibre Wings 1/72 scale Convair B-58 Hustler is an exceptional model of the world's first supersonic bomber capable of Mach 2 flight and one of the iconic American bombers of the Cold War. The B-58 Hustler is an excellent addition to any die-cast model airplane collection, due to its limited production numbers and unique subject matter. The B-58 Hustler's impressive size, high-quality paint finish and tampo graphics, detailed rivets and panel lines, and working features such as opening cockpits and removable ordnance make it the perfect display piece for the desk or bookshelf of anyone interested in aviation history or Cold War aircraft.



# Northrop T-38A Talon



*The Northrop T-38A Talon flown by aviation pioneer Jacqueline “Jackie” Cochran to set several world records for speed, altitude, and distance in 1961 hangs on display in the National Air and Space Museum’s flagship building, located on the National Mall in Washington, D.C. The T-38A hangs on display next to the Extra 260 flown by aerobatic pilot Patty Wagstaff when she became the first woman to win the U.S. National Aerobatic Championship in 1991.*

The Northrop T-38 Talon was the world’s first supersonic jet trainer and has trained tens of thousands of pilots since entering service in 1961. The T-38’s performance, versatility, ease of maintenance, and affordability to operate made it an ideal trainer for fighter pilots. Pilots of aircraft such as the F-15E Strike Eagle, F-22A Raptor, B-1B Lancer, and A-10 Thunderbolt II have all had advanced flight training in the T-38 Talon.

Development on the T-38 Talon began in 1954, as Northrop believed a lightweight supersonic fighter would sell well internationally. The early concept designs for the T-38 Talon were loosely based on an earlier Northrop project, the N-102 Fang. Unfortunately, in the early 1950s, when the N-102 Fang was conceived by Northrop, the jet engines of the time were too large and heavy for the sleek fuselage design proposed by Northrop. That changed in 1954 when General Electric showed Northrop a new engine they had developed, designated the J85. This small and powerful engine weighed only 500 pounds (227 kg) and produced over 2,500 pounds (1134 kg) of thrust. When equipped with

an afterburner system, the J85 could produce up to 3,600 pounds (1,633 kg) of thrust. Northrop developed plans for an aircraft designated the N-156 in the spring of 1955. The plans were drawn by Joe Talley and George Gluyas, with influence from Welko Gasich and Edgar Schmued, famous for his prior work on the North American P-51 Mustang and F-86 Sabre.

The N-156 was planned for the U.S. Navy as a lightweight supersonic fighter that could operate from smaller escort carriers. At the same time, the U.S. Air Force issued a request for a new supersonic trainer. Northrop developed two versions of the N-156 to meet the requirements for each service branch. However, shortly after Northrop began developing the aircraft, the U.S. Navy began retiring its escort carrier fleet, canceling the need for the N-156. Northrop continued to develop the aircraft anyway, submitting the design to the U.S. Air Force for its trainer competition. In 1956, the U.S. Air Force declared Northrop’s design the winner and designated it the T-38 Talon, awarding the company a production contract for the new aircraft.



The initial U.S. Air Force contract authorized Northrop to build three prototypes, designated YT-38's. In 1959, the first YT-38 flew for the first time. In 1961, the first operational T-38 Talon entered service at the Randolph Air Force Base in Texas. During a production run that ran until 1972, nearly 1,200 T-38s were built. Most of the T-38s built were for the U.S. Air Force, but the nations Germany, Portugal, Turkey, and South Korea also ordered small numbers of the aircraft.

In service, the T-38 Talon was known as a "hot rod", with the performance of a fighter aircraft but handling qualities that make it an ideal trainer. Thanks to its small size, streamlined fuselage, swept wings, and powerful engines, the T-38 Talon can reach speeds of Mach 1.3 (858 mph, 1381 km/h), has an airframe capable of sustaining up to seven Gs, and can fly at altitudes of up to 55,000 feet (16,764 m), and can climb to an altitude of 30,000 feet (9,144 m) in one minute. The T-38 Talon features a two-place air-conditioned and pressurized cockpit equipped with rocket-powered ejection seats for the instructor and student pilot. To facilitate ease of

maintenance, most core components of the aircraft are at waist height. Two hydraulic systems power the T-38's flight controls, and the Talon features a tricycle landing gear arrangement with a steerable nosewheel. A flaw in the T-38's design since its entry into service is its brakes. The brakes can be weak and ineffective in some situations due to the T-38's high landing speed, and have been a contributing factor in several accidents.

As a training aircraft, the T-38 Talon was not designed to carry armament. In operational service, some aircraft were modified to carry gun pods, rockets, and bombs, instead of an external fuel tank, on a centerline pylon for training on weapons systems. The U.S. Navy utilized some T-38s for dissimilar air-to-air combat training, as the Talon's small size and high performance were similar to those of many fighters in service with the Soviet Air Force during the Cold War. The T-38 Talon's design also served as the basis for the F-5 Freedom Fighter and the F-5E/F Tiger II, small, lightweight fighter derivatives of the T-38 purchased by several smaller nations through the U.S. Military Assistance Program.





The Northrop T-38 Talon has served for over 60 years as an advanced supersonic trainer for the U.S. Air Force. During its years of service, the T-38 has trained thousands of U.S. Air Force pilots. In addition to U.S. Air Force pilots, NATO fighter pilots have also trained in the T-38 Talon during joint training programs. The German Luftwaffe operates T-38s in a training program in the United States at the Sheppard Air Force Base in Texas. These aircraft are painted in U.S. Air Force markings. The U.S. Air Force “Thunderbirds” Flight Demonstration Squadron also used the T-38 Talon as their flight demonstration aircraft from 1974 to 1983.

Other operators of the T-38 Talon in the United States include the U.S. Navy, which operates a small fleet of the aircraft at its United States Naval Test Pilots School located at Naval Air Station Patuxent River in Maryland. NASA also maintains a fleet of 32 T-38 aircraft that were transferred to the agency from the U.S. Air Force. Astronauts use these T-38 Talons to maintain flight proficiency and for travel purposes. The T-38 fleet is also used as chase planes during test flights of NASA vehi-

cles, such as experimental rocket-powered aircraft.

The U.S. Air Force remains the largest operator of the T-38 Talon, with 485 aircraft remaining in service as of late 2024. In 2001, the U.S. Air Force upgraded the surviving T-38 fleet with modernized major engine and structural components, a “glass” cockpit, and integrated avionics with a head-up display. These updated T-38s are designated T-38Cs. The U.S. Air Force continues to use the T-38 Talon as its advanced supersonic trainer; however, in recent years, it has also used the aircraft in an aggressor role to simulate enemy aircraft during air-to-air combat training.

Despite the modernization program, the U.S. Air Force acknowledges that the T-38 Talon is showing its age, and a replacement is needed. In 2018, the U.S. Air Force announced the gradual replacement of the T-38 Talon with the Boeing-Saab T-7A Red Hawk. The U.S. Air Force is targeting 2034 as the year for the final retirement of the T-38 fleet. In December 2025, the first Boeing-Saab T-7A Red Hawk assigned for operational training arrived at Joint Base San Antonio-Randolph in Texas.



The T-38A Talon in the National Air and Space Museum's collection was flown by Jacqueline "Jackie" Cochran on a series of flights in 1961 in an attempt to set several world records. During these flights, Cochran successfully set eight new world records for speed, altitude, and distance. One of these records included a new world speed record, when Cochran flew 844.2 miles per hour (1,358.6 km/h) over a 15-kilometer closed course on August 24, 1961. Cochran was 55 years old when she set this record. All of these records are painted on the left side of the aircraft's fuselage under the canopy.

Cochran had earned her pilot's license in 1930 and began an air racing career. She earned the nickname "Speed Queen" for her frequent record-setting flights and the trophies that she won, including the 1938 Bendix Trophy. Cochran also became the first woman to break the sound barrier in 1953 while flying a Canadair Sabre Mk. 3 (a variant of the North American F-86 Sabre). Cochran set her final speed record in 1964 at age 58, when she flew a Lockheed F-104 Starfighter to a speed of 1,429.297 miles per hour (2,300.23 km/h).

In addition to being an aviation pioneer, Jackie Cochran was also a key advocate for women in aviation. She worked with the Ninety-Nines, a women's pilots organization. She was also a founder and later the head of the WASP (Women Air Force Service Pilots) organization during World War II. Cochran also ensured women could participate in the Civil Air Patrol when it was founded in 1941.

The T-38 Talon remained in the U.S. Air Force inventory after Cochran's record-breaking flights. In 1963, it was flown by U.S. Navy Captain and NASA astronaut Wally Schirra. The T-38 was then used for engineering flight tests at McClellan Air Force Base near Sacramento, California. At McClellan Air Force Base, the T-38 Talon was part of the 2874 Test Squadron and used as a chase plane and to perform developmental and engineering test flights in support of other aircraft. The U.S. Air Force transferred the T-38 to the Smithsonian Institution's National Air and Space Museum in 2004. The T-38 is on display at the National Air and Space Museum's flagship location in Washington, D.C.



## AIRCRAFT OF SPECIAL INTEREST

### Boeing 717-200

(1999)



The Boeing 717-200 is a narrow-body, twin-engine, commercial airliner produced by Boeing Commercial Airplanes from 1998 to 2006. The aircraft was developed for the 100-seat market and originally designed and marketed by McDonnell Douglas in the early 1990s as the MD-95. The airliner was designed as a shorter derivative of the successful McDonnell Douglas MD-80 series and planned to be part of the company's broader DC-9 family of commercial airliners. When McDonnell Douglas merged with Boeing in 1997, Boeing continued development of the aircraft and decided to market it as the Boeing 717. The 717-200, the main production variant of the aircraft, entered service in 1999 with AirTran Airways. A total of 155 Boeing 717-200s were built before production of the aircraft ended in 2006.

### Boeing 717-200

**Crew:** 2 Flight Crew, 3 Cabin Crew

**Passenger Capacity:** 106 in a two-class layout or 117 in a one-class layout

**Length:** 124 ft 0 in (37.80 m)

**Height:** 29 ft 8 in (9.04 m)

**Wingspan:** 93 ft 4 in (28.45 m)

**Wing Area:** 1,007 sq ft (93 m<sup>2</sup>)

**Powerplant:** Rolls-Royce BR715-A1-30 turbofan engines (x2)

**Range:** 1,430 nmi (2,645 km)

**Cruise Speed:** 504 mph (811 km/h)

**Maximum Speed:** 566 mph (911 km/h)

**Empty/Gross Weights:** 67,500 lb/110,000 lb (30,617 kg/49,895 kg)

**Service Ceiling:** 37,000 ft (11,000 m)

28 "Distelfink Airlines"



# Narrow-Body, Short-Haul, Workhorse

## Design

The MD-95/717 was designed in the 1990s as a replacement for the early production DC-9s then in service, which were approaching 30 years old. As a result, the MD-95/717 had the same wingspan and fuselage length, landing gear layout, and T-tail configuration as the DC-9-30. Upgrades to the design included new engines, a new cockpit, and more modern systems.

## Cabin

The Boeing 717-200 has a 2+3 seating arrangement in the main economy class. This seating arrangement differs from the Boeing 737 family and Airbus A320 family of aircraft, which often feature a 3+3 seating. Unlike its DC-9/MD-80 predecessors, McDonnell Douglas did not offer aft airstairs for boarding flexibility on the MD-95/717. Instead, the company focused on fuel efficiency by reducing and simplifying as much equipment on the aircraft as was practical. In recent years, Delta Air Lines has updated the cabins of its Boeing 717 fleet by installing new interiors to accommodate 110 passengers in a two-class layout and adding passenger amenities, including Wi-Fi access.

## Reputation

The Boeing 717-200 has a positive reputation for being a reliable workhorse for high-frequency, short-haul routes that require quick turnaround times. The 717-200 is also efficient to operate and simple to maintain. The 717-200 remains in use with Hawaiian Airlines, which uses the type for flights throughout the Hawaiian Islands, and Delta Air Lines, which operates the type for domestic flights throughout the United States. Both airlines have praised the excellent reliability and affordability of operating the Boeing 717-200, acknowledging that although the type is showing its age, it will not be easy to replace in their fleets in the years ahead.



## Cockpit

The Boeing 717-200 features a glass cockpit for a two-person flight crew. The cockpit incorporates six interchangeable liquid-crystal-display units and advanced Honeywell VIA 2000 computers. The cockpit design, known as the Advanced Common Flightdeck (ACF), is shared with the MD-10 and is similar to the MD-11. The flight deck features an Electronic Instrument System, a dual Flight Management System, a Central Fault System, and a Global Positioning System. Future Air Navigation Systems are also available for installation on the 717-200. The flight deck also features a fly-by-wire technology mechanical control suite developed by MPC Products in conjunction with Parker Hannifin. These modules replaced cumbersome rigging that had been an issue in DC-9/MD-80 aircraft.

## Delta Air Lines

Delta Air Lines is currently the largest operator of the Boeing 717-200, with 80 aircraft in service. Delta uses its Boeing 717-200 fleet primarily for high-frequency, short-haul, domestic flights, connecting major hubs to smaller or mid-sized cities that require mainline service and a premium first-class seating option. The 717-200s are operated extensively out of the Delta hubs at Atlanta, Detroit, and Minneapolis. Initially, Delta Air Lines intended to phase out the 717-200 fleet in the mid-2020s. Recent fleet plans indicate Delta Air Lines intends to keep its 717-200 fleet operational until the late 2020s or early 2030s, when it will be replaced by Airbus A220 aircraft. To keep its Boeing 717-200 fleet flying, Delta Air Lines has purchased used aircraft from airlines retiring the 717-200 as sources for spare parts and engines. The airline also relies on its extensive TechOps MRO (maintenance, repair, and overhaul) program to support its 717-200 fleet.

## Engines

A pair of Rolls-Royce BR715 turbofan engines located at the rear of the aircraft and mounted on the sides of the fuselage powers the Boeing 717-200. This engine layout was similar to that found on the DC-9 family and MD-80 series of aircraft manufactured by McDonnell Douglas. The engines are noteworthy for being easy to maintain and more efficient than other available engines offering the same amount of thrust. The engines are controlled completely by an electronic engine system, known as Full Authority Digital Engine Control (FADEC), developed by BAE Systems. This system offers improved engine controllability and optimization.



# Amelia Earhart's "Little Red Bus"



*A Lockheed Vega 5B once owned and flown by aviation pioneer Amelia Earhart on display in the National Air and Space Museum's flagship building, located on the National Mall in Washington, D.C. In 1932, Earhart flew two record-breaking flights in this aircraft, becoming the first woman to fly solo across the Atlantic and the first woman to fly solo across the continental United States.*

Introduced in 1927, the Lockheed Vega was a five-to-seven-seat, high-wing, single-engine monoplane airliner built by the Lockheed Aircraft Company. Designed by Jack Northrop (who would later form his own company), the Vega was the Lockheed Aircraft Company's first aircraft. The Vega featured a veneer monocoque fuselage (a molded shell without internal bracing) and a single-piece spruce plywood-covered cantilever (internally braced) wing. Unusual for the time, the Vega also featured a fully enclosed cockpit for the pilot. These design features, combined with the best engine available, meant the Vega was built for speed. In 1929, Lockheed introduced the improved Model 5 variant of the Vega. By adding a NACA engine cowling, streamlined wheel pants, and a new 450-horsepower Pratt & Whitney radial engine, Lockheed boosted the Vega's cruising speed from 120 miles per hour (190 km/h) to 155 miles per hour (249 km/h). The Vega's maximum gross operating weight was also increased due to the improved performance of the more powerful engine.

Although intended for use as an airliner and executive transport, the Vega, with its spacious fuselage and streamlined design, became the aircraft of choice for many pilots attempting record-breaking flights. One of those pilots was Amelia Earhart. Between 1929 and 1936, Earhart owned four different Lockheed Vegas and leased two others. In a Lockheed Vega 5B she purchased in 1930, Earhart flew two record-breaking flights in 1932. On May 20-21, 1932, Earhart became the first woman to fly solo across the Atlantic when she flew from Newfoundland to Ireland. In August of the same year, she became the first woman to fly solo across the continental United States, flying from Los Angeles to Newark, New Jersey, in record time. In 1935, flying a Vega 5C, a high-speed variant with revised tail surfaces, Earhart became the first person to fly solo from Hawaii to the mainland United States, flying from Wheeler Field on Oahu to Oakland, California. Later that year, flying the same Vega, Earhart flew record-breaking flights from Los Angeles to Mexico City, and then from Mexico City to Newark, New Jersey.

The Lockheed Vega shown here is the Model 5B flown by Amelia Earhart on her two record-breaking flights in 1932. Earhart affectionately named this Vega her "Little Red Bus" because of its fire engine red paint and gold trim. In 1933, Earhart sold this Vega to the Franklin Institute in Philadelphia. The Franklin Institute displayed the Vega until 1966, when it gifted the aircraft to the Smithsonian Institution. Today, the Vega is on display in the Barron Hilton Pioneers of Flight gallery at the National Air and Space Museum's flagship location in Washington, D.C.







**Distelfink  
Airlines**

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*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.*

## ABOUT

### **DISTELFINK AIRLINES**

*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.*