March 2025

Corey J Beitler's

"Distelfink Airlines"

An Online Aviation Newsletter

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1/50 Scale Beechcraft T-34 Mentor "Free Spirit" Model

Kawanishi N1K2-Ja Shiden Kai

Aermacchi MB-339A/PAN

American Fighter Aircraft of World War II Bookazine

The toy soldier manufacturer John Jenkins Designs has created an excellent model of the LFG Roland C.IIa German observation and reconnaissance aircraft in 1/30 scale. With its streamlined design and weight-saving techniques used in its construction, the Roland C.IIa was one of the fastest German reconnaissance aircraft when it entered service in 1916.

FROM THE EDITOR'S DESK

LFG Roland C.IIa Model, Kawanishi N1K2-Ja Shiden Kai, Aermacchi MB-339A/PAN

Greetings Everyone:

Welcome to the March edition of "Distelfink Airlines". The newsletter continues to reach readers worldwide. Last month, the newsletter reached readers in Lebanon and Egypt for the first time and has reached readers in 84 countries and territories worldwide. Editions of "Distelfink Airlines" have been read by over 30,000 readers since my hosting site, Heyzine, began tracking readership numbers in 2021. That may not seem impressive, but over 18,000 of these readers have read an edition of the newsletter just in the past year. I'm incredibly thankful to everyone who takes the time to read the newsletter and continues to support my aviation photojournalism efforts. As the weather gets warmer, expect more coverage of outdoor aviation events and airshows, as well as museum trips, and for those events to be featured in the newsletter.

The feature article for this newsletter edition highlights another excellent aircraft model from John Jenkins Designs, the company's LFG Roland C.IIa two-seat German observation and reconnaissance airplane in 1/30 scale. Unfortunately, a trip I intended to do last month for the feature of this newsletter had to be canceled due to inclement winter weather, so this feature article about this model serves as backup content for this edition. The feature article has a history of the LFG Roland C.IIa and a review of the John Jenkins Designs model. This is an incredible model and one of the most difficult John Jenkins Designs World War I aircraft models to find in the secondary market. It is an excellent model and I'm glad to own one of them in my collection. I was able to purchase this model from another collector a few years ago and haven't regretted the purchase. It is an interesting model that starts a conversation every time someone sees it because of its unique paint scheme and excellent detail.

Also featured in this newsletter edition is an article about the Kawanishi N1K2-Ja Shiden Kai fighter that is part of the National Air and Space Museum's collection. The Shiden Kai was one of the best Japanese naval fighters of World War II and was more than a match in speed and armament for the best Allied fighters, including the F4U Corsair and the F6F Hellcat. Unfortunately, the Japanese could not build enough of them to make a difference late in the war and lacked experienced pilots to fly them. The example of the Shiden Kai on display at the National Air and Space Museum's Steven F. Udvar-Hazy Center was one of several captured by Allied forces at the end of World War II.

Finally, the "Aircraft of Special Interest" section features the Aermacchi MB-339A/PAN jet trainer. This jet trainer is used by the Italian Air Force's "Frecce Tricolori" Aerobatic Team at airshow demonstrations in Italy and other locations worldwide. The MB-339s of the "Frecce Tricolori" were seen in the United States and Canada last year when the team conducted a special tour of North America, performing in several airshows as well as flybys of famous landmarks in both countries. The MB-339A/PAN is in its last few airshow seasons with the "Frecce Tricolori", as the team hopes to transition to the new Alenia Aermachhi M-346 Master jet trainer by the 2028 airshow season.

Thank you again for supporting my aviation photojournalism efforts and "Distelfink Airlines". 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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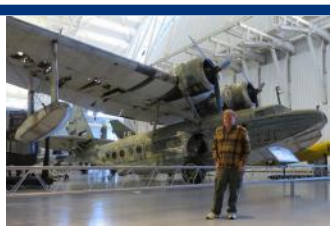

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What's Inside:

Bombardier Global 7500

A Bombardier Global 7500 business jet operated by Vista America on approach to land at the Washington Dulles International Airport in Chantilly, Virginia. The Global 7500 is the largest operational business jet in the world. Since its introduction in 2018, over 200 examples of the Bombardier Global 7500 have been delivered to operators worldwide.

The Bombardier Global 7500 is an ultra-long-range business jet developed by Bombardier Aviation and has the distinction of being the largest operational business jet in the world. The Global 7500 is part of a series of long-range business jets designed by Bombardier including the Global 5500 and 6500 and the stretched and larger 7500 and 8000 models.

The Global 7500 and 8000 project was announced by Bombardier as a clean sheet design in 2010. The metal airframe for the aircraft was designed using aluminum-lithium alloys to save weight and increase range. A new transonic wing was developed for both aircraft. The new wing had a thinner thickness-to-chord ratio, leaner flap track fairings, double-slotted inboard Fowler flaps, and more efficient winglets. The cabin was also a design focus point for Bombardier on the Global 7500 and 8000. The 7500 and 8000 were the first business jets designed with a four-bay cabin. The cabin was designed to seat 19 people comfortably and provided extra space for a sleeping area, an optional shower, and a crew rest area. The cabin design also included larger windows and ergonomic seats for increased passenger comfort. The General Electric Passport 20 turbofan engine was chosen to power the Global 7500 and 8000 due to its efficiency and low carbon emissions. With its efficient engines and aerodynamic design, the Global 7500 has a range of 7,700 nmi (14,300 km) and can reach speeds up to Mach 0.90. Both aircraft feature an advanced fly-by-wire flight control system developed for the Bombardier C-series commercial airliner.

The Global 7500 and 8000 were expected to enter service in 2016 and 2017, respectively. In 2015, Bombardier redesigned the jet's wing to reduce its weight, which delayed flight testing and its entry into service. The Global 7500 finally entered service in 2018. The Global 8000 is expected to enter service sometime in 2025. With its top speed of Mach 0.94, the Global 8000 will be the fastest business jet in the world when it enters service.

The Bombardier Global 7500 pictured was spotted landing at the Washington Dulles International Airport in Chantilly, Virginia. Vista America, a private aviation company specializing in charter operations for corporate and VIP clients, operates this example of the Bombardier Global 7500.


N750B


N750B

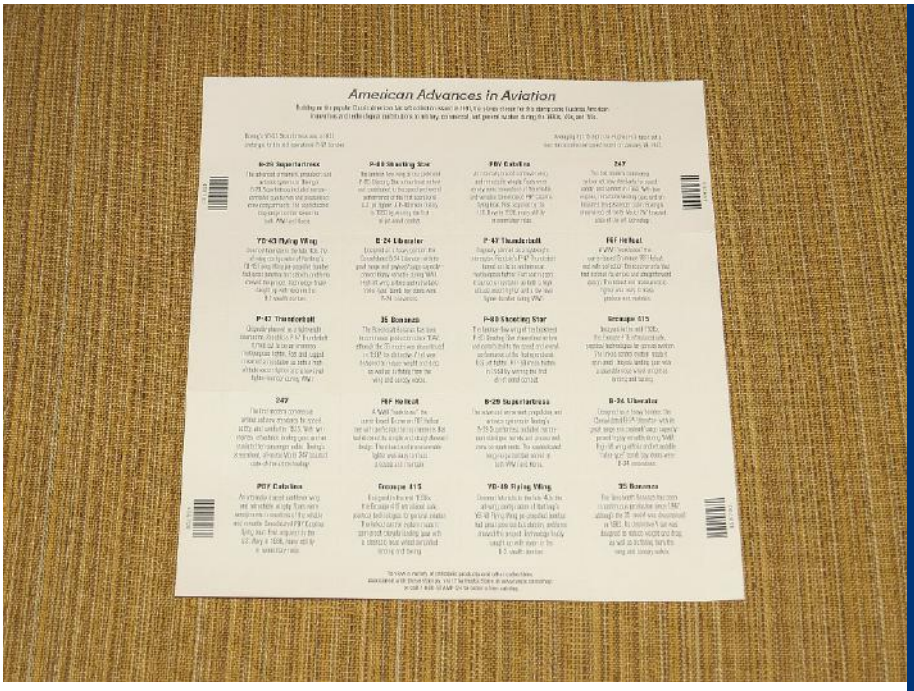
2005 American Advances in Aviation Stamp Set

In 2005, the United States Postal Service issued this commemorative set of stamps featuring aircraft that contributed technological and innovative advances to American aviation during the 1930s, 40s, and 50s. The sheet featured 12 aircraft, 10 on the stamps and two more on the sheet's header. The aircraft selected for inclusion on the stamp set were military, commercial, and general aviation types.

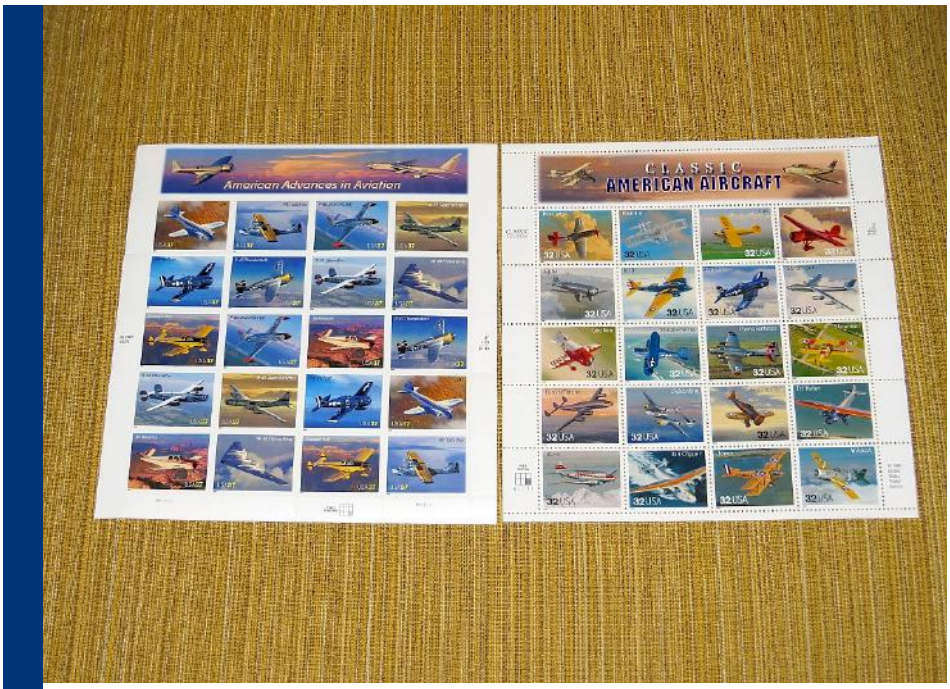
In 1996, the United States Postal Service (USP) issued a set of collectible stamps titled *Classic American Aircraft.* The collectible stamp depicted 20 different aircraft (22 if you counted the two additional airplanes illustrated in the sheet's header) that were iconic and important in American aviation history. Aircraft featured on this collectible stamp sheet included the Piper J-3 Cub, the North American P-51 Mustang, the Douglas DC-3 commercial airliner, and the bright red Lockheed Model 5 Vega flown by Amelia Earhart. The artwork for each stamp on the sheet and the header was painted by renowned aviation artist William S. Phillips of Ashland, Oregon. The *Classic American Aircraft* stamp sheet was well-received by philatelists and aviation enthusiasts.

Building on the success of the *Classic American Aircraft* collectible stamp sheet from 1996, the USPS decided to release another aviation-themed collectible stamp sheet in 2005. This stamp sheet, titled *American Advances in Aviation*, features 10 aircraft (12 if you count the two additional airplanes illustrated in the sheet's header) that contributed to technological and innovative advances in American aviation during the 1930s, 40s, and 50s. Once again, the USPS chose aviation artist William S. Phillips to paint the illustrations of the aircraft used on the stamps and the sheet's header. Similar to his paintings for the *Classic American Aircraft* stamp sheet, Phillips depicted each aircraft at different angles and with unique backgrounds so that no two stamps looked alike. The *American Advances in Aviation* stamp sheet was released on July 29, 2005, in Oshkosh, Wisconsin, during the annual Experiential Aircraft Association's (EAA) Fly-In and Airshow, which is billed as the largest gathering of aircraft in the world during a single week. Some of the famous aircraft chosen for the *American Advances in Aviation* stamp sheet included the Boeing 247 commercial airliner, the Republic P-47 Thunderbolt, and Grumman F6F Hellcat World War II fighters, the Boeing B-29 Superfortress heavy bomber that saw service in World War II and later the Korean War, and the Engineering and Research Corporation Ercoupe 415, and Beechcraft 35 Bonanza general aviation aircraft. The backside of each stamp includes a small description of the aircraft depicted on the front.

The *American Advances in Aviation* stamp sheet is an excellent entry-level collectible item of aviation memorabilia, as the sheet can still be found new and in the original shrink wrap through stamp dealers and online auctions for reasonable prices. The stamps are a great introduction to the most technological and innovative aircraft in American aviation history through beautiful artwork.



A brief description of each aircraft is printed on the back of the stamps. Unlike the 1996 Classic American Aircraft stamp set, which featured 22 different airplanes, the 2005 American Advances in Aviation set features just 12 aircraft, as the USPS did not have the funding to commission 22 new paintings for the later set.



The American Advances in Aviation stamp set followed the well-received Classic American Aircraft stamp set released by the USPS in 1996. Both collectible stamp sets make excellent introductory pieces for aviation memorabilia collectors, being easy to find in mint condition for affordable prices.

1/50 Scale Beechcraft T-34 Mentor "Free Spirit" Model

In 2009, Auto World/Round 2 produced this 1/50 scale die-cast and plastic model of the Beech T-34A Mentor "Free Spirit" flown by aerobatic pilot Julie Clark on the air-show circuit from 1977 until she retired in 2019. The model was produced in part-nership with the Chevron Corporation, which spon-sored Julie Clark and her T-34 "Free Spirit" on the airshow circuit at that time.

The Beechcraft T-34 Mentor is an American propeller-driven, single-engine, military trainer aircraft that was derived from the manufacturer's Beech 35 Bonanza general aviation aircraft. Early versions of the T-34 from the 1940s and 1950s were piston-engine aircraft. These early versions of the T-34 were eventually succeeded by the upgraded T-34C Turbo Mentor, powered by a turbo-prop engine. Decades after it was designed, the T-34 remains in service as a military training aircraft. Early versions of the T-34 retired from military service are popular with antique aircraft and warbird collectors.

The T-34 was the brainchild of Walter Beech, who de-signed it as the Beechcraft Model 45. As there was no military budget for a training aircraft at the time of its design, Beechcraft developed the Model 45 as a private venture. Three initial design concepts were developed for the Model 45, including one that featured the Bo-nanza's signature V-tail. The final design that emerged in 1948 incorporated conventional tail surfaces for the military, which favored more conservative designs. The Bonanza's fuselage with its four-place cabin was re-placed with a narrower fuselage and a two-place cockpit with a bubble canopy. The same engine used in the Bo-nanza, the Continental E-145 inline piston engine, was chosen to power the Model 50. During the flight testing of the prototypes, one was fitted with a more powerful Continental E-225 inline engine, which was similar to the engine used in the production version.

Production of the T-34 did not begin until 1953. The first production versions were the T-34A for the U.S. Air Force and Model B45 for export. Production of the T-34B variant for the U.S. Navy began in 1955. This ver-sion had a number of changes reflecting requirements of the U.S. Navy. The U.S. Navy T-34Bs had differential braking instead of nosewheel steering, additional wing dihedral, and to cater to the different heights of pilots, adjustable seats and rudder pedals. Production of the T-34A was completed in 1956, with T-34Bs being built until 1957. Model B45 versions were built in Canada, Japan, and Argentina until 1958. Total production of the Continental–engine versions in the United States and abroad totaled 1,509 examples.

After a production hiatus of nearly 15 years, the T-34C Turbo-Mentor powered by a Pratt & Whitney CanadaP-T6A-25 turboprop engine was developed in 1973. Development of this version was done at the request of the U.S. Navy, who supplied two T-34Bs for the conversion process. The T-34B's original Bonanza/Debonair wing was replaced with the wing from the larger Beech Baron and the landing gear was replaced with the landing gear from the even-larger Beech Duke. Production of the T-34C for the U.S. Navy began in 1975. Production of the T-34C-1, an armed version for export customers with four underwing hardpoints for ground-attack missions, began in 1977. The final T-34C Turbo-Mentors rolled off the production line in 1990.

In U.S. Air Force service, the T-34A entered service and began replacing the North American AT-6 Texan in the primary training role in 1954. The T-34A then remained the primary trainer in the U.S. Air Force until the arrival of the Cessna T-37 Tweet jet trainer in the late 1950s. As the T-34As were replaced by the T-37s, many of them were turned over to U.S. Air Force aero clubs at air force bases in the United States and overseas. Others were marked for foreign military sales. Some of the T-34As were also turned over to the Civil Air Patrol for use as search aircraft. The last T-34As were retired by the Civil Air Patrol in 2003.

In U.S. Navy service, the T-34B was used as a Naval Air Training Command primary flight trainer until the 1970s, and as a Navy Recruiting Command aircraft until the 1990s. Some T-34Bs remain operational with flying clubs at U.S. Navy and Marine Corps bases. The T-34C Turbo-Mentor became the U.S. Navy's new primary training aircraft for Student Naval Aviators in 1975. In the mid-1980s, the T-34C commenced service as a basic trainer for Student Naval Flight Officers at Naval Air Station (NAS) Pensacola, Florida.

The T-34C has been retired as a training aircraft in the U.S. Navy, having been fully replaced by the North American AT-6 Texan II in the role. Several T-34Cs remain in service at the Naval Air Test Center at NAS Patuxent River, Maryland and as aerial spotter planes with F/A-18 Fleet Replacement Squadrons (FRS) and Strike Fighter Weapons and Tactics Schools at NAS Oceana, Virginia, NAS Lemoore, California, and Marine Corps Air Station (MCAS) Miramar, California. NASA has also used a pair of T-34Cs as chase airplanes to chase remotely piloted unmanned vehicles on research and test flights.

For a model in its size and price range, Auto World/ Round 2's model of Julie Clark's T-34 Mentor "Free Spirit" has a nice assortment of moving parts. The model features rolling wheels, a rotating propeller, and moving wing flaps. The model includes a metal display stand featuring the Chevron Petroleum Company's branding, as the company sponsored Julie Clark in 2009 when this model was originally sold.

Although the Auto World/ Round 2 model of Julie Clark's T-34 Mentor "Free Spirit" includes a display stand, the model can also be displayed on its landing gear, which is molded in the fixed down position. Auto World/ Round 2 did an excellent job replicating the T-34 Mentor's overall shape and distinctive features, such as the large cockpit canopy, on the model.

Variants of the T-34 have also been used by several nations worldwide as a primary flight trainer and ground-attack aircraft. As of 2007, a number of nations continue to fly variants of the T-34 in military service. T-34s retired from military service have passed into civilian hands through surplus sales. Today, restored T-34's remain popular with airshow performers, warbird enthusiasts, and vintage aircraft owners.

One of the most prominent pilots who flew a T-34 Mentor in airshow performances was Julie Clark. A now-retired commercial airline pilot and airshow performer with over 50 years of experience and type-rated in 66 different aircraft types, Clark began flying a T-34 Mentor named "Free Spirit" at airshows in 1977. Clark bought the T-34 at a government auction in Alaska for $18,000. After restoring the T-34 over four years and giving it a unique paint scheme, Clark flew the airplane in aerobatic routines at approximately 20 airshows each year until 2019. During her airshow career, Clark and her T-34 Mentor were sponsored by several companies, including Mopar, Chevron, Tempest, and Juice-Plus. A favorite in the airshow industry and among airshow fans, Clark won several awards during her long and successful career as an airshow performer.

This 1/50 scale die-cast model of a Beech T-34A Mentor was manufactured by Auto World/Round 2, which sells die-cast cars, trucks, and aircraft. The model is part of company's Vintage Fuel product line, which features models of trucks, cars, and aircraft with promotional gasoline advertising. This model represents Julie Clark's Beech T-34A Mentor when she was sponsored by the Chevron Corporation in 2009. This model was available exclusively through Auto World/Round 2 die-cast dealers and through the Chevron Corporation. The model comes in a decorative box featuring the Chevron logos and pictures of Julie Clark and the T-34 "Free Spirit". The back panel of the box has some brief literature on Clark and her airplane.

The T-34 Mentor model is made of die-cast metal and plastic. For this model release, Auto World/Round 2 used a mold of the T-34 previously manufactured and released under the Arch and Model Power brand names. The Auto World/Round 2 version does not have pilot figures in the cockpit as previous versions of the model did but does have moving wing flaps, a turning propeller, and rolling wheels. The model can be displayed either on its fixed landing gear or on the provided display stand, which features the Chevron logo.

For a basic model, Auto World/Round 2 did a terrific job replicating the paint scheme that Julie Clark's T-34 wore during the 2009 airshow season. The model features the correct blue and aluminum color scheme Julie Clark chose for her T-34 and the Chevron sponsorship branding logos in the proper locations. The paint application has excellent quality, and there are no significant imperfections, errors, or overspray on the model.

Another highlight of the model is the overall accuracy of the mold. The model has the correct shape of a Beech T-34A Mentor. The panel lines and textures of the control surfaces of the model are replicated nicely. The model also has a nice selection of moving parts for a product in its price range, including the rotating propeller, rolling wheels, and working flaps on the wings.

There are a few aspects of the model that could have been improved upon. Unfortunately, the cockpit interior only features basic mold and paint detail. Since the T-34 Mentor has a large clear canopy, the basic details of the cockpit interior stand out when the model is on display. As mentioned earlier, when this model was manufactured by Arch and Model Power, pilot figures were included in the cockpit. These pilot figures helped hide some of the lack of detail in the model's cockpit. Two versions of this model were made by Arch in the color scheme of Julie Clark's T-34 when it was sponsored by Mopar. Figures of Julie Clark and her pet dog were included in the cockpits on the first version of the Arch model and would have been a nice addition to this model. Added paint details would have improved the look of the model's cockpit.

Another weak point of this model is the display stand. There is no way to lock the model onto the cradle designed to hold the model on the top of the display stand. The cradle is also movable to allow the T-34 model to be displayed at different angles. Unfortunately, it is easy to knock the model off the cradle on the stand and send it crashing to the desk or table below. A safer method to display the model is on its fixed landing gear, which is sturdy and easily supports the weight of the model.

The Auto World/Round 2 model of Julie Clark's Beech T-34A Mentor "Free Spirit" is easy to find on the secondary market new in the box for reasonable prices. The model is an unusual addition to any die-cast airplane collection. It is an excellent way to honor one of the pioneering female pilots in the airline industry and an aerobatic pilot beloved as an performer by airshow audiences throughout her career.

Although Auto World/Round 2's model of Julie Clark's T-34 Mentor "Free Spirit" is a decent representation of the actual airplane, there are some features that could have been improved. The metallic blue paint used on the model is slightly darker than the hue used on Julie's airplane. The model also lacks cockpit detail. The lack of detail and pilot figures in the cockpit is noticeable due to the T-34's large canopy.

John Jenkins Designs LFG Roland C.IIa Walfisch

The toy soldier manufacturer's excellent model of one the German World War I observation and reconnaissance aircraft features incredible details and a striking color scheme.

The John Jenkins Designs LFG Roland C.IIa model is an excellent addition to the manufacturer's "Knights of the Skies" product line of 1/30 scale World War I toy soldiers, ground vehicles, aircraft, and diorama accessories. The model is a well-detailed replica of an aircraft that saw service from 1916 to 1918 as a German observation and reconnaissance aircraft.

The LFG Roland C.II and C.IIa was a World War I German reconnaissance and observation aircraft of advanced design that entered service in 1916. John Jenkins Designs, a toy soldier company, made an excellent model of the LFG Roland C.IIa as part of its "Knights of the Skies" product line of World War I figures, vehicles, and diorama accessories. In this photo, the model is shown in a World War I German airfield diorama display.

The LFG Roland C.II was an advanced two-seat reconnaissance aircraft built by LFG Roland in 1915. Introduced into service in 1916, the airplane was used extensively by the German Luftstreitkräfte (the air arm of the Imperial German Army) throughout World War I. The LFG Roland C.II incorporated many innovative ideas into its design, such as a lowered upper wing assembly, drag and weight-reducing "I" struts, and an aerodynamically refined fuselage. Nicknamed the Walfisch ("Whale") by its crews due to its shape, the LFG Roland C.II was one of the fastest and most maneuverable aircraft of its type when it entered service. By the end of the war, the deployment of newer and more advanced aircraft made the LFG Roland C.II obsolete, and the type was relegated to training roles for the remainder of the conflict.

In 1915, Luft-Fahrzeug-Gesellschaft (LFG) Roland began building Albatros B.I, B.II, and C.I, reconnaissance and observation aircraft under license. Because another German aircraft manufacturing firm had a similar sounding name, the company eventually became more commonly known as just Roland. Around the same time, Kurt Tantzen joined the company as its chief designer. With Tantzen employed as the chief designer and with the experience gained from building the Albatros types under license, LFG Roland began designing their own reconnaissance and observation airplane, the C.II. Rapid advances in aviation technology were making the Albatros reconnaissance types obsolete, and LFG Roland felt they could build a similar aircraft with improved performance.

The C.II incorporated a streamlined fuselage constructed of thin layers of veneer strips wrapped around a simple plywood frame. The veneer strips were then glued together and reinforced with fabric. The result of this process was a fuselage that had a sturdy and streamlined design. The process of building the fuselage was an early attempt at monocoque construction, which involves having a shell built around a frame. Although this was an excellent construction technique to reduce drag and create a strong fuselage, it was time-consuming and expensive to build, limiting the numbers available for service.

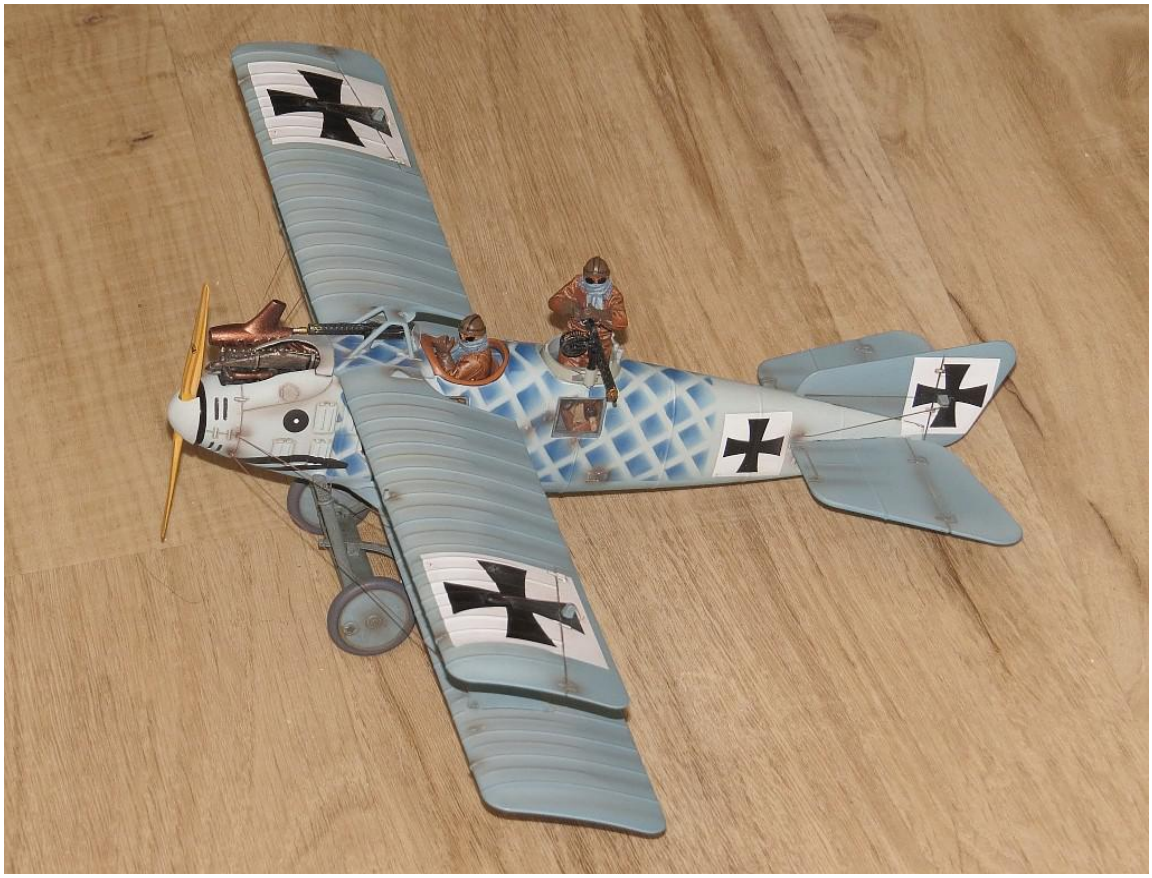
The deep fuselage also contained cockpits for the pilot and the observer. Unusually, both cockpit positions were designed so the pilot and observer sat on the top of the fuselage above the top wing. The pilot's cockpit had a windshield and a metal roll bar in front of the cockpit to protect the pilot's head in case the aircraft flipped over on landing. The fuselage had two celluloid windows on each side of the fuselage to observe troop movements. The observer's position was also equipped with a radio, powered by an airscrew-powered dynamo located near the landing gear, and flares to signal ground forces on the location of enemy troop positions. Finally, as a defense against enemy fighter aircraft, the observer's cockpit contained a 7.92 mm (0.312 in) Parabellum machine gun mounted on a rotating ring.

Another innovative feature of the LFG Roland C.II was the design of its wings. The wings were made of wood and covered in doped fabric, a standard construction method of the time. The wings were of equal span and chord. The wings were built into the fuselage, and single "I-Struts" constructed of plywood and reinforced internally connected the wings together. This construction method limited the bracing wire needed for the wings and helped the C.II have a clean design. The ailerons were located in the lower wing and constructed of steel tubing covered with doped fabric. The tail unit consisted of a single vertical fin with large horizontal planes. The tail unit was constructed of wood and covered with doped fabric.

The Mercedes-Benz D.III, a six-cylinder, water-cooled, inline engine that produced 160 horsepower, was chosen to power the C.II. The engine was mounted in the front of the aircraft and drove a wooden propeller. The fuselage panels surrounding the engine were the only part of the airplane constructed of metal. Some of these panels were equipped with hinges so they could be opened and give mechanics easy access to the engine components to service the engine. The engine had two radiators on each side of the fuselage for cooling purposes.

The LFG Roland C.II, and later, the improved C.IIa, were single-engine, two-seat, reconnaissance and observation airplanes used by the German (Luftstreitkräfte) throughout World War I. The aircraft was an innovative design for its time, with a streamlined fuselage and powerful Mercedes-Benz D.III six-cylinder engine. This 1/30 scale model of an LFG Roland C.IIa was made by the toy soldier company John Jenkins Designs.

When introduced in 1916, the LFG Roland C.II had an impressive top speed of 103 miles per hour and could fly at a ceiling of 13,000 feet. This speed was faster than any other German reconnaissance aircraft and most Allied fighter aircraft. The C.II and C.IIa's high speed allowed it to operate as an escort fighter and ground attack aircraft in addition to its usual role as a reconnaissance and observation aircraft.



The prototype C.II flew for the first time in October 1915. The first flight of the prototype ended in disaster when its engine failed in flight, the resulting crash landing damaging the aircraft. This prototype was quickly repaired and joined by a second flying prototype. During test flights, it was found that due to its aerodynamic design and powerful Mercedes-Benz D.III engine, the C.II had a top of 103 miles per hour (165 kilometers per hour), faster than any other German reconnaissance aircraft then in service and a service ceiling of 13,000 ft (4,000 meters). The C.II also had an impressive endurance of four to five hours. After minor design changes to improve the aircraft's stability, the Luftstreitkräfte ordered an initial production batch of 50 examples. By March of 1916, these initial C.IIs were ready to be sent to squadrons on the front lines.

The C.II was pressed into service alongside many German aircraft types within the Luftstreitkräfte as it tried to get the upper hand against the Allied offensives taking place. Some of these aircraft were modern, some were obsolete, and some like the C.II, were all-new designs. Control of the skies often shifted when a new development in aviation design could render aircraft obsolete within weeks of their introduction.

Pilots initially judged the performance of the C.II as strong. Its top speed was so fast that it outran all other German reconnaissance aircraft and most Allied fighter aircraft. This caused the Luftstreitkräfte to assign the C.IIs to special reconnaissance squadrons, where they could operate together and use their speed as their strength. The Roland C.II's speed also allowed it to be used as an escort fighter. One of the first modifications to the C.II was pilots adding a forward-firing machine gun to the aircraft as an in-field modification so it could be used to dogfight against Allied fighters. This modification did not go unnoticed by the Luftstreitkräfte, which ordered a second production batch of C.IIs totaling 79 aircraft. These C.IIs were factory-equipped with a forward-firing 7.92 mm (0.312 in) Spandau machine gun synchronized to fire through the propeller.

This angle of the John Jenkins Designs LFG Roland C.IIa model highlights one of the flaws in the aircraft's design. The position of the cockpits for the pilot and gunner/observer and the airplane's large wings made it extremely hard for the crew to see below the aircraft. Allied fighter pilots quickly discovered they could attack the LFG Roland C.IIs and C.IIas undetected from below.

Unfortunately, the C.II was not without its flaws. In the observer role, because the crewmen were seated above the body, visibility above the plane was superb, but the visibility in front of the aircraft was lacking, and visibility beneath the airplane was poor. An early attempt to fix this was placing cutouts in the base of the wings, but the solution was inadequate. Allied fighter pilots quickly discovered this weak spot in the Roland C.IIs design and began attacking the aircraft from below, where its crew could not detect an enemy aircraft. The poor visibility also made landing the C.II difficult. Pilots had trouble calculating how close they were to the ground when landing and more than one C.II ended up upside down at a German airfield due to a landing mishap during its time in service.

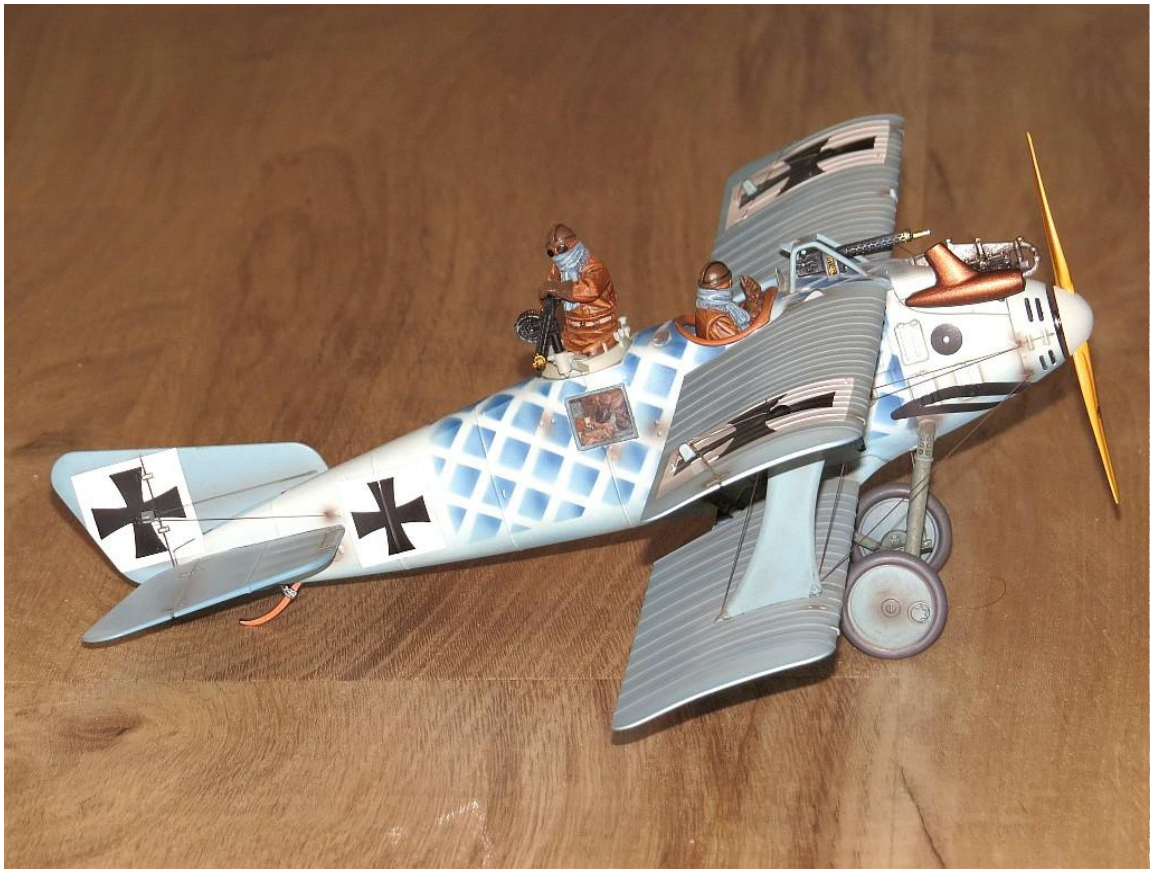
To address some of the shortcomings of the C.II, Roland reworked the aircraft. Introduced in April 1916, the C.IIa had shortened wings and I-struts that were moved inward. These changes made the wings much more structurally sound and eliminated a wing flexing problem prevalent with the earlier C.II. The ailerons were also moved to the top wing, and the vertical fin was enlarged to improve stability and maneuverability. Finally, a bomb rack was introduced on the C.IIa that could carry four 28 lb (12.5 kg) bombs. This bomb rack could be retrofitted to the earlier C.IIs already in service. The bomb rack allowed the C.II and C.IIa to be used in a ground attack role while flying escort duties for other German reconnaissance aircraft.

Over 90 C.IIas were built between April and June 1916. Large numbers of C.IIs and C.IIas were operational and took part in the Battle of the Somme during the summer of 1916 as reconnaissance and escort aircraft. The C.II and C.IIa were used throughout the rest of 1916. The last examples of the C.IIa built were completed by the Linke-Hofman Company under license as the C.IIa(Li) in early 1917. By then, the Roland C.II and C.IIa had lost their performance edge. The surviving examples were sent to training schools where they would serve until the end of the war in 1918.

Approximately 400 LFG Roland C.IIs and C.IIas were built from 1916 to 1918. In 1916, Roland attempted to design a successor to the C.II and C.IIa, the C.III. The C.III had larger wings, a different vertical fin, and a more powerful 200-horsepower Mercedes-Benz D.IV engine. Development of the C.III never progressed beyond the prototype stage and it is not known if the prototype ever flew, as it was destroyed in a factory fire in September 1916.

This 1/30 scale model of the LFG Roland C.IIa was manufactured by the toy soldier company John Jenkins Designs as part of their "Knights of the Skies" series of toy soldiers, vehicles, and diorama accessories representing World War I. John Jenkins Designs released the LFG Roland C.IIa in two color schemes. The first model was product-coded ACE-050, and released in 2018. This LFG Roland C.IIa was painted in a green and purple camouflage color scheme. The second release of the model was product-coded ACE -051 and released in 2020. The example of the LFG Roland C.IIa featured in this article is the second release of the model, and the airplane is painted in a striking light blue color scheme and wearing markings resembling a fish face and scales on its nose and fuselage sides. This model represents a LFG Roland C.IIa supposedly flown by Lt. Richard Seibert, with Hptm. Arthur Pfleger as the observer/gunner as part of Bavarian Feldflieger Abteilung 5b on the Western Front in late 1916.

The John Jenkins Design 1/30 scale LFG Roland C.IIa is a stunning model of the German World War I two-seat reconnaissance aircraft. To date, it is the only two-seat aircraft offered by John Jenkins Designs in their "Knights of the Skies" collection of World War I aircraft. Since the model replicates a two-seat aircraft, the size is impressive, with a wingspan of 13 in (33 cm) and a length of 10 in (25 cm. Similar to other John Jenkins Designs 1/30 scale aircraft models, the LFG Roland C.IIa is made of mixed media materials with resin, plastic, and photo-etched metal parts being used throughout the model to accurately replicate details found on the actual aircraft in miniature form.



In service, the LFG Roland C.II and C.IIa were nicknamed "Walfisch" ("Whale ") by their crews due to the shape of the aircraft's fuselage. Many crews painted stylized fish faces on their airplanes as a homage to the aircraft's nickname. The John Jenkins Designs LFG Roland C.IIa represents an aircraft that served on the Western Front in late 1916. The LFG Roland C.IIa not only had a fish face painted on its nose but also stylized fish scales painted on its fuselage sides.

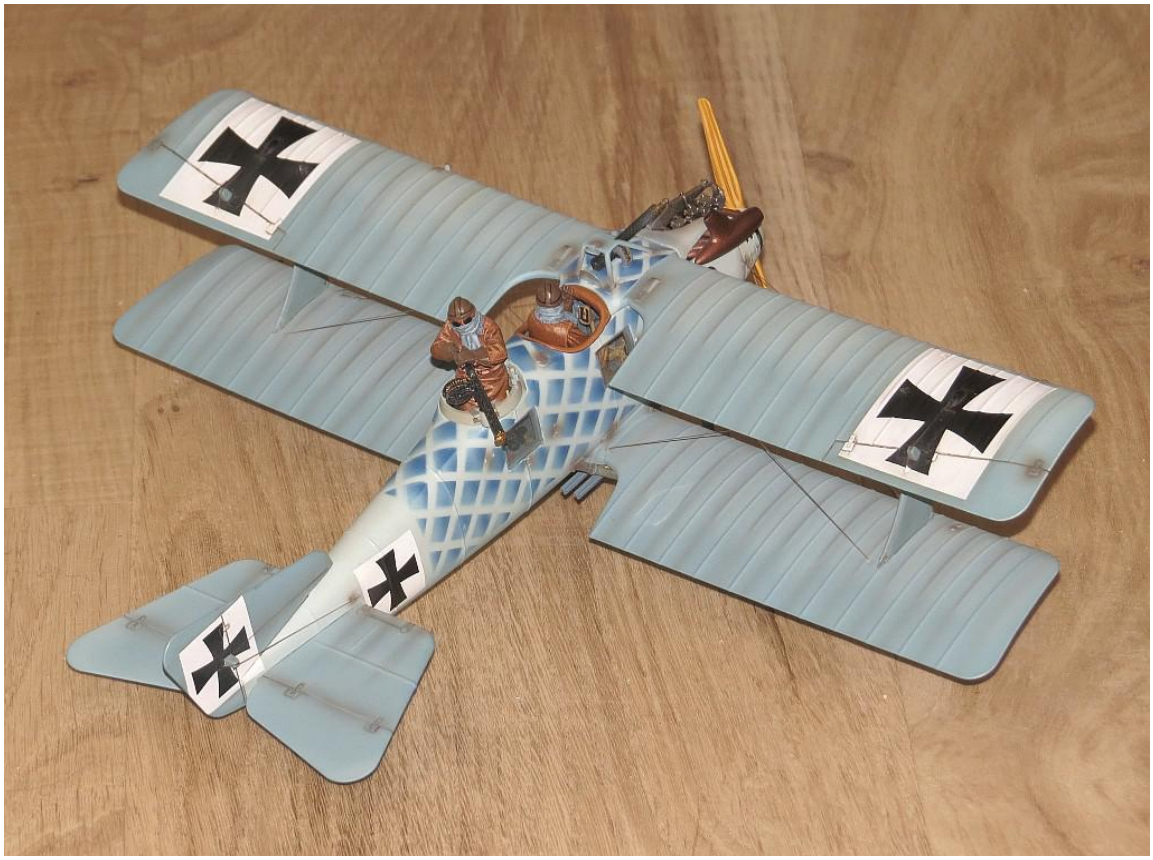
One of the most impressive aspects of the John Jenkins Designs LFG Roland C.IIa is the excellent effort put into the model to get its overall shape and unique details correct. The unusual shape of the C.IIa's horizontal tailplanes and streamlined fuselage are all replicated accurately. Other easily identifiable parts of the LFG Roland C.IIa's design, such as the cockpits positioned above the fuselage, celluloid windows in the fuselage, distinctive "I-Struts" connecting the wings, and the large equal span wings with prominent ribs are all replicated on the model.

Another highlight of this excellent model is the paint scheme. Most models of the LFG Roland C.IIa are painted in standard camouflage patterns. John Jenkins Designs chose a correct light blue scheme for this model. The unusual color scheme stands out in any collection of World War I aircraft. John Jenkins Designs also did an excellent job paying homage to the C.II and C.IIa's "Walfisch" nickname by choosing a scheme that included a fish face on the nose of the aircraft. Many LFG Roland C.II and C.IIa crews decorated their aircraft with a stylized fish face in honor of the "Walfisch" nickname the LFG Roland C.II and C.IIa received by the crews that flew it. Since so few photographs survive of World War I aircraft, it is not known for certainty if this LFG Roland C.IIa ever had the "fish scales" painted on its fuselage sides as this model and several artistic illustrations of this aircraft depict.

John Jenkins Designs also did an excellent job replicating the LFG Roland C.IIa's bracing and drag wires. The wires used throughout the model are tinted in an earth color, which gives them a scale-like appearance on the model. The wire is thin and fragile, so the model must be handled carefully. In addition to the authentic-looking bracing and drag wires on the model, John Jenkins Designs also added realistic weathering on their LFG Roland C.IIa. These weathering effects give the model the appearance of an airplane that has been on the front lines and in combat. The weathering is not overdone and adds a sense of realism to the LFG Roland C.IIa without ruining its unique and colorful paint scheme.

The John Jenkins Designs LFG Roland C.IIa model has many smaller details that make it an exceptional model of the German World War I observation and reconnaissance aircraft. These details include a simulated wood grain propeller, a detailed engine, seats, flight instruments in the cockpits, and photo-etched metal machine guns in front of the cockpit and on the ring system at the observer/gunner position.

For the John Jenkins Designs LFG Roland C.IIa model, the manufacturer made a pilot and gunner/ observer figure set for the cockpits of the model that were sold separately. These figures are exceptionally well sculpted and painted and are an excellent addition to the model.



Lastly, John Jenkins Designs did an exceptional job using mixed media materials to capture intricate details on the model. Photo-etched metal parts were used to recreate a detailed Mercedes-Benz D.III engine in the nose of the model, complete with the cooling lines and exhaust stacks. Photo-etched metal parts were also used to replicate the bomb rack and four bombs located on the underside of the fuselage and the forward-firing Spandau machine in front of the cockpit. Smaller details are also recreated on the model with excellent accuracy, such as the roll bar just in front of the cockpit, complete with the rear-view mirror mounted on the top so the pilot could see if an enemy aircraft was behind him.

John Jenkins Designs also did an excellent job recreating the cockpits of the LFG Roland C.IIa on the model. Each cockpit has a detailed seat with molded seat belts. The front cockpit has a control stick and painted flight instruments and gauges. The observer's cockpit includes a Parabellum machine gun mounted on the ring system that the observer would have used for defense against enemy fighters. The exceptional detail throughout the model gives it a realistic appearance.

For an added sense of realism for the cockpit, a set of figures can be purchased separately from John Jenkins Designs. This set includes a seated pilot and an observer seated on the ring system holding the Parabellum machine gun mounted on the ring and aiming at an enemy aircraft. For the model featured here, this set of figures is product-coded ACE-051P. The pilot and observer are fully painted and sculpted in flight gear the LFG Roland C.IIa crews would have worn. The paint and sculpt quality of these figures is excellent. The pilot is sculpted in the seated position and easily fits into the front cockpit of the model. For the ACE-051P figure set, the ring system for the machine gun is painted light blue to match the light blue color of the airplane. The observer is attached to the ring system, and this piece is added to the model by swapping out the original gun and ring system piece with the one including the observer figure.

A front view of the John Jenkins Designs LFG Roland C.IIa model shows the bracing and drag wires that were present on the real aircraft faithfully recreated in miniature form on the model. Unfortunately, the wire used on the model for the bracing and drag wires is fragile and easy to break if the model is not handled carefully.

Although the John Jenkins Designs 1/30 scale LFG Roland C.IIa is an excellent model, there are elements of the model that could be improved. The paint scheme on the model is beautiful, but the light blue paint scratches easily and these scratches are noticeable if one occurs. Some of these scratches occur during shipment to John Jenkins Dealers when the model rubs against the foam packing inserts surrounding the model within its box to prevent breakage. Although John Jenkins Designs seems to have stopped making World War I aircraft models, one solution to this for any future model aircraft releases might be a coat of flat clear coat over the model's paint to protect the colors and markings and prevent any scratching or scuffs on the paint surfaces.

Another area of this model that could be improved is the drag and bracing wires. Although the LFG Roland C.IIa did not have many of these wires, two drag wires are in a spot on the LFG Roland C.IIa model where they are very easy to snag with a dust cloth or finger, causing them to either detach from the model entirely or lose their tension. On the LFG Roland C.IIa, John Jenkins Designs used thin wire to replicate the wires on the actual airplane. These thin wires are fragile and susceptible to breakage. On the model used for this article, two wires had to be glued back into place after becoming detached from the model during shipping. Other collectors have noted similar issues with the thin wires becoming detached on their models of the LFG Roland C.IIa.

The final minor inconvenience with this model is that no stand is included and must be purchased separately. Most model aircraft manufacturers include display stands with their models, whereas John Jenkins Designs does not. With this being one of the larger aircraft made by John Jenkins Designs as part of their World War I aircraft model collection, some collectors would probably like to display this model on a stand to make better use of their available shelf space. It would be excellent if, in the future, John Jenkins Designs could rerelease their acrylic display stands for collectors who need them to display their aircraft models.

The excellent detail of the John Jenkins Designs 1/30 scale LFG Roland C.IIa makes it a great diorama display piece with some of the German ground crew figures and accessories previously released in the "Knights of the Skies" product line by the company. These figures and accessories can be used to create a realistic scene in which the ground crew uses its equipment to prepare the LFG Roland C.IIa for its next mission over the trenches of the Western Front.

These figures and accessories can be combined with 1/30 scale diorama accessories and display bases from other manufacturers to make the scene even more realistic. The toy soldier manufacturer Thomas Gunn Miniatures has made several sets of crates and tarps that work well as additional diorama pieces. This company also made a grass display mat made of hardwearing foam board that makes a great diorama base. Unfortunately, the company recently discontinued most of the display mats it sold as part of its diorama accessories offerings. An excellent alternative is model display bases from a United Kingdom-based company called Coastal Kits. This company makes several different diorama display bases simulating concrete, dirt roads, paved roads, stone roads, grass and dirt, snow, and water. These bases are available in several dimensions and scales, and the scenery is printed directly onto the foam board base for a no-mess setup. The diorama accessories and display bases from these manufacturers combined with the John Jenkins Designs "Knights of the Skies" figures lets any collector put the LFG Roland C.IIa into a realistic diorama scene in their collection.

The John Jenkins Designs LFG Roland C.IIa is an excellent replica of one of World War I's most famous fighter aircraft. The model is a great addition to the company's "Knights of the Skies" series of World War I aircraft, vehicles, figures, and diorama accessories in 1/30 scale. The LFG Roland C.IIa is well-detailed, and its unique color scheme and markings make it a wonderful model to display on a desk or bookshelf or in a realistic diorama setting with other John Jenkins Designs and other toy soldier manufacturers World War I 1/30 scale vehicles and figures.

The John Jenkins Designs LFG Roland C.IIa is prepared for its next mission in this diorama featuring the model. The model looks terrific displayed with the German mechanic figures released earlier in the John Jenkins Designs "Knights of the Skies" series. An additional crew consisting of a Roland C.IIa pilot and observer are part of this diorama. This crew is checking their map for enemy troop and artillery locations a final time before boarding their aircraft nearby.

Kawanishi N1K2-Ja Shiden Kai

A Kawanishi N1K2-Ja Shiden Kai on display in the National Air and Space Museum's Steven F. Udvar-Hazy Center in Chantilly, Virginia. Entering service in late 1944, the N1K2 Shiden was one of Japan's best late-war naval fighter aircraft. Produced in small numbers, the N1K2 Shiden was issued only to elite naval squadrons of the most experienced pilots. This restored N1K2-Ja Shiden Kai is painted in the markings of the 343rd Kōkūtai, a Japanese squadron that flew interception missions in defense of the Japanese home islands.

The Kawanishi N1K2-J Shiden (Violet Lightning) was the official name and designation given to the best Japanese naval fighter produced in quantity from late 1943 to the end of World War II. The Allies gave it the codename GEORGE. Ironically, this outstanding land-based naval fighter originated from a floatplane design, the N1K1 Kyōfu (Strong Wind), Allied codename REX.

Before and during World War II, many countries built floatplanes for missions such as reconnaissance and hunting enemy submarines and surface ships. Although some countries built prototypes of fighter planes on floats to test the concept, only Japan fielded large numbers of fighter planes on floats. The Imperial Japanese Navy planned to use these specialized fighter planes to gain aerial superiority to support amphibious landings when carrier or land-based fighters were unavailable. These fighter planes on floats also served as patrol aircraft on the remote Japanese-held islands on the southern fringes of Japan's Pacific empire. The Kawanishi N1K1 Kyōfu was the only airplane designed specifically for this purpose during World War II.

The design work for the N1K1 began in 1940 when the Imperial Japanese Navy issued a specification for floatplane fighters capable of supporting amphibious operations. A team of Kawanishi engineers had the prototype N1K1 ready by May 1942, and it flew for the first time on May 6. The Navy's requirements for the new aircraft were almost impossible to achieve for a floatplane, and the N1K1 went through several design changes and prolonged development. This delay led Nakajima to develop a float plane version of the Mitsubishi A6M Zero, the Nakajima A6M2-N, as an interim solution.

The N1K1 Kyōfu entered service in 1943. By this time, Japan was on the defensive, and there was no need for the aircraft in its original role. The requirement to carry a bulky and heavy float severely hampered the N1K1's performance against modern American fighters. The N1K1 Kyōfu saw limited service, mostly on islands in Southeast Asia. A few N1K1s were also used during the Battle of Okinawa. Toward the end of the war, N1K1 Kyōfus were used as home defense fighters, operating from Lake Biwa northeast of Kyoto.

Even before the first N1K1 Kyōfu flew, Kawanishi engineers believed that the basic design would make an excellent land-based fighter. The conversion to a land-based fighter aircraft would involve replacing the main and wingtip floats with conventional landing gear. Kawanishi developed the land-based version of the fighter as a private venture. As the project unfolded, the engineers replaced the original 14-cylinder MK4C *Kasei* 13 engine with a new 18-cylinder Nakajima NK9A *Homare* 11 radial engine. This new engine was expected to develop 2,000 horsepower. The new fighter also featured long main landing gear, necessitated due to the mid-mounted wing and the large propeller. A unique feature of the fighter was combat flaps that automatically adjusted in response to acceleration, reducing the chances of stalling in combat.

The early flight testing revealed problems with the new fighter. The Nakajima NK9A *Homare* 11 engine, although powerful, had been rushed into production and suffered from reliability problems. Landing gear failures also occurred due to poor heat treatment of the wheels. Despite the teething problems, the new fighter showed promise. It was faster than the Mitsubishi A6M Zero and had a greater range than the Mitsubishi J2M Raiden. The Imperial Japanese Navy desperately needed new fighter planes and ordered the N1K1-J into production.

Just days after the prototype flew, Kawanishi engineers completely redesigned the N1K1-J. The N1K2-J addressed all the major defects of the N1K1-J. The wings were moved to a lower position on the airframe, which allowed the engineers to use a shorter main landing gear design. The fuselage was lengthened, and the tail was redesigned. Production of the aircraft was also simplified so over a third of the parts of the N1K1-J could be used in the new variant, while construction used fewer raw materials. The *Homare* engine was retained in the design despite its reliability problems because no replacement was available. The new N1K2-J was 550 lb (250 kg) lighter than its predecessor, making it faster and more maneuverable. After completing flight trials in April 1944, the new variant was rushed into production as the N1K2-J Shiden-Kai.

The first of the N1K1-Js entered service in 1943. The early production examples of the airplane were used by the Imperial Japanese Navy for pilot familiarization and training. In anticipation of the Allies conducting an amphibious landing in the Philippines, the Imperial Japanese Navy sent the first operational Shiden squadron to Cebu in time to challenge Allied fighters supporting the invasion of the island in October 1944. Engine reliability, landing gear, logistics, and maintenance problems plagued the Shiden units flying in the Philippines. Allied pilots tangling with the Shiden in combat soon realized they were facing a new and powerful Japanese fighter.

Just over 1,000 examples of the N1K1-J Shidens were built before production switched to the improved N1K2-J variant. Unfortunately, production difficulties and B-29 bomber raids on Kawanishi factories meant only 415 examples of this superior variant were built. As a result, the N1K2-Js were issued only to elite naval fighter units, such as the 343 Kōkūtai (343rd Naval Fighter Group), constituted on December 25, 1944. This unit consisted of some of the Imperial Japanese Navy's most experienced pilots, including Saburo Sakai and Naoshi Kanno. This unit, commanded by Minoru Genda, received the best equipment available, including the N1K2-J and the Nakajima C6N Saiun (Allied Codename: MYRT) long-range reconnaissance aircraft.

The 343 Kōkūtai was involved in several engagements against American naval aircraft. On March 19, 1945, Shidens from the squadron intercepted 300 American fighter and attack aircraft from U.S. aircraft carriers steaming toward Japan. During one of the numerous engagements that day, Shidens tangled with Grumman F6F Hellcats from U.S. Navy Fighter Bomber Squadron 17 (VBF-17), with eight F6F Hellcats lost in exchange for six Shidens. In another engagement, three F4U Corsairs were shot down and five damaged by Shidens from the 343rd Kōkūtai. Several other engagements between the 343rd Kōkūtai and American naval fighters took place throughout the day, with both sides suffering heavy losses. By the end of the day, the 343rd claimed 52 American fighters destroyed, while the U.S. Navy claimed 63 Japanese aircraft destroyed.

In every encounter with American fighters, the Shiden, especially the *Kai* variant, proved to be a capable dogfighter with an excellent combination of firepower, agility, speed, and a rugged structure. The Shiden was competitive and could hold its own in the hands of an experienced pilot against the premier late-war Allied fighters, such as the North American P-51 Mustang and Grumman F6F Hellcat. The Shiden was less suited to interception missions against B-29 Superfortress bombing raids over the home islands because of its poor rate of climb and lack of power at high altitudes.

Kawanishi developed several variants of the Shiden designed for specialized missions, such as high-altitude bomber interception, dive bombing, and ground attack. Due to Japan's military situation at the end of the war, many of these variants were proposals only and never reached prototype or production stages. Although the Shiden was an excellent design, the fighter appeared too late in the war and in too few numbers to make any difference in the outcome of the conflict.

The National Air and Space Museum's N1K2-Ja Shiden Kai is one of four surviving examples of the Shiden found in museums today. This variant of the Shiden Kai was designed for fighter interception and could carry four 550 lb (250 kg) bombs for ground-attack missions. The Shiden is one of four recovered from Japanese airfields and brought to the United States for evaluation at the end of the war by American intelligence agents. After being evaluated at the Naval Aircraft Factory in Philadelphia, the Shiden Kai was moved to the Willow Grove Naval Air Station near Philadelphia.

At Willow Grove Naval Air Station, the Shiden Kai was placed in outdoor storage for several years with other captured Japanese and German aircraft from World War II and deteriorated from exposure to the elements. The Shiden Kai was acquired by the Smithsonian Institution in 1983. The airplane was loaned to the Champlin Fighter Museum in Mesa, Arizona, in 1991 for restoration, with the project completed in 1994. The restored Shiden Kai is now on display in the National Air and Space Museum's Steven F. Udvar-Hazy Center in Chantilly, Virginia.

Aermacchi MB-339A/PAN (1979)

The Aermacchi MB-339 is a military jet trainer and light attack aircraft designed and manufactured by the Italian aviation company Aermacchi. The MB-339 was developed in the 1970s to meet an Italian Air Force requirement for a new jet trainer aircraft to replace the existing fleet of Aermacchi MB-326s. The MB-339 entered service with the Italian Air Force in 1979. Roughly half of the 230 MB-339s built entered service with the Italian Air Force as trainers. The rest were sold in small numbers to export customers. Variants of the MB-339 saw combat with Argentine Naval Aviation during the 1982 Falklands War and with the Eritrean Air Force during the Eritrea-Ethiopia War of 1998-2000. The MB-339 has also been the display aircraft used by the Italian Air Force's "Frecce Tricolori" Aerobatic Team since 1982.

Aermacchi MB-339A/PAN

Crew: 2 (Pilot/Flight Instructor, Student Pilot)

Length: 36 ft (10.97 m)

Height: 11 ft 10 in (3.60 m)

Wingspan: 35 ft 8 in (10.86 m)

Wing Area: 208 sq ft (19.3 m^2)

Powerplant: Rolls-Royce Viper Mk. 632-43 turbojet engine(x1)

Range: 950 nmi (1,760 km) (on internal fuel), 1,140 nmi (2,110 km) with two external fuel tanks

Cruise Speed: 400 mph (648 km/h)

Maximum Speed: 558 mph (898 km/h)

Empty/Maximum Takeoff Weights: 6,779 lb/13,001 lb (3,075 kg/5,897 kg)

Service Ceiling: 48,000 ft (14,630 m)

Armament: Up to 4,001 lb (1,815 kg) of weapons or other external stores on six underwing hardpoints

Italian Jet Trainer

MB-339PAN

The MB-339PAN is the official designation for the variant of the MB-339 used by the Italian Air Force's "Frecce Tricolori" Aerobatic Team. The MB-339PAN is essentially an MB-339A painted in the famous "Frecce Tricolori" livery with the wingtip fuel tanks removed and a smoke generator system added for aerobatic displays. The Italian Air Force converted 21 MB-339As to the MB-339PAN variant for use by the "Frecce Tricolori". The team travels with 12 to 13 aircraft to airshow display sites, with the remainder held in reserve as spares.

Frecce Tricolori

The "Frecce Tricolori" are the official aerobatic display team of the Italian Air Force. Founded in 1961, the team has performed at flight displays and airshows worldwide. The team is considered one of the national symbols of Italy, and with ten aircraft flying in close formation, one of the world's largest aerobatic teams. The team began flying the Aermacchi MB-339 in airshow displays in 1982. In September 2024, it was announced that the "Frecce Tricolori" would transition to a new aircraft, the more modern Alenia Aermacchi M-346 Master advanced jet trainer, in 2028.

Cockpit

The cockpit of the MB-339 has seating for a crew of two in tandem configuration. In training operations, the student pilot sits in the front seat and the instructor in the rear seat. The rear seat of the cockpit is raised so the instructor can see over and past the student's head. The cockpit is pressurized and has a jettisonable canopy that works with the two Martin-Baker ejection seats in the cockpit. Later variants of the MB-339 featured digital avionics and a modernized cockpit layout. Combat-oriented variants of the MB-339 are fitted with advanced avionics in the cockpit, including a laser range finder, radio jammer, electronic countermeasures ECM), digital nav/attack computers, hands-on throttle-and-stick, and radar warning receivers (RWR).

Wing

The MB-339 has a low, un-swept wing with air intakes for the turbojet engine located in the wing roots. Most variants of the MB-339 have wingtip fuel tanks. The wingtip fuel tanks on the MB-339PANs used by the "Frecce Tricolori" are removed for safety during close formation flying and to improve the acrobatic performance of the MB-339 aircraft in airshow performances. The wing has six hardpoints capable of carrying up to 4,000 lb (1,815 kg) of weapons or external stores. When used in the light attack role, pods for Zuni or SNEB unguided rockets, pods fitted with two 12.7 mm M2 Browning machine guns or two 30 mm DEFA cannons, general-purpose bombs, AIM-9 Sidewinder or R.550 Magic air-to-air missiles, the AGM-65 Maverick air-to-surface missile, the Martle Mk.2 anti-ship missile, and external fuel tanks can be mounted on these underwing hardpoints.

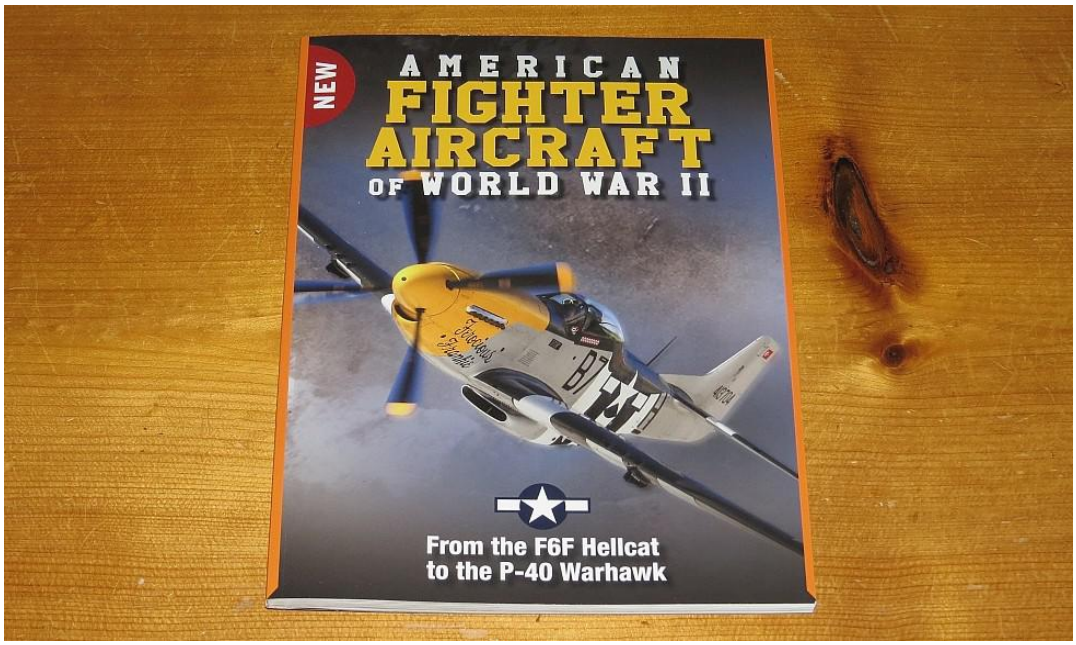
Powerplant

The initial production variants of the MB-339 were powered by the Rolls-Royce Viper Mk. 632-43 turbojet engine, capable of generating up to 4,000 lbf (17.8 kN) of thrust. Later variants of the MB-339, including the MB-339C, are powered by the improved and more powerful Rolls-Royce Viper Mk. 80 engine, which can generate up to 4,300 lbf (19.57 kN) of thrust.

Structure

The Aermacchi MB-339 was designed in a conventional configuration for a jet training aircraft, with an all-metal structure, tricycle landing gear, and a tandem cockpit for a flight instructor and student pilot. The MB-339 shared much of its airframe with the aircraft it replaced, the Aermacchi MB-326. The most significant revision of the aircraft was the design of the forward fuselage, which raised the instructor's seat higher to allow for improved visibility over and past the head of the student pilot. The MB-339 featured a larger tailfin than the MB-326 for improved aerodynamics and maneuverability.

American Fighter Aircraft of World War II Bookazine

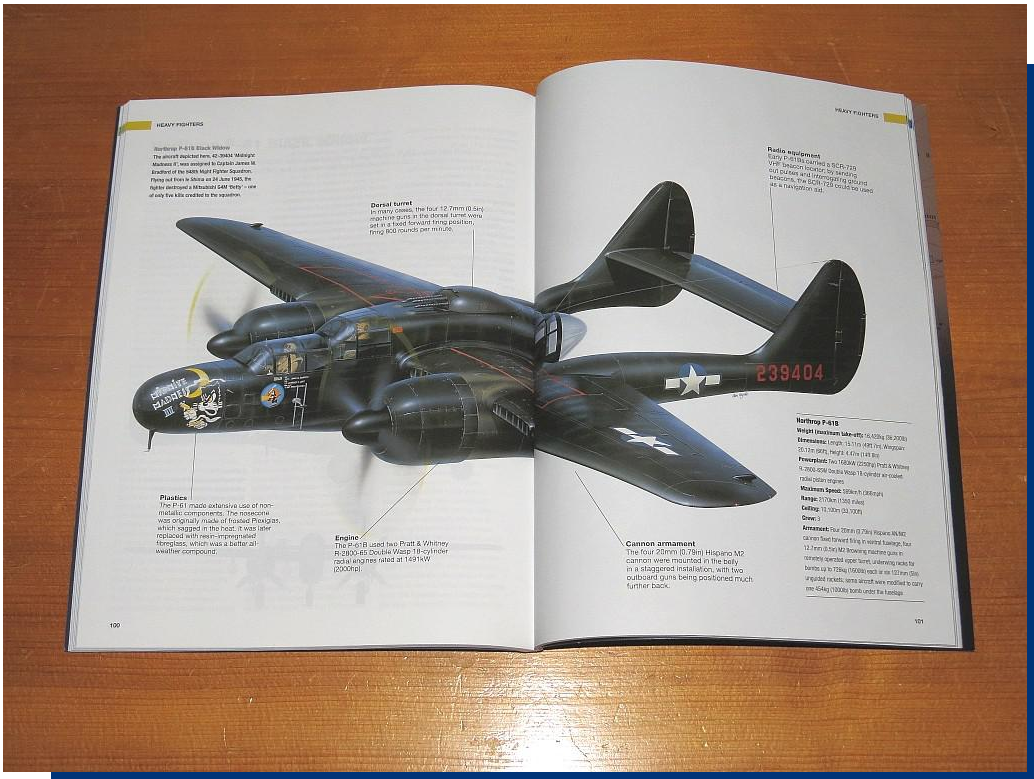


American Fighter Aircraft of World War II is a new title now available from publisher Amber Books Ltd. in their continuing series of aviation reference bookazines. The bookazine is an excellent quick reference guide to the major types of American fighter aircraft used during the war. The bookazine includes performance specifications, cutaway diagrams, profile drawings, and colorful illustrations of each aircraft featured in the publication.

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

The newest release in the series is titled *American Fighter Aircraft of World War II* and covers the fighter aircraft used by the United States during World War II. The 144-page bookazine features color profiles of each aircraft, a brief description of their operational history, and performance specifications. Famous types such as the North American P-51 Mustang, Curtiss P-40 Warhawk, Lockheed P-38 Lightning, Chance Vought F4U Corsair, Grumman F4F Wildcat, and Grumman F6F Hellcat are all covered in the bookazine. The bookazine also covers some lesser-known types to have served in World War II, such as the Northrop P-61 Black Widow night fighter. *American Fighter Aircraft of World War II* also covers some foreign-built aircraft used in large numbers by the United States during the war, such as the Supermarine Spitfire. A few aircraft types that proved to be failures in fighter aircraft design, such as the Bell XPF-1 Airacuda heavy fighter and Brewster F2A Buffalo naval fighter, are also covered in *American Fighter Aircraft of World War II*.

American Fighter Aircraft of World War II is now available from booksellers in the United Kingdom, Australia, Canada, and the United States. Most Barnes and Noble bookstores in the United States are stocking the bookazine in their magazine/newsstand sections in limited quantities. The bookazine retails for £10.99 in the United Kingdom, A$25.99 in Australia, $19.99 in the United States, and CD$29.99 in Canada. Amber Ltd.'s *American Fighter Aircraft of World War II* is an excellent addition to the publisher's series of aviation bookazines. The title is a great quick reference guide for anyone interested in World War II aircraft or aviation history.


HEAVY FIGHTERS
Northrop P-61B Black Widow
Dorsal turret
Radio equipment
Plastics
Engine
Cannon armament
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Northrop P-61B
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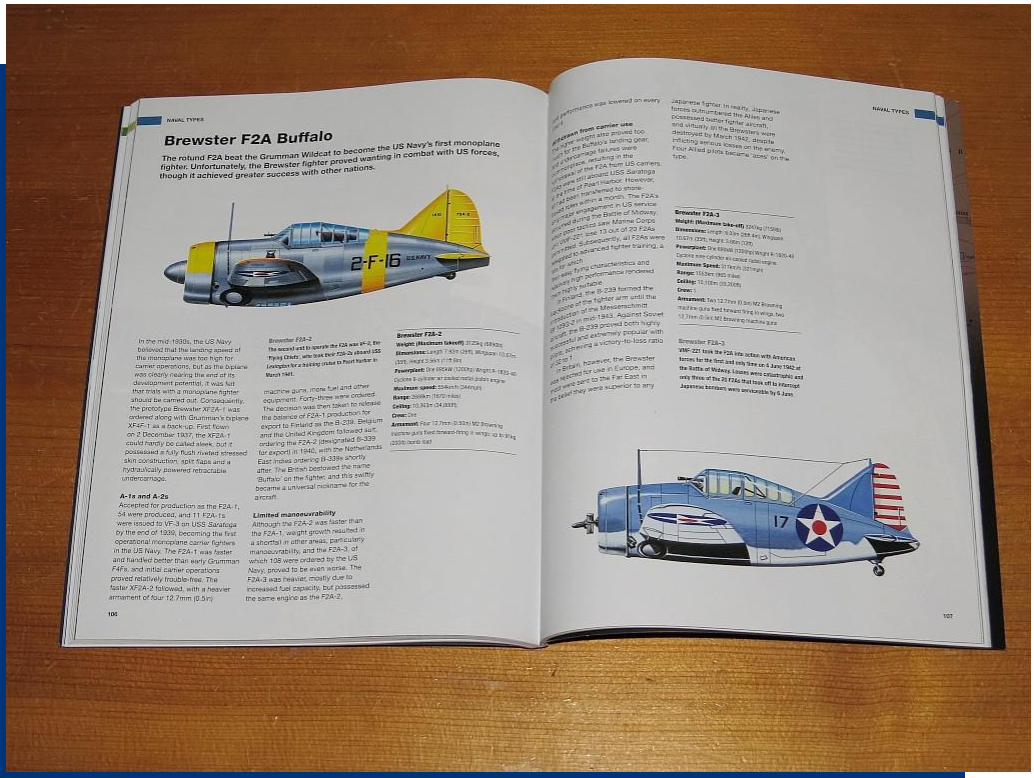
NAVAL TYPES
Brewster F2A Buffalo
2-F-16
NAVY
Brewster F2A-2
Brewster F2A-3
Limited manoeuvrability
Armament from carrier use
NAVAL TYPES
17
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Distelfink Airlines

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.