



HILLER AVIATION MUSEUM

601 Skyway Road, San Carlos, California 94070 www.hiller.org

Non-Profit
Organization
US POSTAGE PAID
San Carlos, CA
PERMIT No. 96

INSPIRATION TAKES FLIGHT AT HILLER AVIATION MUSEUM!

LEVELS AND BENEFITS

As a member of the Hiller Aviation Museum you'll enjoy free unlimited admission for one year, a store discount, and invitations to members-only events!



	SENIOR (65+) 1 named member	INDIVIDUAL 1 named member	FAMILY 2 adults (1 must be the named member) & up to 4 children under 18	PIONEER 3 adults (1 must be the named member) & up to 4 children under 18	PILOT 3 adults (1 must be the named member) & up to 4 children under 18	BARNSTORMER 4 adults (1 must be the named member) & up to 4 children under 18
Signature Events (New Year's and Biggest Little Air Show)	50% Admission Discount				Complimentary Admission	
Digital membership card	✓	✓	✓	✓	✓	✓
Members-only events	✓	✓	✓	✓	✓	✓
One-time guest pass	2	2	2	4	4	6
15% discount in gift shop everyday	✓	✓	✓	✓	✓	✓
Free flights in Flight Sim Zone	✓	✓	✓	✓	✓	✓
Subscription to Museum's newsletter, Briefings	✓	✓	✓	✓	✓	✓
Discount for Aviation Camp	—	—	✓	✓	✓	✓

Be prepared to show photo ID of named member

Guest Passes are "one-time use" only

Children 4 and under are admitted free

Membership card may be downloaded on the eMembership Card App within one week of purchase. More info: hiller.org/digital-membership

Visit hiller.org/membership-faq for membership tax deductibility and employer match amounts.

HILLER MEMBERSHIP CATEGORIES

ONE YEAR

SENIOR (65+)	INDIVIDUAL	FAMILY
☐ \$69	☐ \$85	☐ \$139
PIONEER	PILOT	BARNSTORMER
☐ \$189	☐ \$259	☐ \$500

☐ New Member ☐ Renewal Membership # _____
Optional for Renewal

Primary Adult Member

Optional Second Adult Member (For Family Membership and up)

Optional Third Adult Member (For Pioneer Membership and up)

Optional Fourth Adult Member (For Barnstormer Memberships)

Address

City State ZIP Code

Phone

Email Address

Optional: This is a Gift Membership from

I would like to make an additional fully tax-deductible one-time gift of \$ _____ to the Museum to support educational programs.

Total Amount: \$ _____

☐ Check here if you wish to be anonymous in museum publications.

Card type: ☐ Visa ☐ Mastercard ☐ American Express

Cardholder Name

Card Number

Expiration Date

CVV/CSC

Make checks payable to: **Hiller Aviation Museum**

Thank you for your support.

Please make checks payable to
Hiller Aviation Museum
601 Skyway Rd, San Carlos, CA 94070



You can help inspiration take flight... by donating your vehicle!



No matter your reason, donating your vehicle is as easy as pie.

www.hiller.org/vehicle
1-855-550-4483

Saturday April 26, 2025 10AM-1PM

FREE SHREDDING & E-WASTE EVENT!

Hiller Aviation Museum, 601 Skyway Rd, San Carlos



Shred: 3 banker boxes per person. Shred service will close when truck is full (come early)

eWaste: computers, laptops, monitors, mice, keyboards, cables, tape and zip drives, printers, phones, DVD players, radios, stereos, VCRs, video game consoles, fax machines, scanners, televisions

Not acceptable: household appliances

BRIEFINGS



January-April 2025

HILLER AVIATION MUSEUM WHERE INSPIRATION TAKES FLIGHT

AIR POWER

THE DEVELOPMENT OF AIRCRAFT POWERPLANTS

by Jon Welte

Wilbur and Orville Wright considered development of their airplane complete in 1905, once they had refined their design into what they considered to be a practical flying machine. After a three-year pause in flight activities to secure patents and stand up the Wright Aircraft Company, Wilbur Wright travelled to France to give a series of flight demonstrations to what had become an increasingly incredulous European aviation community that had come to doubt that the Wrights had flown at all. On August 8, 1908, Wilbur completed his first flight demonstration at a racing track at Le Mans, and instantly silenced all critics. Overnight, the Wrights were transformed into public figures and feted for their achievements across two continents.

Charlie Taylor



While it was Wilbur and Orville Wright who gained much of the public fame and adulation, it was a long-time employee of the brothers whose contributions were key to their success. Charlie Taylor's first connection to the Wrights was tenuous – the Wrights leased a building from his wife's family to house their bicycle shop in Dayton, Ohio. Originally brought on as a bicycle mechanic, Taylor's skills and experience with machinery led Wilbur and Orville to turn to him in 1903 to construct an engine for their first powered airplane. Wilbur had originally planned to procure an engine from the automotive industry, but despite extensive correspondence no car company agreed to provide an engine with the necessary performance. Instead, the Wrights set the task to Taylor.

The engine that Taylor constructed was massive and grossly underpowered by today's standards, but in 1903 it was a marvel: a four-cylinder gasoline engine under 200 pounds able to produce 12 horsepower. Fitted to an airframe equipped with the Wrights' newly-developed three-axis control system, Charlie Taylor's engine soared over the sands of Kitty Hawk on December 17, 1903.

Like many aircraft engines yet to come, the 1903 Wright Flyer had a four-stroke engine. The Wrights had a local foundry cast an engine block from an alloy of aluminum and copper, with significant weight savings compared to steel. Charlie Taylor then machined four individual cylinders into the engine – cavities within which steel pistons could move. The pistons, each attached to a common crankshaft, slid in and out within the cylinder through a sequence of four steps: admitting fuel and air into the cylinder, compressing the



Leaping Leprechaun
by helicopter March 16



Spring Model Train Show
April 5 - April 13



Easter Bunny
by helicopter April 19

mixture, burning it, and then exhausting the burned gases before starting the process over again. Four stroke internal combustion engines were not developed specifically for aviation, but they proved uniquely suited to the requirements for powered flight.

Orville Wright improved the original 1903 engine design into the Wright Vertical 4, a more powerful version that equipped both the Wright Model A and Model B flyers.

The demonstration flights conducted in 1908 spurred a dynamic period of aeronautical innovation, one that accelerated still further with the outbreak of war in Europe in 1914. The Wrights' work was quickly emulated and surpassed, and the development of steadily more capable powerplants rapidly became a pacing technology. Patent infringement lawsuits and Wilbur Wright's untimely death in 1912 served to curtail the Wright Company's development of aircraft, and Orville ultimately sold the company in 1915. Wright Aeronautical continued to develop cutting-edge aircraft engines long after the departure of its founders, however, with the Wright Whirlwind being perhaps the most influential. Unlike the Wright Vertical 4, the



Wright Vertical 4



Wright Whirlwind engine

the engine cylinders, by air – an important consideration as ever more powerful engines became available. The first R-790 Whirlwind generated 200 horsepower in 1932, five times the output of the Vertical 4. The final version of the Whirlwind, the R-975, was able to produce up to 450 horsepower and proved to be a popular powerplant for a number of 1930s and 1940s-era aircraft – and the M4 Sherman tank, as well.

While radial engines had many advantages, liquid cooling allowed for engines of great power and more streamlined size – an important consideration for high perfor-

mance aircraft. One of the most storied such engines was the Rolls Royce Merlin, developed in the UK during the 1930s. The Merlin took on great importance when selected to power the Royal Air Force's two new frontline fighters: the Hawker Hurricane and Supermarine Spitfire. The exceptional power and reliability of the Merlin engine enabled these aircraft to meet the modern aircraft of the German Luftwaffe on equal terms during 1940's Battle of Britain, and it allowed a later US aircraft – the North American P-51 Mustang – to transcend its original performance limitations and become one of the war's most important fighters.

Following World War II jet propulsion supplanted piston-powered propellers in commercial and military aviation, leaving high performance piston engines like the Merlin as the last of their kind. Yet even today, these engines are capable of spectacular achievements – a customized P-51 Mustang named *Voodoo* set the all-time speed record for a piston-engined airplane in 2017, reaching a speed of over 554 miles per hour.



Packard Merlin

Since its inception the Hiller Aviation Museum has hosted a collection of aircraft powerplants, including many historic examples such as a Wright Vertical 4 and the unique Loughead XL-1. Many of these engines are now on display in a re-imagined engine gallery, providing the opportunity to see how this essential technology developed during the first half century of flight. On your next visit to the museum, take a moment to explore these engines first hand and marvel at how far they have come since the days of Charlie Taylor.

Resources

https://airandspace.si.edu/collection-objects/packard-rolls-royce-merlin-v-1650-7-v-12-engine/nasm_A19520106000, downloaded 2 Dec. 2024

https://airandspace.si.edu/collection-objects/wright-vertical-4-line-4-engine/nasm_A19520108000, downloaded 2 Dec. 2024

<https://www.nps.gov/people/charles-e-taylor.htm>, downloaded 2 December 2024

The Bishop's Boys: A Life of Wilbur and Orville Wright, Tom Crouch, 2003

PRESIDENT'S PERSPECTIVE



One of the many delights at the Hiller Aviation Museum is the ability to mark the changing of the seasons through our year-long procession of special events. We've

just seen Santa arrive by helicopter for his annual visit, and the balloons are about to drop from our ceilings for our traditional Noon Year's celebration. Over the coming months we'll see leaping leprechauns, flying bunnies, and the Airport Runway Run. Behind each of these experiences is the hard work of the museum's staff and volunteers – the crew that makes everything possible.

Our aircraft and exhibits are a more enduring part of our museum experience, but we are equally indebted to our team for making them possible. In March the Museum will formally dedicate the new Air Racing exhibit that has been taking shape in the Restoration Shop, on our outside ramp, and most recently inside the Exhibit Gallery over the past two years. We are deeply appreciative of Vicky Benzing and the families of late volunteers George Mendonca and Dean Williamson for their material and financial support for this project, and to the many members of the Hiller Aviation Museum's Restoration team who have donated their time and talent for the effort – especially Martin Baladon, Bob Dilfer, Bob Hassing and Leon Melamud, who have taken on leadership roles in completion of our two-thirds scale model of the P-51 racer *Plum Crazy*.

Special events and new exhibits fill the museum's calendar and Gallery, but it can only complete its mission with your engagement and support. As always, thank you for all that you do to help dreams take flight here at the Hiller Aviation Museum.

Jon Welte, *President & CEO*

Hiller Aviation Museum has gone green with digital eMembership cards

Members, please visit www.hiller.org/ digital-membership for details and download the eMembership App on your Smartphone.

**SUNDAY, APRIL 13
2025**



HILLER
AVIATION
MUSEUM

**SPONSORSHIPS
NOW AVAILABLE!**



**VOLUNTEERS
NEEDED!**

REGISTER NOW
WWW.HILLER.ORG/RUN

RUN. JOG. WALK.

on the

San Carlos Airport Runway!



Certified 5k and 10k courses + 2k fun run

WHEN GIANTS RULED THE SKY

PRESENTATION AND BOOK SIGNING BY
JOHN GEOGHEGAN



SATURDAY, FEBRUARY 22, 11 AM

The U.S. Navy's Zeppelins were the largest, most expensive, most technologically sophisticated aircraft of their day. Intended to patrol the Pacific to prevent a surprise attack by Japan in the days before radar, Zeppelins were also poised to become the dominant form of long distance transportation. In fact, Moffett Field was built as the premier airship base on the west coast to house the Navy's state of the art Zeppelin, the USS Macon (ZRS-5). This 60 minute talk is based on research for Mr. Geoghegan's book, WHEN GIANTS RULED THE SKY, and will be lavishly illustrated with rare photographs and vintage film clips. Bio: John J. Geoghegan is a former Special Correspondent for the New York Times. He specializes in reporting on unusual inventions that fail in the marketplace despite their innovative nature.

PERFECT PAPER PLANES

SATURDAY MARCH 22, 11 AM

Legendary author and paper plane designer John Collins returns to the San Francisco Bay area for a special presentation at the Hiller Aviation Museum! Designer of the paper airplane that set a world distance record of over 226' in 2012, Collins has written multiple books and presented hundreds of workshops in a quest to help everyone create their own perfect paper plane. Join John for a spectacular hands-on workshop on January 20 as he demonstrates a table-top air show of paper-light flyers and helps all participants fold and fly their own paper airplanes.



AVIATION EXPLORATION DAY 2025

Take off with careers in the
World of Aviation



SUNDAY | MARCH 30 | 11AM-3PM
HILLER AVIATION MUSEUM
401 SKYWAY RD., SAN CARLOS, CA 94070

FEATURING

AIRPORT OPERATIONS •
AIRCRAFT MAINTENANCE •
AIR TRAFFIC CONTROL •
AVIATION EDUCATION •
DRONE OPERATORS •
US AIR FORCE & COAST GUARD •
PILOTS & FLIGHT ATTENDANTS

FREE ENTRY

SIMULATORS
GIVEAWAYS
FOOD



AIR RACING GRAND OPENING EVENT

SATURDAY, MARCH 1, 11 AM

PANEL DISCUSSION AND RIBBON CUTTING
SATURDAY, JANUARY 20

Celebrate the grand opening of Air Racing at the Hiller Aviation Museum! This exciting new exhibit features displays from the Golden Age of Air Racing and the Reno Air Races. Renowned air race pilots Vicky Benzinger, Justin Phillipson, Dave Morss, and Bruce Wallace join in a spirited panel discussion at 11 AM, followed by the ceremonial ribbon cutting to formally open the new exhibit at 12 noon. Join us for a thrilling journey through air racing history and witness the evolution of the world's fastest motor sport.



CALENDAR

JANUARY

WED-FRI, JAN 1-3
Aviation Camp

SUN, JAN 5 • 3 PM - 4:30 PM
Flight Simulator Rally

MON, JAN 6
Aviation Camp

THU, JAN 9 • 5 PM - 7 PM
Starlight Nights

SAT, JAN 11 • 1:30 PM - 3 PM
Starlab

SUN, JAN 12
Scout Day

SUN, JAN 12 • 11 AM
Air Power Adventure Assembly

FRI, JAN 17
Aviation Camp

SUN, JAN 19 • 11 AM
Straw Rocket Workshop

MON, JAN 20
Aviation Camp

SUN, JAN 26 • 3 PM - 4:30 PM
Flight Simulator Rally

FEBRUARY

SUN, FEB 2 • 11 AM
Helicopter Adventure

SAT, FEB 8 • 1:30 PM - 3 PM
Starlab

SUN, FEB 9 • 10 AM - 12 PM
Bot Bowl and Flying Footballs!

THU, FEB 13
Aviation Camp

FRI, FEB 14
Aviation Camp

SUN, FEB 16 • 3 PM - 4:30 PM
Flight Simulator Rally

MON - FRI, FEB 17-21
Aviation Camp

SAT, FEB 22 • 11 AM
When Giants Ruled the Sky

SAT, FEB 22 • 1:30 PM - 4 PM
Aero Design Challenge

SUN, FEB 23 • 11 AM
Air Power Adventure Assembly

MARCH

SAT, MARCH 1 • 11 AM
Air Racing Exhibit Grand Opening

PUBLIC PROGRAMS • SA

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BSA & GIRL SCO

OFFERED EACH MONTH—S

OF EVENTS

SUN, MAR 2 • 11 AM

Glider Discovery Day

FRI, MAR 7

Aviation Camp

SUN, MAR 9 • 11 AM

Straw Rocket Workshop

MON, MAR 10

Aviation Camp

SAT, MAR 15 • 10 AM - 3 PM

Garden Model Trains

SUN, MAR 16 • 10 AM - 12 PM

Kids' Carnival – Leaping Leprechaun

SUN MAR 16 • 10 AM - 12 PM

Kids' Carnival

SAT, MAR 22 • 11 AM

Paper Airplane Show

SUN, MAR 23 • 10 AM - 12 PM

Bubble Bonanza

FRI, MAR 28

Aviation Camp

SUN, MAR 30 • 11 AM - 3 PM

Aviation Exploration Day

SUN, MAR 30 • 11 AM

Straw Rocket Workshop

MON - FRI, MAR 31 - APR 4

Aviation Camp

APRIL

APR 5 - APRIL 13

Spring Model Train Show

SUN, APR 6 • 3 PM - 4:30 PM

Flight Simulator Rally

MON-FRI, APR 7-11

Aviation Camp

SUN, APR 13 • 3 PM - 4:30 PM

Flight Simulator Rally

SUN, APR 13 • 7:30 AM

Airport Runway Run

SAT, APR 19 • 10 AM - 12 PM

Easter Bunny by Helicopter

SUN, APR 20 • CLOSED

Easter Sunday

MON - WED, APR 21 - 23

Aviation Camp

SAT, APR 26 • 10 AM - 12 PM

Kids' Carnival

SAT, APR 26 • 10 AM - 1 PM

E-Waste Pickup

SUN, APR 27 • 10 AM - 12 PM

Bubble Bonanza

SAT & SUN • 11 AM - 3 PM

INVENTION LAB

OUT PROGRAMS

SEE WEBSITE FOR DETAILS

FLYING FOOTBALLS FUN FEST & BOT BOWL

SUN FEB 9 • 10 AM - 12 PM

FOOTBALL DROP AT 12PM



Join the excitement of the big game as the Hiller Aviation Museum explores the combination of football and flight in a family-friendly extravaganza! See a helicopter football drop, participate in the Robo Bowl, split the uprights with an FPV drone, run through the obstacle course, program a robot to carry a football to the end zone in the Invention Lab, and more! Wear your favorite team jersey and get a prize!

Come "Tailgate" with hotdogs and pizza available for purchase. Plenty of time to get home afterwards for the big game! Event included with Museum admission

BAY AREA GARDEN TRAINS

SAT MAR 15, 10 AM - 3 PM



The Bay Area Garden Railroad Society's waist high track features live steam locomotives. These railroad engines are designed to be run in anybody's backyard garden. Live steam locomotives have a butane fueled fire that boils water. The resultant steam is then used to power the pistons. This is the same technique full sized locomotives have used for 175 years. Many examples of old time model steam locomotives will be seen running on the track, all the while puffing wonderful plumes of steam.

LEAPING LEPRECHAUN

SUN, MAR 16 • 10 AM - 12 PM

LEPRECHAUN LANDS AT 12 PM



Come celebrate St. Patrick's Day at the Hiller Aviation Museum with face painting, bounce house, "Pot of Gold" treasure hunt, Paint an airplane GREEN, and a Skydiving Leprechaun! Event included with museum admission.

EASTER BUNNY ARRIVES BY HELICOPTER

SUN, APRIL 19, 11 AM

Join the Easter

Eggstrava-

ganza on

Saturday, April

19 from

10 AM – 12

PM, The Bunny

arrives at

11AM. Get an

Easter Egg

straight from the Bunny and enjoy face

painting and bounce house. All included

with museum admission.



TRAINS & PLANES DISPLAY

APRIL 5- 13

10 AM - 4 PM

Join us for our annual Spring Model Train Show. This year there will be five separate model train layouts set up at the museum.





HILLER AVIATION MUSEUM

Garden Steam Model Trains



**Saturday
March 15
10am - 3pm**

Spring Model Train Show

**April 5
through
April 13, 2025**

See up to five exquisitely crafted scale model train displays in a magical world of miniature landscapes, scenery and villages.



Trains included with museum admission
650-654-0200 www.hiller.org

EDUCAT

AVIATION CAMP—SPECIAL WINTER/ SPRING SESSION GRADES K-5

**1-DAY CAMP SESSIONS
JAN 6, 17, 20 • FEB 13, 14
MAR 7, 10, 28
SEE WEBPAGE FOR CAMP TOPICS**



XTREME FLIGHT FEBRUARY 17-21



STEM EXPLORERS MARCH 31 - APRIL 4 APRIL 7-11 - APRIL 21-23



Aviation Camp returns with high-flying fun throughout the school holidays January-April. Each session explores the science and adventure of aviation with hands-on activities, flying model aircraft, realistic flight simulation and opportunities to investigate real aircraft.

Visit www.hiller.org for complete information on each program, or to register online today!

HILLER AVIATION MUSEUM PRESENTS

Flying on the Edge

20TH BENEFIT GALA

Platinum Presenting

Mark Jon Bluth

Scott Cronce & Deborah Caryle Maxwell

Gold Premier

Christopher Lee

Hank Scherf & Vicki Sanders

Bronze Key

Asset Management Company

Bob Grassilli • Carolyn Hiller

Charles Litchfield • Kirsten Komoroske

Rick Gostyla & Sally Puccini

Steve & Char Hiller

Special Thanks to Our Sponsors!



ION PROGRAMS WINTER/SPRING 2025

FAMILY EVENTS

AIR POWER ADVENTURE

SUN, 11AM: 1/12 • 2/23

Experience the amazing power of Earth's atmosphere in a spectacular science demonstration! Explore the science of this invisible force that is always around us as air power crushes metal, powers chemical reactions, freezes metal, and blasts objects skywards in a family-friendly demonstration.



BOT BOWL

SUN, 10AM - 12 PM: 2/19

Join the Robo Bowl and take a turn commanding programmable robots to run plays in the Hiller Aviation Museum's own robotic stadium!



BUBBLE BONANZA

SUN, 10 - 11AM: 3/23 • 4/27

Discover a hands-on exploration of water, air, and the world of bubbles! Bubble Bonanza harnesses the science of surface tension to create the most hands-on of all hands-on experiences - bubbles! Visit multiple outdoor stations and experiment with bubble shapes, sizes, and colors!



FLIGHT SIMULATOR

SUN, 3 - 4:30PM: 1/5 • 1/26 • 2/16 • 4/6 • 4/13

The Flight Simulator Rally, held in the Hiller Aviation Museum's Flight Sim Zone, presents participants with a specific mission in simulated flight. Each 30-minute session provides ample time for participants to learn a particular flight, then ends with a challenging flight to achieve the best possible results!



STARLAB

SAT, 1:30 - 3PM: 1/11, 2/8

Enter the amazing dome of a Starlab planetarium and see the glittering stars of the night sky projected overhead. Discover the brightest constellations visible each night and the stars used by pilots, sailors and others to navigate across vast and featureless oceans. *A separate Starlab ticket is required for each participant.



GLIDER DISCOVERY DAY • AGES 3+

SUN, 11AM: 3/2

Explore aircraft up-close and personal at Glider Discovery Day! Learn the parts of an airplane, help to assemble a full-size aircraft mockup, and build and fly balsa gliders in a fun-filled investigation of flight.



HELICOPTER ADVENTURE

SUN, 11AM: 2/2

Launch a vertical adventure with helicopters! Explore a real, full-sized helicopter and learn how to control an aircraft capable of vertical flight. Make a simple paper helicopter and test fly it in a wind tunnel, and climb aboard the Scorpion helicopter to try out the controls!



KIDS' CARNIVAL

SUN, 3/16 • SAT 4/26, 10AM - 12PM

Join the fun to build and fly a model aircraft, check out in an aircraft cockpit, experiment with wind tunnels and weather permitting paint a full-size airplane! On March 16 the carnival will welcome the Leaping Leprechaun in a spectacular parachute jump!



STRAW ROCKET WORKSHOP • AGES 5+

SAT, 1:30 - 4PM: 2/22,

Explore the world of rocketry! Each Rocket Blastoff features an introduction to rocketry and Newton's Third Law of Motion, including an exploration of a real JPL rocket on display at the Hiller Aviation Museum. Following a demonstration, participants construct a high-performance straw rocket, then launch it across the museum with a calibrated burst of air.



AERO DESIGN CHALLENGE - AGES 9-12

SAT, 1:30 - 4PM: 2/22

Aero Design Challenge is an exploration into design and engineering. The program explores concepts in aeronautics that challenges participants to construct a working prototype. Each student in the Aero Design Challenge participates in a series of discovery experiences including flight simulation, Exploration of Museum, and Design Challenges.



Held annually since 2013, the Aero Design Challenge celebrates the design thinking process in the world of flight. Offered at no cost to participants through the generous support of sponsors, the Aero Design Challenge has engaged over 5,500 participants since its inception. The Aero Design Challenge is generously funded through the support of the SAGA Foundation.

All Sunday Family Events are included with Museum admission. Space is limited for some events and no-cost tickets or reservations may be required. Check www.hiller.org for capacity information, or request tickets at the Admissions counter on the day of each program.

AVIATION CAMP • SUMMER 2025

Registration is now open for this summer's Aviation Camp program! Visit www.hiller.org for more information. Online registration now available. Make your plans now to join us this summer for an amazing experience in flight!