

# Hiller Aviation Museum

## Aviation Camp 2021

### Summer Adventures in Flight!

Children entering Grades K-5 discover the world of aviation in a week-long day camp program! Each topic includes hands-on science and engineering activities, realistic flight simulation, exploration of real aircraft and more in a fun small group setting.



### Air & Space

Discover the universe and the science of spaceflight!



### Robo Mechanics

Experiment with drones and robots in an adventure in engineering!



### Physics Flyers

Investigate the science and wonder of flight!



### Pilot Cadets

Explore cutting edge aircraft and learn real pilot skills!

Sessions meet Monday-Friday 9 AM – 4 PM at the Hiller Aviation Museum in San Carlos. Late pickup is available for an additional fee. Additional topics for Grades 5-7 and Half Day programs for Grades K-5 are also available.

All Aviation Camp sessions are presented in compliance with state and county health orders. Visit [www.hiller.org](http://www.hiller.org) for more information.

**ENROLL TODAY**

[www.hiller.org](http://www.hiller.org) ♦ (650) 654-0200

The Hiller Aviation Museum is a 501(c)(3) public nonprofit organization, ID #94-3226411



## HILLER AVIATION MUSEUM

601 Skyway Road,  
San Carlos, California 94070

[www.hiller.org](http://www.hiller.org)

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

# BRIEFINGS

June – August 2021

## HILLER AVIATION MUSEUM

WHERE INSPIRATION TAKES FLIGHT

MUSEUM OPEN DAILY 10 AM - 5 PM STARTING MAY 29

### ROTARY-WINGED RAVEN THE HILLER UH-12

by Jon Welte

Stanley Hiller, Jr.'s coaxial-rotor XH-44 design first flew in 1944. This unusual configuration dispensed with the need for a tail rotor, but proved to have limitations. While the XH-44 controlled vertical motion in much the



Hiller XH-44

mounted to the main rotor shaft at 90 degree angles to the rotor blades. The paddles, deflected by a cyclic control that extended in front of the pilot, smoothly tilted the whirling disc of the main rotor in the desired direction, all while maintaining stable flight. The result was a revolution in small helicopter control stability that marked a dramatic increase in controllability over contemporary aircraft built by competitors Sikorsky and Bell.

same manner as a traditional helicopter, directional control was another matter. Traditional helicopters deflect a portion of their main rotor lift forward, backward, left or right in order to fly in the desired direction. Adjustment of the tail rotor provides control over leftward or rightward yaw. The counter-rotating dual main rotors and lack of a tail rotor in the XH-44 limited the effectiveness of such means of control.

Undaunted, Hiller sought other means to achieve his goals. Using a helicopter test-bed known as the UH-5, in 1946 Hiller engineer Edward Bennet conceived of the idea of effecting control with a pair of aerodynamic paddles

Seizing the opportunity, Hiller redirected his efforts from coaxial to single rotor machines featuring this new "Rotor-Matic" control system. An operational prototype designated the Hiller Model 360X was built and flown in 1947, and soon entered mass production as the UH-12A. Able to carry a pilot and up to two passengers, the UH-12 dominated the market for light piston-engine helicopters in the late 1940s and early 1950s. UH-12s operated by the French Army were famously used by Major (later General) Valerie Andre



Hiller 360

### SPECIAL NOTE

THE HILLER AVIATION MUSEUM WILL REMAIN OPEN AND RESUME EVENTS IN ACCORDANCE WITH PUBLIC HEALTH ORDERS. EVENTS LISTED IN THIS EDITION OF BRIEFINGS MAY BE MODIFIED, RESCHEDULED OR CANCELLED IF NECESSARY TO COMPLY WITH FUTURE PUBLIC HEALTH GUIDANCE. PLEASE VISIT [WWW.HILLER.ORG](http://WWW.HILLER.ORG).

### PEAXY // TOTAL DATA ACCESS FOR INDUSTRY Biggest Little AIR SHOW

Saturday  
June 26  
10am-1pm



### PLANES, TRAINS & COOL CARS SATURDAY AUG. 7



### Airport Runway Run Saturday, Aug. 15



Smithsonian Institution  
Affiliations Program

## JOIN NOW!

MEMBERSHIP RATES GO UP IN JULY

**Senior (age 65+) \$50**  
Unlimited admission for you + 2 guest passes.

**Individual \$65**  
Unlimited admission for you + 2 guest passes.

**Family \$90**  
Unlimited admission for 2 named adults and up to 4 children (17 & under) + discounts on Aviation Camp.

**Pioneer \$125**  
Family Membership benefits + an additional card for a named member (ideal for caregivers) and 2 guest passes.

**Pilot \$275**  
Family Membership benefits with a total of 3 guest passes + 8 FMX Flight Simulator passes and 50% off additional FMX tickets.

**Barnstormer \$550 • Adventurer \$1,000**  
Pilot Membership benefits with a total of 4 guest passes + 10% off Museum Rental and Birthday Parties.

**Explorer \$2,500 • Navigator \$5,000**  
Pilot Membership benefits with a total of 8 guest passes + 15% off Museum Rental and Birthday Parties.

**Aviator \$10,000**  
Pilot Membership benefits with a total of 12 guest passes + 25% off Museum Rental and Birthday Parties and a Hiller Aviation Museum jacket.

## Annual Membership Application

Or join online at [www.hiller.org/member](http://www.hiller.org/member)

I want to be a member of Hiller Aviation Museum in the following category:

- |                                            |                                             |
|--------------------------------------------|---------------------------------------------|
| <input type="checkbox"/> Senior (65+) \$50 | <input type="checkbox"/> Barnstormer \$550  |
| <input type="checkbox"/> Individual \$65   | <input type="checkbox"/> Adventurer \$1,000 |
| <input type="checkbox"/> Family \$90       | <input type="checkbox"/> Explorer \$2,500   |
| <input type="checkbox"/> Pioneer \$125     | <input type="checkbox"/> Navigator \$5,000  |
| <input type="checkbox"/> Pilot \$275       | <input type="checkbox"/> Aviator \$10,000   |

New Member  Annual Renewal

Primary Adult Member: \_\_\_\_\_

Second Adult Member: \_\_\_\_\_

(Family Memberships and up)

Third Adult Member: \_\_\_\_\_

(Pioneer Memberships only)

Address: \_\_\_\_\_ City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_ Daytime Phone: \_\_\_\_\_

Email: \_\_\_\_\_

This is a gift membership from: \_\_\_\_\_

Payment Amount: \_\_\_\_\_  VISA  MC  AMEX

Card #: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

CSC: \_\_\_\_\_ Print Name on Card: \_\_\_\_\_

Signature \_\_\_\_\_



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Jeffery Bass

We appreciate everyone who participated in our first-ever virtual fundraiser! Your donation auction bids, and aircraft votes all made a major difference for Hiller Aviation Museum. THANK YOU!

AN AVIATOR'S PARADISE!  
VISIT OUR GIFT SHOP  
Gift Certificates available!

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





to develop aerial evacuation techniques in French Indochina. Adopted by the United States Army as the OH-23 Raven, this popular Hiller design served in a similar role throughout the Korean War. It proved to be the most popular and most produced of all of the Hiller helicopter designs.

The Hiller Aviation Museum has long exhibited three different Hiller 360/UH-12 helicopters as part of its collection. Recently, a fourth UH-12 was acquired – a unique UH-12E5 prototype, the only one to be built with seating for five. The traditional bench seat in the rear of the stretched cabin accommodated up to three passengers, while dual single seats in a front row accommodated two pilots or a pilot and additional passenger. The Hiller Aviation Museum's Restoration Shop team will work to repair and rebuild this singular aircraft and return it to a mission of public interpretation of the remarkable history of vertical flight at the Hiller Aviation Museum.



Resources  
Vertical Challenge: The Hiller Aircraft Story, Jay Spenser, 2003

## AVIATION CAMP 2021

### FALL/WINTER AVIATION CAMP SUMMER PROGRAMS GRADES K-7

Explore flight this summer at the Hiller Aviation Museum! Aviation Camp introduces kids entering Grades K-7 to aerospace with hands-on experiments, flight simulation, real aircraft and much more. Seven different topics are available. All sessions are week-

long, health compliant programs. See the enclosed flyer or visit [www.hiller.org](http://www.hiller.org) to enroll today!

## WEDNESDAY FAMILY EVENTS

### SPECIAL EVENTS AT THE HILLER AVIATION MUSEUM

Join the excitement on special event Wednesdays starting in July 2021! Special events and programs for kids and their families are offered each Wednesday, and gourmet food trucks are available 11 AM – 2 PM.

Event dates and/or format are subject to change if required by public health orders.

### HAPPY BIRDS

WEDNESDAYS JULY 7 & AUGUST 11, SATURDAY, JULY 24 • ALL SHOWS 11 AM



The birds are back in town! Meet the hilarious team of feathered (sometimes) fliers with the Happy Birds! This unforgettable flock of parrots, macaws and cockatoos demonstrates remarkable natural behaviors and amazing trained tricks and antics.

### PERFECT PAPER PLANES

WEDNESDAYS, JULY 21 & AUGUST 4, 11 AM & 1 PM, SATURDAY, JULY 10

Champion paper plane maker John Collins shares his design techniques while putting on a remarkable demonstration of flying paper airplanes. Build a paper plane and watch unique designs take flight.



### WATER ROCKET RALLY

WEDNESDAYS, JULY 14 & AUGUST 18 • 11 AM



Have a blast exploring the world of rocket propulsion! Learn about the science of rocketry, then create a high flying water rocket. Bring a clean, recycled soda bottle from home or purchase one at the Gift Shop on the day of the event.

### KIDS' CARNIVAL

WEDNESDAY, JULY 28 • 10 AM – 12 PM

Explore open airplane cockpits, hand-paint a Cessna Cardinal airplane, help to assemble or take apart a Penguin

training aircraft, build and fly a glider or experiment with wind tunnels in a morning of family-themed fun!

### INVENTION LAB



OPEN WEEKENDS 11 AM – 3 PM

Engage in hands-on fun all summer at the Hiller Aviation Museum's Invention Lab! Open weekends and select holidays, the Invention Lab provides a different project in flight each month accessible to kids and adults of all ages! Included with Museum admission.



REGISTER NOW  
[WWW.HILLER.ORG/RUN](http://WWW.HILLER.ORG/RUN)

SUNDAY, AUGUST 15, 2021



WALK • JOG • STROLL

on the San Carlos Airport Runway!

Certified 5K and 10K courses & 2K fun run

SPONSORSHIPS NOW AVAILABLE!

VOLUNTEERS NEEDED!

### SPECIAL NOTE

Event is subject to change based on public health guidelines and may be modified, rescheduled, cancelled, or conducted virtually if necessary. Please stay tuned to [hiller.org/run](http://hiller.org/run) for the latest info on the Runway Run.

## PLANES TRAINS AND COOL CARS



HILLER AVIATION MUSEUM

SATURDAY AUGUST 7TH, 2021 • 10AM-2PM

UNIQUE AIRCRAFT • COOL CARS • EUROPEAN MODEL TRAINS



HILLER AVIATION MUSEUM

SAN CARLOS AIRPORT  
[WWW.HILLER.ORG](http://WWW.HILLER.ORG)  
EVENT INCLUDED WITH MUSEUM ADMISSION

## PRESIDENT'S PERSPECTIVE SUMMER 2021



Well...it's been an incredible ride, hasn't it? It's been over a year since the pandemic descended on the Bay Area and like every family and business in sight the museum has rolled with every punch thrown our way. Being closed for 343 days (yes, we've been counting) and not being able to spend face time with our visitors and Members has been hard. Fortunately, we've remained connected with virtual activities like our "Hiller at Home" web page and the Virtual Invention Lab. And along the way, we've presented 31 episodes of our bi-weekly series of live 45-minute "Hiller Hangar Talks."

But we're here! And we're open now every Saturday and Sunday (10 am – 5 pm) with plans to be a full 7-day-a-week operation, again, by June. A couple of new exhibits are in our gallery or soon to debut. Be sure to look for "Picturing Women Inventors," a display exhibit from the Smithsonian featuring the careers and exploits of women with diverse backgrounds who have created inventions that change our lives every day. And coming soon is Fantasy Sky, a collection of vertical wind tunnels and towering parachute launchers.

We are pleased and humbled at the financial support we've received during the lockdown and we greatly appreciate our family of museum visitors and Members for helping make the Hiller Aviation Museum a vibrant and exciting part of the community. We look forward to seeing you soon at the Museum!

Jeffery Bass  
President & CEO, Hiller Aviation Museum



HILLER AVIATION MUSEUM | 601 Skyway Road, San Carlos | 650-654-0200 | [hiller.org](http://hiller.org)

### Camper Information

Child's Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_

Parent's Name: \_\_\_\_\_ Day Phone: \_\_\_\_\_

Street: \_\_\_\_\_

City, State, ZIP: \_\_\_\_\_

Email Address: \_\_\_\_\_ Member #: \_\_\_\_\_

### Sessions Requested (Circle)

| Topic          | Grades          | Start Date (Circle)                  | Price (Member)                                     | Extended Hours | Total |
|----------------|-----------------|--------------------------------------|----------------------------------------------------|----------------|-------|
| Air & Space    | K-5             | 6/7 6/21<br>7/6* 7/19<br>8/2** 8/16  | \$499 (\$449)<br>*\$399 (\$359)<br>**\$519 (\$469) | \$50           |       |
| Physics Flyers | K-5             | 6/14 6/28<br>7/12 7/26<br>8/9** 8/23 | \$499 (\$449)<br>**\$519 (\$469)                   | \$50           |       |
| Pilot Cadets   | K-5             | 6/21<br>7/6* 7/19<br>8/2** 8/16      | \$499 (\$449)<br>*\$399 (\$359)<br>**\$519 (\$469) | \$50           |       |
| Robo Mechanics | K-5             | 6/14 6/28<br>7/12 7/26<br>8/9** 8/30 | \$499 (\$449)<br>**\$519 (\$469)                   | \$50           |       |
| Aero Engineers | 5-7             | 6/21<br>7/19<br>8/2***               | \$525 (\$475)<br>***\$545(\$495)                   | \$50           |       |
| X-Plane Pilots | 5-7             | 6/28<br>7/26<br>8/9***               | \$525 (\$475)<br>***\$545(\$495)                   | \$50           |       |
| Drone Rangers  | K-5<br>HALF DAY | 6/14<br>7/12<br>8/16                 | \$309 (\$279)                                      | \$50           |       |
| <b>Total</b>   |                 |                                      |                                                    |                |       |

Aviation Camp registrations may be changed or cancelled no later than two weeks prior to camp start date. A \$35 per session processing fee will be deducted from all refunds. Parents must complete emergency information electronically prior to camp start date.

### Payment Information

\_\_\_\_\_ Check/Money Order \_\_\_\_\_ MC \_\_\_\_\_ Visa \_\_\_\_\_ AMEX

Card Number: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ Name on Card: \_\_\_\_\_