

HORIZONS

A publication of the Massachusetts Air and Space Museum

The Massachusetts Air and Space Museum inspires new generations to explore, experience, and pursue interests and opportunities in science and technology

Vol. 7 Issue 3

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September 2021

Win an Airplane that can Land Anywhere! MASM Raffle On Now!

by Board Member Kevin Currie

The Massachusetts Air And Space Museum (MASM) is thrilled to announce its inaugural raffle fundraiser to support the Museum and its educational activities. In addition to supporting a wonderful cause, every ticket purchased will have the opportunity of winning one of the three prizes listed below. No more than 5,000 tickets will be sold, so act now. The drawing will be held on July 12, 2023 or earlier if all tickets are sold before then.



1971 Thurston Teal [N501ME}

GRAND PRIZE

The grand prize is a classic 1970 Thurston Teal Air-

Continued on Page 2

Unique Display at Barnstable Airport: Courtesy of MASM

by MASM President Bob Segal

MASM recently installed an exhibit about the history of commercial aviation at Cape Cod Gateway Airport. The exhibit features 25 different airliners that have flown into the airport over the



*Shannon Brown installing aircraft display at
Cape Cod Airport*

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From the Cockpit

We've come a long way in a short period of time, thanks in no small measure to volunteer docents and board members, and of course to our many generous benefactors. We're even raffling off an airplane now!

There are many big things in MASM's near future, and it is our fervent hope to greatly expand our reach to include many new sponsors and volunteers. The museum opened its doors a year and half ago just at the onset of the worst pandemic in over a century. We superseded all health and safety protocols to insure a trouble-free experience for visitors and we witnessed an ever-increasing stream of museum-goers who were eager to drink in the Bay State's space and aviation history. We're open and we're here to stay. Come and see for yourself. You'll love it!

Bob Segal, President



Chairman of the Board Joe Dini jdini@massairspace.org
 President Bob Segal rsegal@massairspace.org
 Curator Barbara Jagla bjagla@massairspace.org
 Operations Manager Bryan Mckay bmckay@massairspace.org

Museum located at:

*The Landing (formerly Capetown Mall) 790 Iyannough Road
 Hyannis, MA 02601*

Museum Hours:

*Thursday, Friday & Saturday 10:00 AM to 4:00 PM
 Admission: Adults \$8.00 Children (ages 5-11) \$5.00
 Active Military with ID: Free*

MASM Mailing Address:

200 Hanscom Drive Bedford, Massachusetts 01730

Horizons is a production of Berkshire Cottage, LLC

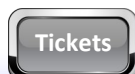
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for the Massachusetts Air and Space Museum

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Click here for your museum tickets:



Thurston Teal aircraft in the shop completing the annual FAA inspection and certification.

plane (N501ME). This is a 2/3 place all aluminum amphibious airplane with fewer than 1,350 hours of total time. The 150 HP Lycoming engine and Hartzell prop have ~130 hours since overhaul. The aircraft will include a new annual inspection and new tires. Also, included are instruments and avionics as follows: ADS-B, a PJ2 COM Radio, Electronics International model R-1-4 digital RPM/TACH, model M-1 digital manifold pressure gauge, King KLX 135 GPS/Moving Map/Com, KT 76A transponder, PS Engineering PM 1000 2-place intercom system. In addition, the winner will receive \$3,000 for his/her tail wheel rating and/or seaplane



Tail rudder of aircraft showing the Thurston Teal trademark and the registration number of the airplane

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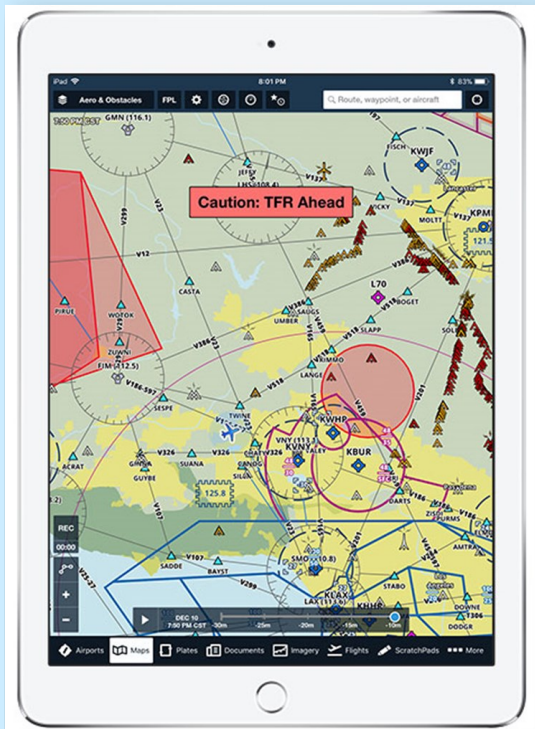
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rating. The airplane value is estimated at \$58,500.

SECOND PRIZE

Second prize is a Bose A20 Aviation Headset that is valued at \$995.95.




THIRD PRIZE

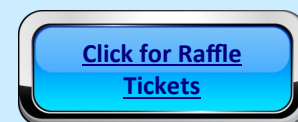
Third prize is an iPad MINI with 256 GB with Wi-Fi, plus a one-year subscription to ForeFlight Pro-Plus. This prize is valued at \$689.98 (cellular service is not included).

Tickets prices are \$65 for a single or \$150 for a block of three and may be purchased at MASM's museum at 790 Lyannough Road in Hyannis, Massachusetts. Additional purchasing and raffle information may be found by visiting our website at www.massairspace.org.



Cockpit of 1970 Thurston Teal [N501ME] with stick controls, and manual main and tail gear controls.

The Thurston Teal was designed by David Thurston and manufactured in Sanford, Maine at the [Thurston Aircraft Corporation](http://www.thurstonaircraft.com). Mr. Thurston had a long and productive career in developing aircraft for water use. During World War II he worked for Grumman Aircraft and later on helped create the [Lake Buccaneer](#), [Colonial Skimmer](#), and the [AeroMarine](#) Seafire as well as the [Thurston Teal](#). 



Instrument panel on the Thurston Teal



Completed exhibit adorns the waiting area of Cape Cod Airport. Each airplane in the display is shown in the livery of the airline company that flew commercially to and from the Barnstable Municipal Airport .



The legend for the display shows detailed information about each aircraft, plus a comprehensive history of the airport itself.

years and the airlines that flew them.

Large window decals of each airliner were developed and installed by MASM President Bob Segal and Graphic Designer Shannon Brown. The two researched, organized, designed and installed the display stand and graphic panel which explains the content of



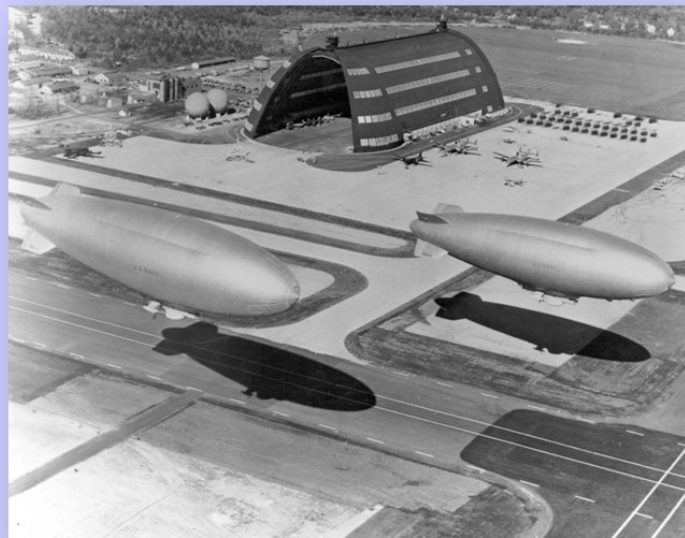
Traveler enjoying the new display and learning about Cape Cod Airport.

the window display as well as the history of the airport. The display is part of an ongoing cooperative partnership between MASM and the Airport Authority. ✈️

NAS South Weymouth Gone, But Not Forgotten

How did a World War II U.S. Naval Air Station evolve into an elaborate set for movie making? It was a journeyed trip, to be sure.

With war looming on the horizon in 1941, the U.S. Navy was charged with establishing a coastal watch around the perimeter of the entire country to seek out any potential enemy submarine activity. The best eyes-in-the-skies in 1941 were anti-submarine patrol blimps due to their ability to fly low and slow over coastal waters compared to their conventional fixed-wing aircraft counterparts. While rigid airships had pretty much seen their day after the Hindenburg disaster, dirigibles, or blimps, were still widely used and made for excellent patrol aircraft.



Two K-series blimps, each 215.7 feet long, 79 feet high and 62.5 feet wide, passing in front of LTA Hangar #1 at South Weymouth NAS.

One of the Navy's largest blimp hangars ever built stood at NAS South Weymouth. It was a steel erection that required excavation of the peat bogs to a depth of 20 feet in order to provide sufficient footings and foundation for the structure. Blimps remained at the station during the late 1950s and early 1960s to aid in secret Navy research projects with MIT's Lincoln Laboratory called Navy Air Development Unit [NADU]. But, in 1966 due to elimination of blimps for coastal patrols and their subsequent utilization in the NADU research projects, the giant steel blimp barn, LTA Hangar #1, was dismantled for good and her tons of steel recycled for other uses.

At the conclusion of World War II the base was placed in "caretaker" status until it was reactivated in the 1950s as it acquired all the assets and mission of the Squantum Naval Airbase. The original NAS South Weymouth consisted of 1,257 acres in the towns of Weymouth, Abington, and Rockland, MA. Before the base was finally closed, the government erected a second and more modern control tower that was never used. Like many of the less prominent structures, it remains there today, abandoned, vandalized, and graffitied.



Blimp hangar at NAS South Weymouth

Continued on Page 6



False-fronts used for filming "Patriot's Day."

Enter Hollywood! On a remote section of the former Naval Air Station, the Lionsgate Entertainment Incorporated, a motion picture production company, erected a collection of false-front buildings replicating both a portion of Boylston Street in Boston near the finish line of the Boston Marathon and a Watertown, MA neighborhood. Although the structures were only whole when viewed from certain angles, the camera saw it as Laurel Street in Watertown where a horrendous shootout occurred between police officers and the terrorists who were responsible for the 2013 Marathon bombing in Boston. The abandoned base allowed for the action to be as noisy as it needed to be without disturbing anyone in the area. The 2016 film "Patriot's Day" starred Boston's own Mark Wahlberg, and also Kevin Bacon and Michelle Monaghan. Since the eventual abandonment of the movie set, vandals had also taken a toll on structures. The entire set was completely destroyed by arsonists in March of 2020.



Quiet Watertown neighborhood ... in S. Weymouth.

Mass. Company Building 5-Seat Helicopter Powered by Liquid Hydrogen



The Skai 6-prop, 5-seat, hydrogen fueled helicopter

The aviation community has been reeling from the 1937 Hindenburg disaster when hydrogen was seen as a culprit. But NASA employed liquid hydrogen fuel cells throughout the entire manned space program so successfully that they are now considered a fuel source of choice.

Here on earth, hydrogen fuel cells are starting to attract more attention as a means of getting significantly closer to zero emissions in modes of transportation. [Alaka'i Technologies](#) of Hopkinton, MA has introduced [Skai](#), an eVTOL multi-passenger helicopter with six electric motors powered by hydrogen fuel cells. The only significant emission from this aircraft is H₂O; water.

While current operational aspects are somewhat limited, it boasts a 4-hour running time per cell, with only 10 minutes needed for refueling, unlike electrical battery counterparts. An application as urban air-taxis with payloads of up to 1,000 pounds is a great target market. But the big payoff with *Skai* is the safety factor. By keeping systems simple, the potential for points of failure is reduced exponentially and the margin of safety is compounded.

The brain power behind this innovative step forward in transportation includes both scientists and engineers, plus a former NASA administrator, Daniel Goldin. He sees an especially bright future for *Skai* as the company forges through the FAA certification process of this safe and revolutionary aircraft, hopefully by 2022. ✈️

MASM Board Meets at Museum



MASM Board's July meeting at the museum

The MASM Board of Directors met collectively on July 28th at the Museum in Hyannis, both in person and via Zoom. Although the health protocols mandated by the state were previously lifted, board members and attendees maintained a distance from one another of roughly six feet.

Jack Tamposi provided a detailed financial report that included projections on future income along with target goals for fund raising. The finance committee has been working diligently to focus on both the revenues generated by tickets, gift shop sales, and donations, plus the burn rate of expenditures in keeping the museum doors open and the collections up-to-date and preserved.

Board Chairman Joe Dini reported that MASM has hired an accounting firm to help manage the complexities of running a modern non-profit organization. He also reported a law firm has been working for the museum completing a major revision of the bylaws that was distributed to all board members.

Board Member Tom Hiniker rose to address the need for MASM to establish a scholarship program for students who wish to pursue careers in both the aviation and space industries. Tom has had experience with other agencies setting up such programs and it was decided that a scholarship committee would be formed to develop the program. Those wishing to volunteer to work on the committee are urged to contact Joe Dini to be included.



Chairman of the Board Joe Dini

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Board Member Kevin Currie on Zoom reported that the raffle for the Teal aircraft is ready to go live. He went over the various rules that are required under Commonwealth laws, and the details on the other two prizes being offered (see Page 1 story).

Upon the completion of business, the meeting adjourned and those attending in person moved to the Yarmouth House Restaurant in Yarmouth where they enjoyed a delicious dinner and great conversation with fellow MASM enthusiasts.

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Zoom meeting attendees



Board Member Tom Hiniker



The Aero Club of New England

Boston, Massachusetts

Motto: *De Terra Ad Astra: From the Earth to the Stars*

"Sketch of the Aero Club of New England 1902-1918" by

William Carroll Hill, ACONE Secretary, Boston 1918,

Adapted by MASM Curator Barbara Jagla

The Aero Club of New England (ACONE) was the first aeronautical club to be formed in America and dates from the ninth day of January, 1902, when eleven well known Boston men, meeting socially at the Massachusetts Automobile Club, signed an agreement to associate as a club and to indulge in the sport ballooning. Nearly six years later, on November 21, 1907, on the 124th anniversary of the first ascent of man into the air, the club was formally incorporated with some forty members and has since played an active and important role in New England and American aviation.

The honor of having formed the first aeronautical

club in the country belongs to Mr. Charles, J. Glidden, one of the founders of the Bell Telephone System and the founder of the automobile tours bearing his name. During the early years of the Aero Club, Glidden and other members received instruction as balloon pilots in the United States and in Europe. Glidden was a balloonist of note, and during World War I was an officer in the Balloon Corps of the United States Army.

Professor A. Lawrence Rotch of Harvard University, founder and director of the Blue Hill Observatory, was elected the first President of the Aero Club at the first Board of Directors meeting at Young's Hotel, Court Square on November 21, 1907. William Henry Pickering, the noted Harvard astronomer was among the Board members.

The Aero Club purchased a balloon, of 5,000 cubic



ACONE Logo

feet capacity, called the "Boston". Up to 1915, the Club constantly maintained another balloon of the "Boston" capacity, and bearing the same name, and for a time owned and had in service the balloon "Massachusetts", of 65,000 cubic feet.

Interest in the sport was aroused to such extent that New England and Massachusetts easily became the center of aeronautical activity for the entire country and for a number of years more ascensions were made annually in Massachusetts under the auspices of the Aero Club of New England than were credited to all other states combined.

In the period from 1907 to 1915 inclusive, 242 ascensions were made in New England under the auspices of the Club with 640 passengers carried into the

Continued on Page 9



air and some 9,700 miles traveled. The balloons were in the air for a total of 475 hours. Some of the experiments of the State Guard with balloons for military observation purposes were made in Massachusetts with the assistance of the Club balloons.

The history of the Club divides itself into two periods, the earlier period covering the years when the study of aeronautics was limited to gas ballooning, and the second, when aeronautics has been concerned more especially with the aeroplane. The interest in aviation began to take serious hold of the Club as early as 1910, with the holding of aviation meets and expositions in Boston. The Club was instrumental in holding the first aeronautical exposition in the country at Mechanics Hall in Boston in February 1910 and again in 1911.

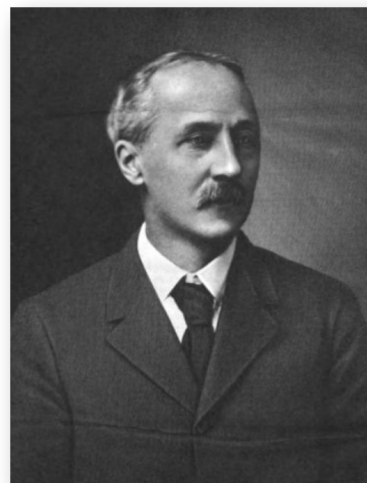
In 1910, the Aero Club of New England cooperated with the Harvard Aeronautical Society in the holding of one of the first aviation meets in the country at Squantum, MA. The rapid development and interest in the aeroplane lessened the followers of the balloon, and interest in the Club's earlier line of sport lagged.

The election of Mr. Godfrey L. Cabot as president of the Club in 1915 established it more firmly upon a basis of aviation. Mr. Cabot was keenly interested in aviation and a flier himself. About the same time the Massachusetts National Guard was to form an aero company in Massachusetts in connection with the Coast Artillery, to select a flying field and develop a flying corps.

In April 1917 an aviation camp was maintained by the Navy Department at Marblehead and Lieutenant Godfrey L. Cabot, president of the Aero Club, who had received his commission in the United States Naval Reserve Flying Corps, was appointed commandant in charge.

A notable and generous contribution of \$31,000 in September 1917 was provided by Lieutenant Cabot, which he placed at the disposal of Rear Admiral Bradley A. Fisk U.S.N (retired) for the development of Admiral Fisk's torpedo carrying airplane.

Mention should also be made of the significant contributions to aviation by three ACONE members, W. Starling Burgess, Greely S. Curtis and Frank H. Russell, who early began the manufacture of airplanes at Marblehead and have furnished the government with many airplanes. ✈️



Godfrey Lowell Cabot



William Starling Burgess

C.A.V.U

Most people familiar with aviation know that the abbreviation “CAVU” stands for “*Ceiling and visibility unrestricted.*” In this recurring feature of **Horizons**, your ability to see clearly into the history of aviation will be tested through identification of flying machines that once were. The first reader who submits the correct answer will be entitled to bragging rights and have their name and answer published in the subsequent edition of **Horizons**. Submit your name, the name of the aircraft, the type or version (if applicable), and the country where it was manufactured to the editor-in-chief of **Horizons** at: horizons@massairspace.org

Here is your challenge for this edition:

For additional content, click on any of the photos in this edition.
You'll find interesting videos and links for related information!



June 2021 Edition's Answer:

Harbin Y-12—China

Two crew utility light transport—**Max. speed:** 188 MPH (302 km/h)
Ceiling: 9,845 ft (3,000 m) **Radius:** 255 miles (410 km) (*actual ceiling not revealed*)

Dry weight: 6,614 lbs (3,000 kg) **Max. take-off weight:** 12,125 lbs (5,500 kg)
Dimension: Wing span: 56 ft 6.7 in (17.24 m); length 48 ft 9 in (14.68 m); height 17 ft 3.9 in (5.28 m); wing area 368.89 sq ft (34.27 m)

Powered: 2 620-shp (462 kg) Pratt & Whitney Canada PT6A-27 turboprops
Payloads: 17 passengers, or 14 parachutists, or 3,748 lbs (1,700 kg) freight

Correct Answer: Roger McDowell

