



The Flightline



Volume 53, Issue 1 Newsletter of the Propstoppers RC Club, AMA 1042, January 2023



President's Message

Gentlemen,

Your new Board and leadership team is meeting to prepare for the 2023 flying season on the evening of January 18. We will be planning our picnic schedule as well as work and improvement to our fields.

On behalf of the Board and all members a special THANK YOU to Dick Bartkowski for his many years of service to Propstoppers. Not only has he been a longstanding Secretary, but has actively participated in recent work projects like; spreading wood chips at CA's entrance, clearing brush at CA field and laying crabgrass preventer with Pete at Elwyn Field. He also volunteers with Dave Harding to make presentations to Drexel engineering students and to assist with their flight trials. He has truly been a dedicated and active Propstopper. Please thank him for his service when you see him.

The warm weather pattern has enabled many of us to fly on a fairly regular basis this winter. We moved the picnic tables at Elwyn to a higher area to get them out of the mud. The fields are both in good shape for flying. When you get a few free hours on a warm day get out there and fly!

Mike

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Agenda

Propstoppers General Membership Meeting

TBA

Look for an announcement of the next club meeting in the Spring.

2023 Picnic Schedule

May 20th, rain date 21st

September 9th, rain date 10th

October (Tentative) 14th/15th or 21st/22nd

Propstoppers RC Club of Delaware County, Pennsylvania.

Club Officers

President:
Mike Black

Vice President:
Pedro Navarro

Secretary:
Michael Black

Treasurer:
Pete Oetinger

Membership Chairman:
Ryan Schurman

Safety Officers:
Eric Hofberg
Ryan Schurman

Newsletter Editor:
Larry Woodward

Facebook Editor:
Ryan Schurman

Webmaster:
Michael Black

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Indoor Flying at the Brookhaven Gym

The Brookhaven Community Gym is open to members Tuesdays at 10:00-11:00am and Saturday evenings at 5:00pm on the following dates: Jan. 28th, March 18th and April 22nd. Indoor pilots must sign a waiver of liability form.



Minutes of the Propstoppers Model Airplane Club,

General Membership Meeting Minutes from July 23, 2022

Come to order 12:05

Minutes of the April 23rd Meeting were approved.

Treasurer’s Report

Pete sent a note indicating we have \$5,130 after paying for the brush cut and Fun Fly. That is about the same as this time last year. Expenses have risen since Chuck is cutting a larger area.

Membership – Ryan – no report

Website Mike – No Report

Newsletter – Larry is currently working on the latest newsletter

Safety – Pedro, Ryan, and Eric – no report

Picnic – Paul, Mike, Marilyn, and all who assisted were thanked for setting up, cooking, and supplying the activities for the Fun Fly last month. Job well Done! It was noted that the excessive heat and effect on some participants was a concern.

Old Business

TFR’s – It was noted that e-mails cannot be depended upon especially over weekends for changes to TFR’s. Please use one of the appropriate Apps on your phone to check for updates. B4UFly, AirMap, UAS Sidekick all work well.

Porta Potty – was removed because it was hardly used. There was also a question about disability access and the additional cost.

Drexel Program – Dave – improvements are planned to the equipment supplied to Drexel as well as plans to make presentations to students in preparation for their wing and empennage building.

Elwyn outreach – no report

CA Field News – no new news

New Business

Picnic dates – August 27th and October 8th

Safety issues – indoor flying – all AMA rules are in effect the same as at the field.

Fields at Elwyn and CA are now fully open for members and guests, 8 AM to sunset every day all year round. (CA-electric only, Elwyn - Sunday mornings from 8AM to Noon electric only.

We respectfully ask all members to stay in compliance with all Health Department recommendations. The fully vaccinated are no longer required to wear a mask at the field.

Please respect those who are continuing to wear masks or who are not vaccinated, by maintaining social distancing.

LOA with Philadelphia International:

Please comply with the following rules to stay in compliance with our FAA Agreement:

- Maximum altitude 400 feet
- In case of Fly-Away call 215-492-4123 immediately. This is a direct line to the TRACON Office at Philadelphia International Airport.

Tuesday morning breakfast at the Tom Jones Diner starts at 9:00am Indoor flying at the Brookhaven Community Center gym follows at 10:00.

Members and guests must complete a waiver of liability form to fly at Brookhaven Gym.

Other

Adjournment 12:45

Propstoppers General Membership Meeting Minutes September 24, 2022

Meeting location was changed to Elwyn Field due to the heavy rain recently received.

Come to Order 12:05

New members Bob Thomas and Chris Dietz were welcomed into the club.

Minutes of the 7/23/2022 Meeting were not available

Treasurer's Report – Pete noted that we currently have about \$4,500 in the bank

Membership – Ryan – 2 new members as previously noted

Website – Mike – has made some changes to the website for membership

Newsletter – Larry is working to finish the latest edition and asked for pictures and articles

Safety – Pedro, Ryan, Eric – It was noted that FPV flyers should always have a spotter and that their aircraft should always be within line of sight of either the pilot or spotter.

Picnic – Paul – Please place a request to the AMA for a waiver for Sept. 8th for the next picnic

Old Business –

Elwyn Outreach – The individual in charge has left Elwyn. We are trying to establish a new contact

New Business

Membership QR Code – Ryan – a discussion ensued on this topic and Larry will work with Ryan to see if it would be easier to provide members a link to a redacted membership list instead of using ID Cards.

Budget discussion for 2023 – Pete was asked to budget for a Spring Fun Fly Event with a Porta Potty for mid-May. He was also asked to budget for crabgrass preventer and a roller for Elwyn as well as 2 brush cuts for CA

Elections – Nominations

Pres. – Mike Black, VP – Pedro Navarro, Treas. Pete Oetinger, Secy. Michael Black

A query and request from Mr. William Moore was received from a program called Learning Haven. The letter was read and the membership decided that the request did not fit with our mission and goals.

Adjournment – 12:45

Propstoppers General Membership Meeting Minutes November 12, 2022

Call to Order: The Meeting was called to order by President Mike Black around noon. Thirteen members and one applicant member were present.

We had a moment of silence in memory of Mick Harris, and Murray Wilson gave a brief account of his last days. Murray also mentioned that Mick's ashes were scattered on the Elwyn field.

The minutes of the 9/24/2022 and 7/23/2022 Meetings had not been finalized yet.

Treasurer's Report: Pete gave a report of the current Club balance, which is in good shape based on this time of year. He presented the 2023 budget of \$4,600, which resulted in the Executive Committee setting the following 2023 Annual Dues:

- If paid by check by Dec. 30th = \$90
- If paid by Paypal by Dec 30th = \$93
- If paid after Dec. 30th = \$100 (check) or \$103 (Paypal)

The extra \$3 for using Paypal is because we can no longer receive free "friends or family" payments to our business Paypal account.

Membership Report: Ryan reported that we have 4 new members, and our membership is now around 50. He and Larry are working on a way to have the basic information for each Club member available the Club electronically. They are taking into consideration privacy issues while they develop the method.

Website: No update since Michael Black was not in attendance.

Newsletter: Larry again asked the Club members to provide him with articles for the Newsletter. We will be profiling the 4 new members in our upcoming newsletters.

Safety: – Eric brought up the issue of indoor flying when fast and slow planes are simultaneously in the air. We felt that the indoor flyers on Tuesday mornings can address this on an as-needed basis instead of having structured flying slots by aircraft class.

Picnic: A big "Thank you" was given to Paul and his wife (Marilyn) and to Michael Black, for all the hard work they did on the picnics this year.

Old Business: Dave Harding reported that the Drexel Fly Day is scheduled for 11/19. A TFR Waiver request was submitted.

Larry reported that the Elwyn "Outreach" person he was communicating with has left. He is trying to establish a new connection at Elwyn.

New Business: The nominations for election to the Club Board were:

President = Mike Black

Vice President = Pedro Navarro

Treasurer = Pete Oetinger

Secretary = Michael Black

No other nominations came from the floor. By acclamation, the above slate of nominees were elected for 2023.

Other Business : We are still pursuing getting "professional" windsocks for both fields.

Adjournment: The meeting was adjourned around 1 p.m.

Editor's Notes:

By Larry Woodward



All things considered, we had a good fall flying season, and the early winter gave us some great days too. Right now, however, it is 19 degrees outside as another polar air mass is moving across the country. So I'm not holding a lot of hope for making it to the fields any time soon.

But, things are looking up for indoor events. Last week we had our first evening indoor event since before Covid. The turnout was modest, but varied, with free flight rubber, quadcopters and FPV, a helicopter and a 3D foamy. And the pilot ages ranged from octogenarian to pre-teen. This is the type of diversity we are hoping to see more of at the next two events coming up in March and April.

These evening indoor flights are an opportunity for us to fly together with other members we might not ordinarily meet at the fields. It's also a great way to see what other types of aircraft can do. Please keep the next evening indoor events on your calendar and plan to join in the fun.

While I'm on the subject of indoor events, keep your eye out for an upcoming announcement about a wonderful donation to our club from Newt Bollinger. Newt is an old friend of the Propstoppers from a sister club in Delaware. He is a nationally ranked champion in Free Flight Rubber Band competitions. He is retiring from active flying due to deteriorating eye sight and has offered his collection of models to our members. We will be distributing them by lottery to interested members. Stay tuned for details later this month.

Finally, I want to thank all the members who contributed to the newsletter. I can't do much without your content. Dave Harding is my mainstay and Eric Hofberg is right behind him. New member Chris Dietze sent me his profile information within minutes of my invitation. Paul Pujol stepped in with a very amusing review of his new 50MM EDF's. His is a great example of how a simple event or new acquisition can be easily turned into an entertaining article. Everyone, please keep the newsletter in mind as you enjoy your flying activities and send me your photos and commentary.

Looking forward to seeing more of you in the new year,

Larry

Member Profile

Meet new member Chris Dietze

By Larry Woodward

My first model was a Cox 1/2A PT-19 CL. I guess I was around 9. I crashed it repeatedly and was always asking my mom to take me to the hobby shop to get parts. I was always interested in RC but as a kid there was no way to afford it. My friends and I were always building air cars and stuff with .020 and .049 engines. I knew a guy who handcrafted model hydrofoil boats and held the world model speed record several times. He was a big help- taught me how to blend my own fuel from castor and wood alcohol, then he'd give me a cup of nitro.

“I was in my 40’s when I finally had room in my life to start flying RC.”

When I initially got into RC I started with 1/8 scale 4 wheel drive buggies, but the darn things broke all the time so I went to airplanes. Planes are a lot more fun than buggies! Brian Pasternak and Jim DiAntonio of Delaware Country RC taught me to fly.

I stopped out to Sleighton Field about 15 years ago and checked out the club, but since I was a member of DCRC I didn't join at the time. Now that DCRC has lost our field It made sense to join; also, I live close by and it's really convenient. Not to mention it's a great group of people!



Fixed wing aircraft are my zone. I'm a dinosaur and I enjoy glow and am getting into gas. I'm reluctantly entering the electric era with some foamies. I currently enjoy flying 3D enthusiastically and poorly. One of my favorite planes was my Funtana .40... I miss that plane. I guess the current fave is the Aeroworks YAK 54. 90 with a Saito 1.25.

I've not been out too many times yet. I still have a lot of work obligations that interfere with flying time. The work pays for the planes, so it comes first. Bunch of family stuff last year too. Looking ahead, I've got an Edge 540 20cc gasser to assemble after I clean out my garage workshop space.



AMA coordinates FRIA sites

Propstoppers moves forward with FRIA designation

By Larry Woodward
Photos by Paul Pujol



Elwyn Field Aerial Survey January 2023

AMA was officially recognized as a Community-Based Organization on November 15, 2022. This recognition allows AMA to begin requesting FAA Recognized Identification Areas (FRIA) for our charter club flying sites. FRIA sites will allow AMA club members to fly within the designated area without the need to broadcast remote ID information. All pilots operating outside FRIA will be required to broadcast remote ID after September 16, 2023.

Our club has designated President Mike Black as primary point of contact (PPOC) for all things FRIA-related. He will be responsible for filling out the AMA questionnaire to begin the application process, as well as act as the liaison between the club, FAA, and AMA. He is now collecting data and preparing our FAA application regarding flying site locations.

The following information is required to complete the questionnaire:
Club name and number

- Name of individual making the request and his/her AMA number (PPOC)
- PPOC's contact information (physical address, mailing address, phone number, and email)
- Physical address of proposed FRIA location
- Location of proposed FRIA **(may require geometric shape of flying site and lat/long) Airspace letters of agreement (for flying sites in controlled airspace)**
- Description of purpose and need (i.e., recreational flying without remote ID equipped aircraft)
- Estimate of expected use of the FRIA including duration of flight, aircraft type, etc.

The questionnaire will be used for AMA staff to begin the application process on behalf of our club. Completing the questionnaire does not automatically approve our charter club flying site as a FRIA. The FAA has informed AMA that FRIA applications may not be processed for many months after we submit the information. Remember that operators are not required to comply with remote ID rules until September 16, 2023.

While AMA expects most flying sites to receive FRIA status, keep in mind that the FAA states that proximity to other FRIAS may be reason for denial. At this time, we are submitting our highest priority flying site request for Elwyn Field. In the coming weeks, AMA will reach out to the PPOC regarding additional FRIA requests.

Mike and Paul Pujol have already completed an aerial survey and collected geolocation coordinates with the help of Paul's DJI drones. These will be the basis for our current application.

CA Field will be our second FRIA application



Pulitzer Electric Aircraft Race

Submitted by Dave Harding

The Pulitzer Trophy Races

The **National Air Races** (also known as **Pulitzer Trophy Races**) are a series of pylon and cross-country races that have taken place in the United States since 1920. The science of aviation, and the speed and reliability of aircraft and engines grew rapidly during this period; the National Air Races were both a proving ground and showcase for this.

Extremely popular in the years leading up to World War II, the races did not flourish after the war and were suspended in the mid 1950's. Today the advent of electric powered aircraft has rekindled an interest in these race events.



Russell Maughan's record-setting Curtiss R-6 at Selfridge Field, Michigan, 14 October 1922. (San Diego Air and Space Museum)

NAA is planning a cross-country air race for electric propulsion aircraft!



The electric aircraft industry has been rapidly expanding in terms of technological readiness and the number of potential race contestants. The air race will be a resumption of the Pulitzer air races first held in the early 1920s, and the winner of the race awarded the Pulitzer Trophy (on display at the Smithsonian National Air and Space Museum in Washington, DC) at a suitable NAA awards event.

The Pulitzer Electric Aircraft Race! The first Pulitzer Electric Aircraft Race, planned for May 2023, will be a four day, 1,000 nm cross-country event beginning in Omaha, NE and ending near Kitty Hawk, NC. The race will be open to piloted aerodynes of all types using zero-emission electric propulsion (e.g., fixed wing aeroplanes, helicopters, or multi-rotor eVTOL Advanced Air Mobility [AAM] vehicles). Because many of the potential competitors may be in a research and development phase and using experimental aircraft, the race will be a day

only, Visual Flight Rules (VFR) event. The race winner will be the pilot/crew with the fastest speed calculated from the cumulative flight time, not including time on the ground for maintenance, charging, or overnight stays. The specific race rules have been developed by the NAA Pulitzer Race Committee and are available [here](#).

The cross-country format, rather than a closed-circuit speed event, was selected to emphasize electric aircraft range and reliability, in addition to speed, in a realistic operating environment. A cross-country race will require careful logistical planning from the race teams and highlight different electric propulsion technology choices and operational strategies such as rapid battery charging, whole battery changes, and solar power augmentation to extend range. As a long distance, multi-day cross-country event open to all classes and types of electric aircraft, we have designed the Pulitzer Electric Aircraft Race to provide an open canvas for design innovations and be a flying expo for the electric aviation industry.



MIT Jungle Hawk Owl

Submitted by Dave Harding

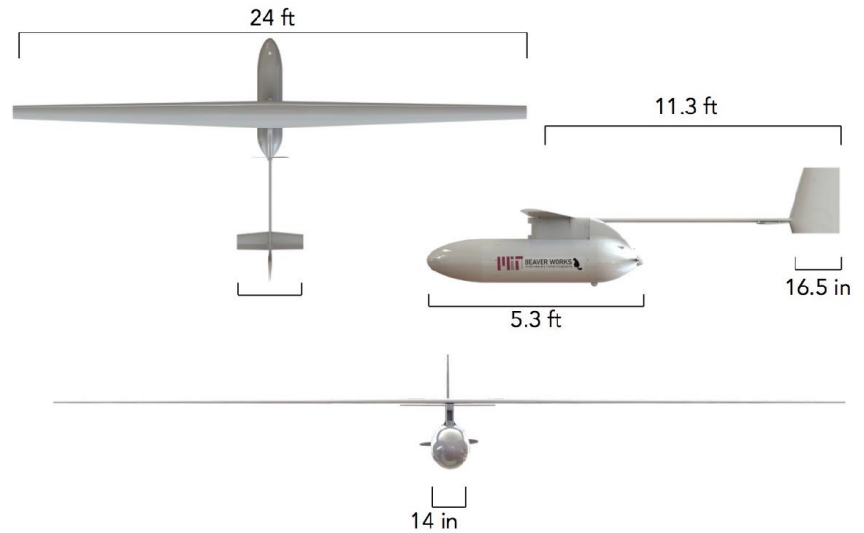
Jennifer Chu | MIT News Office
sUAS News [12 June 2017](#)



In the event of a natural disaster that disrupts phone and Internet systems over a wide area, autonomous aircraft could potentially hover over affected regions, carrying communications payloads that provide temporary telecommunications coverage to those in need.

However, such unpiloted aerial vehicles, or UAVs, are often expensive to operate, and can only remain in the air for a day or two, as is the case with most autonomous surveillance aircraft operated by the U.S. Air Force. Providing adequate and persistent coverage would require a relay of multiple aircraft, landing and refueling around the clock, with operational costs of thousands of dollars per hour, per vehicle.

Now a team of MIT engineers has come up with a much less expensive UAV design that can hover for longer durations to provide wide-ranging communications support. The researchers designed, built, and tested a UAV resembling a thin glider with a 24-foot wingspan. The vehicle can carry 10 to 20 pounds of communications equipment while flying at an altitude of 15,000 feet. Weighing in at just under 150 pounds, the vehicle is powered by a 5-horsepower gasoline engine and can keep itself aloft for more than five days — longer than any gasoline-powered autonomous aircraft has remained in flight, the researchers say.



The team presented its results at the American Institute of Aeronautics and Astronautics Conference in Denver, Colorado. The team was led by R. John Hansman, the T. Wilson Professor of Aeronautics and Astronautics; and Warren Hoburg, the Boeing Assistant Professor of Aeronautics and Astronautics. Hansman and Hoburg are co-instructors for MIT’s Beaver Works project, a student research collaboration between MIT and the MIT Lincoln Laboratory.

A solar no-go

Hansman and Hoburg worked with MIT students to design a long-duration UAV as part of a Beaver Works capstone project — typically a two- or three-semester course that allows MIT students to design a vehicle that meets certain mission specifications, and to build and test their design.

In the spring of 2016, the U.S. Air Force approached the Beaver Works collaboration with an idea for designing a long-duration UAV powered by solar energy. The thought at the time was that an aircraft, fueled by the sun, could potentially remain in flight indefinitely. Others, including Google, have experimented with this concept, designing solar-powered, high-altitude aircraft to deliver continuous internet access to rural and remote parts of Africa.

But when the team looked into the idea and analyzed the problem from multiple engineering angles, they found that solar power — at least for long-duration emergency response — was not the way to go.

“[A solar vehicle] would work fine in the



summer season, but in winter, particularly if you're far from the equator, nights are longer, and there's not as much sunlight during the day. So you have to carry more batteries, which adds weight and makes the plane bigger," Hansman says. "For the mission of disaster relief, this could only respond to disasters that occur in summer, at low latitude. That just doesn't work."



The researchers came to their conclusions after modeling the problem using GPkit, a software tool developed by Hoburg that allows engineers to determine the optimal design decisions or dimensions for a vehicle, given certain constraints or mission requirements.

This method is not unique among initial aircraft design tools, but unlike these tools, which take into account only several main constraints, Hoburg's method allowed the team to consider around 200 constraints and physical models simultaneously, and to fit them all together to create an optimal aircraft design.

"This gives you all the information you need to draw up the airplane," Hansman says. "It also says that for every one of these hundreds of parameters, if you changed one of them, how much would that influence the plane's performance? If you change the engine a bit, it will make a big difference. And if you change wingspan, will it show an effect?"

Framing for takeoff

After determining, through their software estimations, that a solar-powered UAV would not be feasible, at least for long-duration use in any part of the world, the team performed the same modeling for a gasoline-powered aircraft. They came up with a design that was predicted to stay in flight for more than five days, at altitudes of 15,000 feet, in up to 94th-percentile winds, at any latitude.

In the fall of 2016, the team built a prototype UAV, following the dimensions determined by students using Hoburg's software tool. To keep the vehicle lightweight, they used materials such as carbon fiber for its wings and fuselage, and Kevlar for the tail and nosecone, which houses the payload. The researchers designed the UAV to be easily taken apart and stored in a FedEx box, to be shipped to any disaster region and quickly reassembled.

This spring, the students refined the prototype and developed a launch system, fashioning a simple metal frame to fit on a typical car roof rack. The UAV sits atop the frame as a driver accelerates the launch vehicle (a car or truck) up to rotation speed — the UAV’s optimal takeoff speed. At that point, the remote pilot would angle the UAV toward the sky, automatically releasing a fastener and allowing the UAV to lift off.



In early May, the team put the UAV to the test, conducting flight tests at Plum Island Airport in Newburyport, Massachusetts. For initial flight testing, the students modified the vehicle to comply with FAA regulations for small unpowered aircraft, which allow drones flying at low altitude and weighing less than 55 pounds. To reduce the UAV’s weight from 150 to under 55 pounds, the researchers simply loaded it with a smaller ballast payload and less gasoline.

In their initial tests, the UAV successfully took off, flew around, and landed safely. Hoburg says there are special considerations that have to be made to test the vehicle over multiple days, such as having enough people to monitor the aircraft over a long period of time.

“There are a few aspects to flying for five straight days,” Hoburg says. “But we’re pretty confident that we have the right fuel burn rate and right engine that we could fly it for five days.”



“These vehicles could be used not only for disaster relief but also other missions, such as environmental monitoring. You might want to keep watch on wildfires or the outflow of a river,” Hansman adds. “I think it’s pretty clear that someone within a few years will manufacture a vehicle that will be a knockoff of this.”

This research was supported, in part, by MIT Lincoln Laboratory.

Hobby Zone 50 MM EDF

Mike Black and Paul Pujol break in a new EDF collection

By Paul Pujol

It was a warm summer day at the Elwyn field, and Mike, Eric and I were in the midst of recovery from PTSD (post traumatic Stinger disorder) caused by multiple failed hand launches and unexplained stalls with the Stinger 64mm. Our therapist, Eric, showed up with a new Arrows 50mm T33 that he acquired from Hobby Zone.

A nicely appointed sleek looking EDF, but can it fly. Eric attaches the battery and the control surfaces twitch to signal the V2 stabilization system is active. After a preflight control check and a couple revs with the 11 blade fan, he hands the plane to Mike for a hand launch.



Mike points the nose into the wind and with a gentle toss launches the silver beauty.

The little jet never hesitated and gained altitude as the fan belted out a beautiful tune. A few high speed passes mixed with some slow controlled flight had Mike and me in awe. This was followed by a greased landing.

I was on the Hobby Zone site before the battery was unplugged to order my own T33. It was the perfect cure for PTSD. Subsequently Eric and I also ordered the Arrows 50 mm BAE Hawk and Mike ordered the Arrows 50 mm Viper.

All fly superbly and are easy to launch and land. They came set up for 3S but we added 40 amp ESC's and converted them to 4S to make these little jets scream.

New Zealand land yacht Horonuku clocks 138mph to break speed record

Submitted by Dave Harding

[Bernard Lagan](#), Sydney

Monday December 12 2022, 2.10pm GMT, The Times



The New Zealand land yacht Horonuku breaking the wind-powered vehicle speed record in Australia. Pilot Glenn Ashby, inset, said the land yacht is capable of going even faster

GETTY IMAGES

A team of New Zealanders aboard a high-tech land yacht have set a new world record for wind-powered overland speed, reaching over 222 km/h (138 mph) on a remote dry lake bed in the Australian Outback.

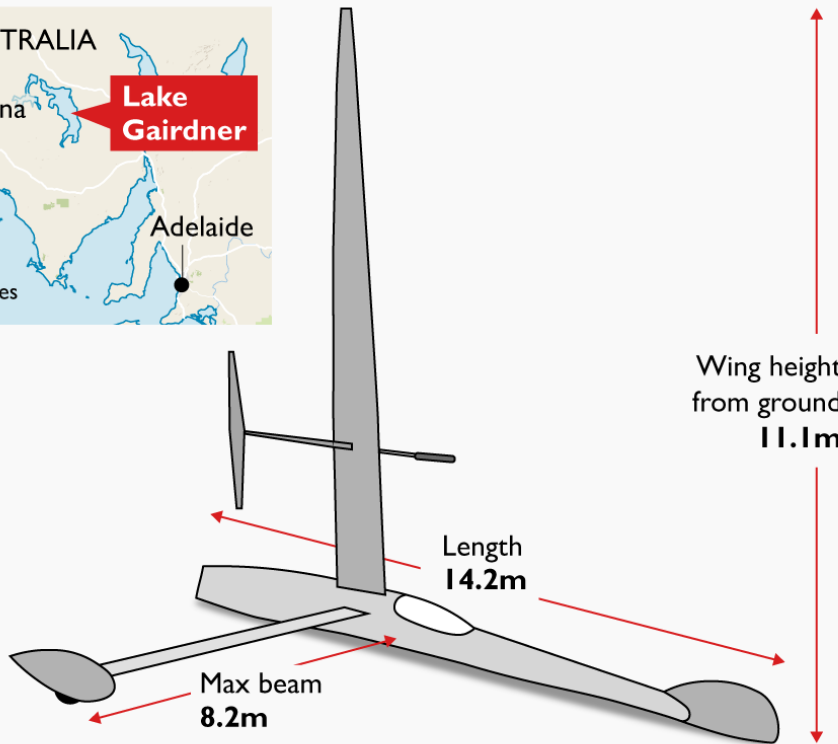
Team New Zealand — normally a sailing team and the current holders of the America's Cup — set the new benchmark on a wheeled craft named Horonuku, at Lake Gairdner, a salt lake in the state of South Australia.

Pilot Glenn Ashby sailed the team's land yacht at 222.4 km/h (138.1 mph) yesterday — in winds of 22 knots.

WORLD

Record breaker

Horonuku land yacht



Wind-powered
land speed
world record
138mph

Total mass	2,800kg
Power	Wind only, no stored energy allowed
Wheels	2x inline rears, 1x front and 1x pod

Source: Emirates Team New Zealand

They beat the record of 202.9 km/h (126 mph) recorded by Richard Jenkins, from England, in March 2009 aboard his land yacht, Greenbird, on the dried-up Ivanpah Lake in California. It took Jenkins, an engineer, ten years to achieve the result.

An Olympic silver medallist and multiple world yachting champion, Ashby skippered Emirates Team New Zealand to victory in the 2017 America's Cup sailing competition, which the team also won last year.

"We're using tyres and wheels and suspension, which is pretty foreign to us, so we've had to get out of our comfort zone a little bit," Ashby said of the new record on land, which he thinks the team can surpass.

"The team and I are obviously buzzing to have sailed Horonuku at a speed faster than anyone has ever before — powered only by the wind," Ashby told the Australian Broadcasting Corporation (ABC) on Monday.

The craft clocked over 138 mph to set a new record

GETTY IMAGES

“But in saying that, we know Horonuku has a lot more speed in it when we get more wind and better conditions. For sure there is a cause for a celebration, but this isn’t the end. We know we can go faster, so we plan to.”

The 14m-long land craft has a cockpit like an aircraft and uses an 11m-high rigid wing as a “sail” to produce thrust, like an aeroplane wing produces lift. The entire machine is built of carbon composite materials, aside from the metal parts used in bearings for the wing and its four wheels.



Before the new world speed is officially declared it must go through a verification process conducted by the international governing body, the International Land and Sand Yachting Federation.



No power except wind and a human push-start must be used, and a top speed must be more than 1 mph beyond a previous record for at least three seconds. The team had an independent judge on the ground in South Australia to witness and verify the run.

The new record comes after months of frustrating delays caused by intense rainfall that led to

surface water on the normally dry 100 mile-long Lake Gairdner, 270 miles north of Adelaide.

In 1994 Rosco McGlashan set the Australian land speed record at the lake, clocking up 802.6 km/h (500 mph) behind the wheel of a jet-powered vehicle.

<https://www.thetimes.co.uk/article/new-zealand-land-yacht-horonuku-clocks-138mph-to-break-speed-record-x2ddvfc6>

RUBBERBAND MAN

HOW A WORLD WAR I PILOT INTRODUCED GENERATIONS OF CHILDREN TO AVIATION THROUGH Balsa WOOD GLIDERS

Submitted by Dave Harding

Aircraft Owners and Pilots Association, AOPA

January 1, 2021 By Julie Summers Walker

The snap could really sting. If you wound your Jetstream 55 balsa wood glider's "motor" too tight or the band was old, that backfire had a bite. Remember playing with a wind-up rubber band-powered toy as a kid? When wound just right, and launched just so, the flight of your own glider was a joy to behold and great fun to chase down in a field. Oh, the lazy, crazy days of childhood—brought to you by Paul K. Guillow Inc., manufacturer of balsa wood motorplanes and model airplane kits since 1926.



Paul K. Guillow started his company after serving in World War I. His design of the rubber band propelled balsa wood model airplane is still going strong more than 90 years later.

Yep, since 1926 . Paul Guillow returned to Massachusetts after the end of World War I. He was an aviator in the U.S. Navy. He'd fallen in love with aviation, as had the rest of America, and would be caught up in the flying fever after Charles A.

Lindbergh flew nonstop to Paris the next year. The enterprising young Guillow created a card game he called "The New Lindy Flying

Game" and he sold it from the trunk of his car to kids around New England. But the bigger and badder Parker Brothers toy company had a similar product, so Guillow had to think of something else. He made an airplane out of lightweight wood, anchored a rubber band at the rear of its fuselage and connected it to the propeller; then, when wound, the rubber band acted as the "engine," and zoom —every kid across the nation had an airplane in their hands. It was far better than a chicken in every pot.



Simpler times

Paul K. Guillow Inc. is in a rabbit-warren maze of buildings on New Salem Street in Wakefield, Massachusetts, a suburb north of Boston, and it has been there since 1928. From his car to a barn to these added-on buildings, Guillow created one of the most iconic and oldest toy manufacturing “plants” in the country. The company has patents on processes, machinery, and plans. In fact, some of the dedicated machines that are used to produce the gliders and the model aircraft parts are so proprietary, AOPA Pilot was asked



not to photograph them. To the untrained eye they look like relics from another time. But these industrial-age form makers, die cutters, and wood stackers (for lack of a better name) are key to the manufacturing of Guillow’s more than 300 products, from the balsa wood gliders and promotional products, to model aircraft kits and hobby wood products. Revenue for

GUILLOW OFFERS THE LARGEST VARIETY OF
War Plane Kits

25¢ each
 24 models to choose from

Accurate scale models of jet fighters, transports and helicopters. Authentic details that duplicate their "big brothers" in every respect. They're so easy to assemble — the razor sharp die-cut parts go together like magic — no difficult carving required! Start building your collection of famous planes today . . . it's educational and lots of fun. Other shelf model kits available from 10c to 50c.

plastic canopy
 or prop disks
 colored decals
 Included in each kit

PAUL K. GUILLOW INC.
 Wakefield, Mass.

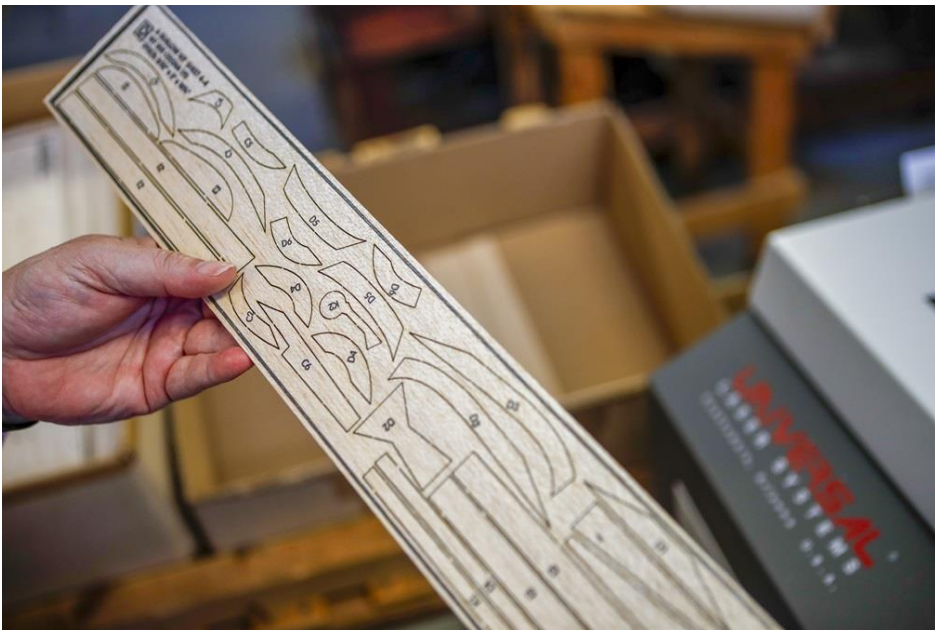
IF NOT AVAILABLE AT YOUR HOBBY DEALER, SEND DIRECT TO FACTORY ADDING 25c PACKING AND POSTAGE IN U.S.A., 40c OUTSIDE U.S.A.

the company exceeds \$5 million annually and—by producing more than 6 million “aircraft” each year—it is the largest aircraft manufacturer in the world.

Guillow started the company with 12 World War I biplane models, each with six-inch wingspans, in kits that he sold for 10 cents. Each kit contained “a three-view plan, balsa wood cement, two bottles of colored dope, and a strip of bamboo for wing and landing gear struts.” These were the warbirds like the Nieuports and Fokker airplanes of the 1914-1918 era; Guillow’s still sells four of these World War I aircraft kits today (for slightly more than 10 cents).



Guillow became an expert in aircraft modeling, writing four books on the topic. By the end of World War II, Guillow’s had scale aircraft models of everything from Spitfires to Mustangs to Warhawks. And they were detailed and authentic; Guillow simply asked the manufacturers for the blueprints, and the companies sent them to him. Then his draftsmen scaled the plans and created the die-cut parts in balsa wood.



Balsa is the softest wood in the world, made from balsa trees, which grow in rainforest areas near the equator such as Ecuador (the largest producer of balsa wood). A balsa tree can grow 70 feet in seven years. The water-absorbing cell structure of the wood is what makes it so lightweight and light in color. While Guillow had used the wood for years, during World War II it became popular for its use in life preservers and life rafts. The shortage forced Guillow’s to use cardboard and try the “new” material: plastic.

After Paul Guillow died in 1951 his wife, Gertrude, led the company with Paul's brothers. The family company put its efforts into the rubber band gliders, creating a product that was inexpensive and fun for kids—and that could be used by companies for promotional purposes. Guillow's inked a company or product name on the wings, and spinning gliders became flying advertisements.



Guillow's also stocked the gliders in small convenience stores, an easy point-of-purchase buy for dads heading home after work.

The decline in model kit production might have led to this 1959 letter that the company still keeps on display in its office: "I think that you have the lousiest planes made from the lousiest wood (please take this as an insult). If you make planes like that put extra parts in them so I can fix the broken, rotten, lousy, dirty, crummy airplanes...if your planes aren't better I will sew you for fraud. Sincerely, Robert Higgins... P.S. drop dead!"

Going strong

Thomas Barker was a high school kid in Wakefield in 1975. He saw a help-wanted sign posted in his school for someone to help the draftsmen of Guillow's with designing the aircraft models. Barker was in the high school's drafting program. He applied. Today he is president of the company.

"Most people say I don't do anything," he laughs when asked what he does. But it's clear that this toy airplane company is more than fun and games. Guillow's



gliders and model aircraft kits are sold around the world, finding sources for the all-important balsa wood is increasingly difficult, and the COVID-19 pandemic has seen a bump in sales that the

company wasn't quite prepared for. Like puzzles, books, and other hobbies, building model aircraft has become a way to fill in the hours while quarantined at home.

“Our kits—we call them authentic scale models—have a couple of hundred parts and might make you busy for 40 hours or so building one,” said Barker. “They also fly with rubber band power, which means you wind up the propeller and throw them.”



Barker is not a pilot, nor is long-time designer Mark Tennant (although he is a radio-controlled airplane enthusiast and flies often with friends who are pilots), but both men have deep appreciation for aviation and respect for the aviation industry and the history their models carry. You'll find detailed information on every model Guillow's makes, as well as attention to details in the markings and paint. Some of the models look almost art-like, especially before the tissue wrapping, dope, and decals are applied. Tennant displays these “naked” balsa wood structures throughout his design studio, the fine bones and details of a 1:20 scale 1903 Wright Flyer a marvelous testimony to the legacy of fine model building Paul Guillow started more than 90 years ago.

The employees are long-term too. Many are in their 70s and 80s. With the pandemic, Barker closed for a couple months but then offered employees the opportunity to come back if they felt comfortable. Most did. “I love working with our people; most are long term and are like family,” he said. Guillow's employs nearly 50 people at peak production times.

“Paul Guillow's dream still lives on in the company today as we continue to strive to keep young and old happily building and flying toy and hobby airplane models. For the past 90 years nearly every American boy, girl, and young at heart have enjoyed the inexpensive balsa wood gliders of the Paul K. Guillow Company. Sunny afternoons flying Guillow gliders have created fond memories and helped imaginations soar,” states the company website, guillow.com.

A Moment in Flight:

Flight Video by Pedro Navarro

I am happy to report that Pedro, on the road to recovery, joined me at Elwyn Field recently for his first RC flights since his stroke last fall. Well, the Maestro is back! He was buzzing and looping all over the sky like it was just yesterday.

Here is his triumphant return with “The Pitts and Molieno Café.”

Editor

Click below to see this issue’s Moment in Flight.

[The Pitts and Molieno Cafe](#)

