



The Flightline



Volume 50, Issue 3 Newsletter of the Propstoppers RC Club AMA 1042 July 2020



President's Message

Gentlemen,

We have seen many good flying days recently. I am happy to report that you are taking precautions seriously. While you can't really wear a mask while flying, we have been wearing them when in close proximity to other members. I do not know of a single member who has contracted the virus, let's keep it that way.

Despite the virus we have had a good late spring and summer of flying. I have heard reports that members are returning to CA to fly, since we have cleared out the trees and high brush. The wood chips seem to be doing a good job of filling in the ruts getting in and out. Chuck has been paid and commended for his service to the club.

We will hold our General Membership Meeting at 10: AM on Saturday July 18. Please wear your masks for the duration of the meeting and maintain social distancing. Lawn chairs spaced at least 6' apart will most likely be the best method. Please note that many of our members either have underlying conditions that make them vulnerable or are living in situations where they have to take extra precautions. Let's not place anyone in jeopardy

Should weather be a factor, we will not be using the classroom in the church. We will send out an e-mail notice to cancel and instead hold a Zoom General Membership Meeting.

Thank you for being the great group of guys that you are,

Mike

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Agenda

Saturday July 18th 2020 General Membership Meeting
At Gateway Community Church Field
10:00 -11:00 am

Call to Order 10: AM

Minutes of the last meeting - Dick

Treasurer's Report – Pete

Membership Report – Ken

Website – Mike

Old Business –

- CA Field – FAA Restrictions reminder
- 400 foot maximum flying altitude
- TRACON # in case of Fly-away 215-492-4123
(Note: this is a direct line to the TRACON office
in the tower at Philadelphia International Airport)
- Other?

New Business –

- Propstoppers T-Shirts:
Vote on type of shirt and insignia to be ordered
for member purchase. See details in Editors
Notes.
- E-mail , communications – FYI Yahoo Groups
is gone. We are looking at Google Apps,
Facebook, WhatsApp
- Zoom Meetings?
- Elwyn Field: We are looking to develop a plan
to approach Middletown Commissioners, and
possible locations in Ridley Creek State Park. .

Reminders: – Please pick up all refuse and trash. Please
use the Trash can at Elwyn and carry out at CA.

Next General membership Meeting – Tuesday, November 10
at 7: PM Gateway Community Church

This will be elections, budget, dues for 2021, etc.

Propstoppers RC Club of Delaware County, Pennsylvania.

Club Officers

President:
Mike Black

Vice President:
Pedro Navarro

Secretary:
Richard Bartkowski

Treasurer:
Pete Oetinger

Membership Chairman:
Ken Merlino

Safety Officers:
Eric Hofberg
Ryan Schurman

Newsletter Editor:
Larry Woodward

Webmaster:
Michael Black

Propstoppers Web Site;
www.propstoppers.org

Contact: Propstoppers@gmail.com

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copied for personal use but shall not be
reproduced for sale.*

Indoor Flying at the Brookhaven Gym

Indoor flying is suspended due
to the Covid-19 related closing
of the Brookhaven Community
Gym

Minutes of the Propstoppers Model Airplane Club

Saturday June 20, 2020 Virtual (Via Zoom)
Membership Meeting

FYI – this was not an official General Membership Meeting so there were no official minutes, Treasurer’s Report, etc.

Discussion:

Elwyn’s plan to reduce its footprint from 300 to 10 acres was discussed. We want to identify members who live in Middletown, hold a meeting and come up with a plan to approach the Commissioners about continuing our field use if it is part of the open space they get from Elwyn.

T-Shirt – bulk sale was discussed – a decision will be made at the July 18th meeting.

Yahoo groups – Dave will cancel out our yahoo group as it is dysfunctional and no longer supported by yahoo.

Field conditions at both fields were discussed. Everything is in good order at this time. Chuck had woodchips dumped into the ruts at CA and it is much improved.

Show and Tell

Dwayne Meyers and Jeff Frazier both made presentations on use of new “affordable” gyros, receivers, and satellite receivers in their respective models.

Calendar of Events 2020 CLUB MEETINGS:

The next General Membership meeting will take place on the Gateway Community Church Field (CA) Saturday July 18th at 10:00 AM.

The Fall General Membership Meeting is currently scheduled for November 10th 2020.

Members participating in meetings, and using the fields at any time, must wear face covering and maintain 6’ distancing at all times.

All activities and events are subject to change or modification in compliance with state and local directives related to the Covid-19 pandemic.

All members are advised to closely monitor timely and responsible sources of public information as the situation develops and to make decisions regarding participation in light of their individual needs and concerns.

As of the time of this publication, members are allowed to use the fields if operating in compliance with any and all current directives regarding public activities such as Personal Protective Equipment (masks and gloves) Social Distancing (6 feet) and/or other designated group dynamics.

Editor's Notes:

By Larry Woodward



Greetings from Crosby Landing Beach, Cape Cod MA

Having waited a while longer than usual to depart from winter quarters, my fellow migrants and I of the species *oldfartium aeromodelari elctrofomus* are now mostly established in our former territories. The natural environment seems to be completely unaware of the crisis hovering over the earth and it is nice to be able to go out and enjoy the simple pleasures of fresh air, sea breezes and warm sunshine in the company of fellow “avians”, albeit masked and at appropriate distances.

Propstoppers Gear soon to include 2020 edition T shirts!

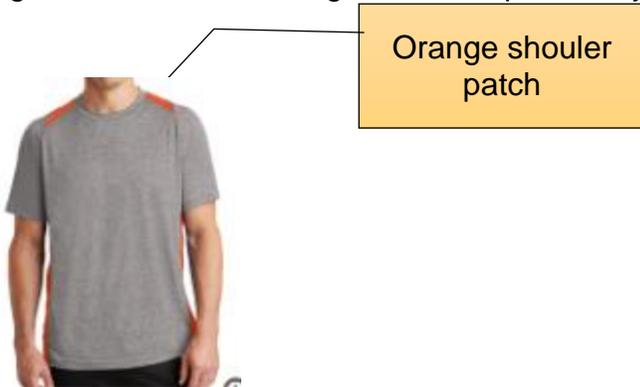
Several members have asked if the Propstoppers logo shirts and other gear will be available for sale again soon. In response, the Executive Committee has initiated a bid for the production of summer weight T shirt designs with the Propstoppers logo. Before placing orders we must make decisions about what type of fabric and design for the base T shirt and whether to have the log embroidered or screen printed.

The **BASE SHIRT** options are three types:

Type A is a synthetic fiber “wicking” material (the same material used on the previous order) in a solid gray color.



Type B is the same “wicking” fabric and gray color but with “Propstoppers Orange” patterns on the top of the shoulders (again similar to the designs ordered previously).



Type C is a solid gray shirt in 100% cotton material.



The **PROPSTOPPERS LOGO** can be screen ink printed or embroidered. The embroidered design is generally considered to be higher quality and will last longer but does cost more.

The cost for a minimum order of each combination is:

Type A Moisture wicking
Screen Print \$14.50
Embroidered \$19.50

Type B Moisture wicking
Screen Print \$18.00
Embroidered \$21.50

Type C 100% cotton tee
Screen Print \$11.00
Embroidered \$14.00

At the meeting on the field July 18th, we will discuss the options and take a vote on what, or if, to order.

Mike Black will bring samples of the previous order to show the fabric and logo designs.

Technology Update and the “New Normal:”

Dave Harding reports Yahoo will no longer support their Groups program and we have found it to be rather dysfunctional. Consequently we could no longer rely on it as a method to inform all members on important issues. This has raised more questions and fostered discussion about just what sort of “communication” system we should be employing and through what platform.

Our Yahoo Groups account was, for many years, useful for sending out newsletters and announcements, letting guys know when we were planning to fly, getting exposure to potential new members and generally communicating with the entire club membership with a single email. Members, as well as the general public, could simply “subscribe” to the group and then received copies of all messages sent to “the group”. The messages could be received individually or as a digest. However, we made a setting that members could only post messages if authorized by the Board. This has inhibited SPAM successfully.

We have been relying primarily on personal email systems for the last few years. This is a significantly flawed method for general club communications.

First, everyone must have a complete and up to date email list. This has proved to be most intractable, particularly as we have had no method to maintain such a list in a way that all members have access to it.

Furthermore it is frequently un-safe as most people sending such messages simply post all the “To” addresses individually as a block. This means everyone’s email address is posted multiple times and could be subjected to harvesting for SPAM or fraudulent actions.

Some members have been suggesting we do more with text messaging and less with email.

I’ve been questioning for a while now whether or not this newsletter is really of the same value to members as it once was. Should it be modified and evolve into something else? Would a social media platform be more timely and bring a member driven informality to the process of staying in touch?

The combination of the Covid crisis and our recent reduction in face to face meetings following years of declining membership participation, has brought us to an interesting place. We have been using another new technology platform, Zoom, to hold informal club meetings. The members who have been participating are not necessarily the same people who attended the regular meetings. Have we stumbled onto something that might be helpful as a regular event?

In an attempt to limit the use of officers’ personal email for club business, we recently opened a club Google account, Propstoppers @gmail.com. One thought is to use the full array of Google services available under this account for a variety of communications, media and data management needs. But is Google the best way to go. Are there better systems out there for us? We need expertise and individual commitment to study these issues and set up the basics to move forward.

Do you have an interest? Can you help? Please step forward and let us know your interest.

We will be discussing this issue extensively at the July meeting. Please think about how you see these issues affecting your membership and come prepared to contribute to the discussion.

Elwyn and the Never-ending Field Search:

If you are not aware, Elwyn is planning to change their footprint in Middletown from 300 acres to 100 acres. Part of the property will most likely go to Middletown for open space. We developing a plan to approach the Commissioners about continuing to use our field, or a field. That said, we should always be looking for possible sites.

One thought being explored is to approach Ridley Creek State Park to see if a suitable location could be found and used within the park's limits.

Should any of you have any ideas about possible field locations, please bring it to the attention of Mike Black.



FALL VINTAGE FLY-IN OCTOBER 10, 2020 9:00AM - 4:00PM



Mid-Atlantic Radio Control Society Field

1918 St. Luke's Road Fruitland, MD

For directions to the field, see MARKS webpage (marksrc.com)

-
- Hosted by Mid-Atlantic Radio Control Society, in association with the Vintage Radio/Control Society.
 - AMA Sanctioned Fly-In for vintage R/C models designed 35 years or more prior to the current year. The focus is on the Golden Age of R/C models designed between 1955 and 1975.
 - 2.4 ghz and 72 mHz (27 mHz at your own risk. Scanner available.)
 - Open Flying all day
 - EVENTS: See the VR/CS web site for more information (www.vintagercsociety.org)
 - VR/CS Concours
 - Theme Plane Concours (48" span Sterling Mambo)
 - VR/CS Scale Event (Rudder Only designs will be allowed elevator &throttle.)
 - Pilots Choice
 - Simple Pattern for all classes of Models.
 - Vintage kit sale: Attendees bring priced kits, radios, or equipment. MARKS to provide tables and supervision. Asking 5% donation.
 - Lunch available on field. All you can eat \$5.00
 - Contest Director: John Haffner Ph.410-341-3825 Email: mooneyjock@outlook.com

Suggested Hotel: Hampton Inn, 304 Prosperity Ln, Fruitland, MD.410-548-1282

PRE-REGISTRATION FORM: **FALL VINTAGE FLY-IN**

Name: _____ AMA# _____ VR/CS# _____

Address: _____ City: _____ State: _____

Zip: _____. Registration Fee: _____ \$10 for VR/CS members _____ \$15 for non-members

REGISTRANTIONS MUST BE RECEIVED BEFORE OCT. 1st

Make Checks payable to: MARKS CLUB. Send to John Haffner 5170 Cooper Rd Eden, MD 21822

Our Safety Officer's Greatest Nightmare, but True.

How a WWII fighter survived the unbelievable.

Submitted by Eric Hofberg

B-17 "All American" (414th Squadron, 97BG)



Pilot- Ken Bragg Jr.
Co-pilot- G. Boyd Jr.
Navigator- Harry C. Nuessle
Bombardier- Ralph Burbridge
Engineer- Joe C. James
Radio Operator- Paul A. Galloway
Ball Turret Gunner- Elton Conda
Waist Gunner- Michael Zuk
Tail Gunner- Sam T. Sarpolus
Ground Crew Chief- Hank Hyland

In a mid-air collision on February 1, 1943, between a B-17 and a German fighter over the Tunis dock area, became the subject of one of the most famous photographs of WW II. An enemy fighter attacking a 97th Bomb Group formation went out of control, probably with a wounded pilot, then continued its crashing descent into the rear of the fuselage of a Flying Fortress named "*All American*", piloted by Lt. Kendrick R. Bragg, of the 414th Bomb Squadron.



When it struck, the fighter broke apart, but left some pieces in the B-17. The left horizontal stabilizer of the Fortress and left elevator were completely torn away. The two right engines were out and one on the left had a serious oil pump leak. The vertical fin and the rudder had been damaged, The fuselage had been cut almost completely through connected only at two small parts of the frame, and the radios, electrical and oxygen systems were damaged. There was also a hole in the top that was over 16-feet long and 4 feet wide at its widest. The split in the fuselage went all the way to the top gunner's turret.



Although the tail actually bounced and swayed in the wind and twisted when the plane turned. All of the control cables were severed, except one single elevator cable still worked, and the aircraft miraculously still flew!

The tail gunner was trapped because there was no floor connecting the tail to the rest of the plane. The waist and tail gunners used parts of the German fighter and their own parachute harnesses in an attempt to keep the tail from ripping off and the two sides of the fuselage from splitting apart.

While the crew was trying to keep the bomber from coming apart, the pilot continued on his bomb run and released his bombs over the target.



When the bomb bay doors were opened, the wind turbulence was so great that it blew one of the waist gunners into the broken tail section. It took several minutes and four crew members to pass him ropes from parachutes and haul him back into the forward part of the plane.

When they tried to do the same for the tail gunner, the tail began flapping so hard that it began to break off. The weight of the gunner was adding some stability to the tail section, so he went back to his position.

The turn back toward England had to be very slow to keep the tail from twisting off. They actually covered almost 70 miles just to make the turn home. The bomber was so badly damaged that it was losing altitude and speed and was soon alone in the sky.

For a brief time, two more ME-109 German fighters attacked the *All American*. Despite the extensive damage, all of the machine gunners were able to respond to these attacks and soon drove off the fighters. The two waist gunners stood up with their heads sticking out through the hole in the top of the fuselage to aim and fire their machine guns. The tail gunner had to shoot in short bursts because the recoil was actually causing the plane to turn.



Allied P-51 fighters intercepted the *All American* as it crossed over the Channel and took one of the pictures shown. They also radioed to the base describing that the appendage was waving like a fishtail and that the plane would not make it, so they should send out boats to rescue the crew when they bailed out.

The fighters stayed with the Fortress, taking hand signals from Lt. Bragg and relaying them to the base. Lt. Bragg signaled that 5 parachutes and the spare had been used so five of the crew could not bail out. He made the decision that if they couldn't bail out safely, then he would stay with the plane to land it.

Two and a half hours after being hit, the aircraft made its final turn to line up with the runway while it was still over 40 miles away. It descended into an emergency landing and a normal roll-out on its landing gear.

When the ambulance pulled alongside, it was waved off because not a single member of the crew had been injured. No one could believe that the aircraft could still fly in such a condition. The Fortress sat placidly until the crew all exited through the door in the fuselage and the tail gunner had climbed down a ladder, at which time the entire rear section of the aircraft collapsed.

This old bird had done its job and brought the entire crew home uninjured.

FAA Moves to Implement UAS Remote ID What's to fear in the latest FAA announcement?

By Larry Woodward



Our latest meeting held via the ZOOM internet app may have been a harbinger of things to come. As technology is filling the voids created by Covid isolation it is clear that many of these innovations and “Improvements” will be here to stay whenever we reach the “New normal.”

For most of us this relentless progression of technological development has fostered a mixed reaction. At once hopeful and frightening, change is always perplexing. Our RC aircraft hobby is certainly a classic example. We embrace the latest electronics and aviation science for the excitement and satisfaction it brings to our recreation, yet we struggle to accept what we see as an intrusion when the same technological imperative is applied to necessary regulatory control and supervision. I would suggest we should focus more on the potential value here than worry too much about an unknown conspiracy to put us out of business.

In fact, I would argue that it is “Business,” the economic value of consumer participation that will assure this technology will do more good than harm. I observe, for example, that the historical

development of automotive technology has endured more than a century of necessary regulation and control but can hardly be accused of leaving the automotive hobbyist behind. We all accept the multitude of regulations, registrations and rules of the road that are necessary to manage automobile traffic. We know that without them we would not be able use our vehicles at all. And, we are confident that the regulatory system that develops and enforces this system is focused on important commercial and public safety objectives while avoiding unnecessary interference in our private pursuits.

So, let's look at this situation from the perspective of an opportunity for growth and, with a nod to precedent, see how much we have to fear.

Where is this coming from?

In just one century the aviation industry has gone from "motorized kites" to space travel. As impressive as space exploration is, I would argue that it is mere icing on the "cake" that we have created in the atmospheric aviation system. And furthermore, among the many achievements required to bring it about (with all due respect to our many Propstoppers aeronautical engineering pioneers), the technical and political solutions to air traffic control and regulation may be the more impressive.



There is no such thing as unregulated air space. The Earth's entire atmosphere is regulated to some degree by a complex set of treaties, agreements, rules and regulations. Domestically, the FAA "Regulates" the air space above the entire nation. Within this regulated space it actively "Controls" air traffic within specific zones through various requirements for air traffic to follow prescribed instructions or pathways and or maintain direct communication with traffic controllers or systems. .

Generally, the air space below 400' is closed to full scale air traffic in populated areas except in conjunction with airports and specifically mandated activity such as crop dusting. This air space, designated Class G, is characterized by complex topography, buildings, structures and ground turbulence, not to mention proximity to human activity. It has therefore been open only to relatively benign uses, including recreational model aviation. Technological development today in small RC aviation operating in Class G airspace has created an emerging commercial and recreational enterprise with the potential to surpass traditional aviation in economic scope and complexity. The FAA is therefore engaged in developing both technical and political systems to manage this potential new classification of air traffic. This technology may well be a pivotal issue of the 21st Century.

How will it work?

Start with registration. Just as every vehicle and driver operating on US roads and highways must be identifiable, Unmanned Aerial Systems (UAS) operating in regulated air space will require a

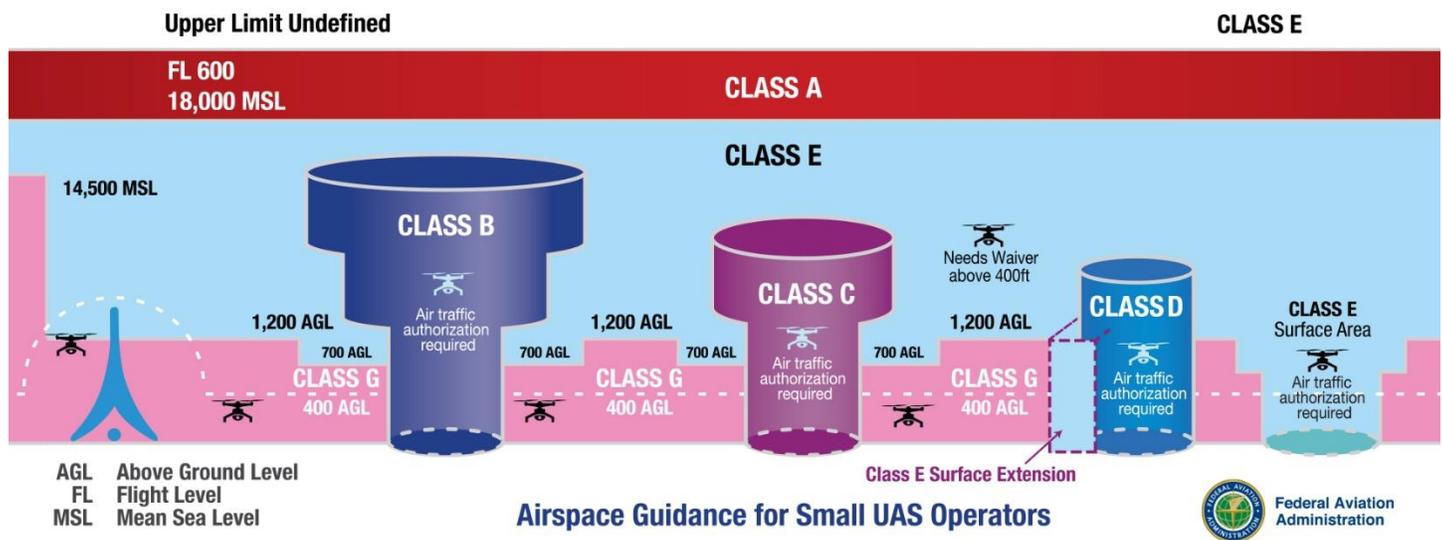
government issued ID. Any management system must begin with the ability to uniquely identify each component/user. The registration process not only provides for identification, but also facilitates the process of policing and assuring that the operator/equipment is trained/maintained adequately to function reliably within the traffic management system.

Create the operating parameters. That sounds easy enough. Just create a system of rules, regulations procedures and design components that tells every operator where to be at every moment in time. And of course, this assumes the operator is capable of navigating to the assigned position at all times.

Believe it or not we have managed to do just that. Depending on your assessment of annual traffic fatality rates, our roads and highways system is a very good, or bad, example. Traffic laws and regulations along with the specifics of road design and marking combine to present a management system for allowing us to know where to place our vehicle at all times. Registration and licensing procedures, along with effective policing, ensure that we all should be able to expect every operator in the system is equally qualified and capable.

It works quite well considering the volume of traffic. Important characteristics are consistent rules and procedures, reliable infrastructure, reliable vehicles and effective policing throughout the system. Every so often as I drive down a highway at 70 miles an hour engaging other vehicles within a matter of a few feet, it is a sobering thought to consider the consequences of any single component's failure in the system, not least of all me.

Now take that example to 30 thousand feet at near sonic speeds with no definable roadway, let alone crisp white lines. Enter the Federal Aeronautics Administration (FAA).



Information is the key. The automobile based system operates almost exclusively through the observations and actions of the driver (but not for long if Google gets its wish). With constant feedback from road signs and pavement markings, as well as diligent observation of adjacent traffic, the driver constantly analyses the situation and makes precise and deliberate input to the controls. The objective is to manage three distinct functions. Location, where am I in relation to my

objective (Destination)? Position, where am I in relation to my management system (traffic lane)? And Proximity, where am I in relation to other vehicles (collision avoidance)?

, Now in the space where aviators operate none of this tangible observation data exists, no roadsides and signs, or even visible proximate aircraft. To navigate and control an aircraft, except under the most basic and high visibility conditions, requires a host of technologically derived data inputs. Systems for determining Location, Position and Proximity have evolved over time from simple lighting and radio beacons to coordinated radars and GPS. And, all of it is scrupulously overseen and operated by a complex air traffic control agency. The system is very effective, as testified by the extremely low rate of aircraft collision. The reliance on automated data systems means that the pilot is as much a systems manager as a vehicle operator. The empty vastness of high the airspace and the relatively small number of vehicles in use at one time, compared to automobiles, makes the system reliable and cost effective.

Enter the Unmanned Aeronautical System (UAS).

With the emergence of UAS there is every expectation that the lower altitudes (below 400 feet) of Class G airspace will become quickly saturated with a new class of both commercial and private uses. Unlike the rest of the airspace system, we know that Class G space is anything but wide open. Proximity to ground topography, structures and turbulence combined with a narrow altitude band create a very challenging environment. Given the potential for tremendous vehicle density it would seem an impossible task for a human pilot, on board or remote, to be able to operate in this environment.

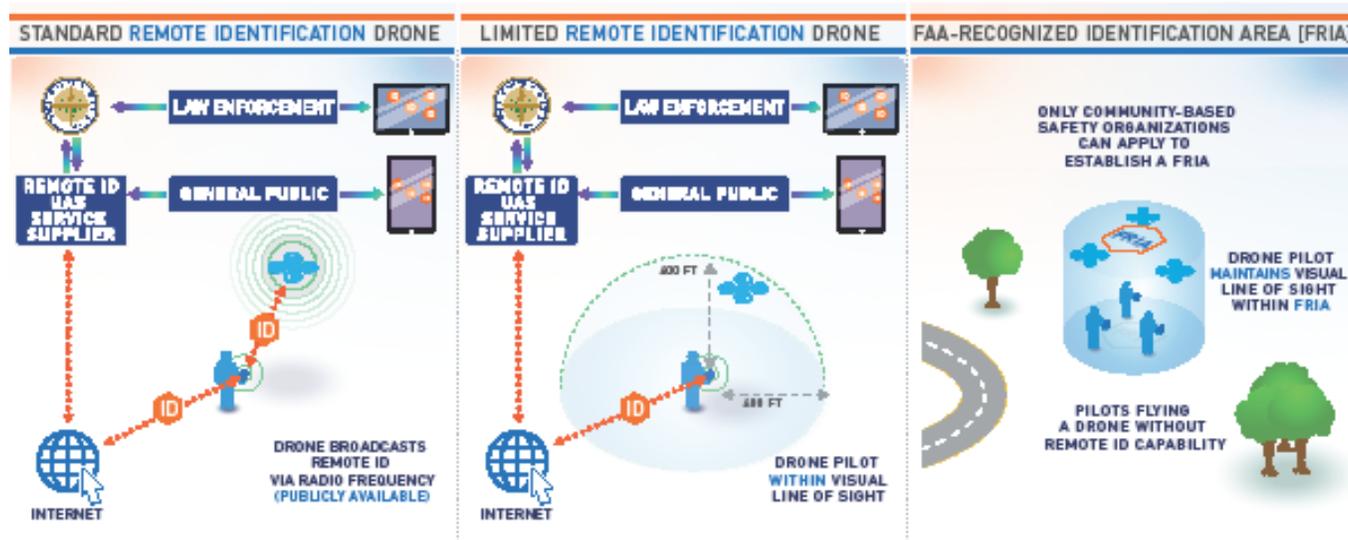
The current objective of the FAA is to design and implement an extension of the current air management system to accommodate this expected new class of traffic.

Most of the necessary traffic management tools for the job already exist, at least in concept. Fully or partially autonomous flight is already a basic part of the full scale flight environment, although perhaps not at the expected new density. GPS, autopilots, signal tracking, position sensing, collision avoidance and many other technologies are commonly used in current, or developing systems for aircraft, boats and even automobiles. My basic 2019 Subaru already has position and collision avoidance systems sufficient to maintain autonomous control at speeds above 30mph. For the most part, the technology is already here. And, one thing we know about technology is that it advances exponentially in growth, capability and affordability. The FAA only needs to design the system.

Why Remote ID?

If the traffic management system does not have the ability for communication with and between the vehicles, then we have a passive control system. This is what our current automobile management system is. Each vehicle is an independently managed element. The driver makes all the decisions based only on that information he can collect by looking around. He knows nothing about the traffic situation further ahead or behind. The system has no way to advise him how to adjust to unseen/unknown information. You only have to experience stop and go traffic on an overcrowded highway to see the limitation of a passive system. . .

3 Ways of Remotely Identifying



An active system knows, through remote ID, what vehicles are in play, including useful information about them. It knows where they are in the system, current speed, position, controls and, maybe even what is their intention, for example, final destination or next desired exit. In the ideal active traffic management system all the vehicles are in constant “conversation” with each other trading information. Everyone benefits from central oversight and analysis that helps with navigation, routing and congestion reduction while peer to peer communication facilitates better local control adjustments for flow optimization and collision avoidance.

The reality is that active traffic management systems, at every scale, are already operating globally. Cell phone tracking, GPS navigation, Google Maps and “smart” auto safety features are among the many examples of how this technology is already serving us. These systems will inevitably become integrated into our live and, I believe, will be one of the most important technical influences of this era.

What does recreational RC aviation have to fear?

In my opinion, we are not facing our demise. Common concern is that we will be pushed out of the Class G Airspace by overreaching legislation and commercial greed. That we will be priced out of the game by requirements for expensive equipment and forced aside by overwhelming numbers of commercial users in this confined and demanding airspace. I’m not saying these forces are not there. But I do not think they are as all powerful as we fear. We have a number of things working in our favor.

1. The model aviation community is extensive, engaged, organized and ornery. Thanks to AMA we are not all just whistling into the wind. We may not be the most powerful political lobby in town, but we have a seat at the table and, I for one, think AMA is doing a very credible job of representing our interests. The current policy and proposal includes FAA Recognized Identification Areas (FRIA) as a simple option for Community Based Organizations. This is a

direct result of AMA activity. Our current FAA agreement regarding Gateway Field is an example.

2. The non-organized model aviation community, all those new drone enthusiasts out there, are a huge commercial market that is not likely to go away. There is a large and growing industry devoted to serving this market that has the resources to be heard.
3. The drone community is young and fearless. Any attempt to regulate recreational flight out of existence will be unenforceable. If no reasonable accommodation is made in the final system for recreational users, there will still be a large number of unlawful users that will cause unacceptable disruption. Just look at how many idiots are already out there flying over airports and emergencies. The only way to make the system viable is to include recreational users.
4. Precedents are in our favor. I can remember very similar concerns among amateur radio enthusiasts, Short Wave and CB, as increased demand for airwave capacity brought pressure to eliminate these users. Political and commercial pressure, along with technical advancements, has kept this hobby alive.
5. The answer is modelled already in the higher altitude airspace management system. FAA manages traffic now with a system based on compartmentalizing airspace above 400' into zones with varying degrees of control. It has established designated routs and pathways to accommodate the majority of traffic efficiently by a credible system of traffic controllers and active measures. The majority of the airspace is minimally controlled and open to full scale recreational users without unacceptable burden. Recreational pilots who want or need to enter more heavily managed airspace are able to do so with appropriate training and equipment. I have every reason to expect that an extension of the traffic control system into Class G airspace will be similarly complex and accommodating.
6. Finally, as for the concern is that equipment needed to engage with the system will be prohibitively expensive, I am most confident on this point that we have nothing to fear. If there is one certainty it is that the systems will be small, light, cheap and fascinating. That's the essential nature of technology in our time. Just look at the development of our current on-board systems for the evidence.

Resources:

https://www.faa.gov/uas/recreational_fliers/

[Remote Identification \(Remote ID\).](#)

[\(Class B, C, D, and E\).](#)

[proposed Remote ID rule](#)

[small UAS rule](#)

Pratt & Whitney Selects the Winner of the Disruptor Award After Two Years of Innovation

teTra Wins \$100,000 Disruptor Award at GoFly Final Fly-Off at Moffett Federal Airfield at NASA's Ames Research Center

News provided by

GoFly

Feb 29, 2020, 19:01 ET

Submitted by Dave Harding



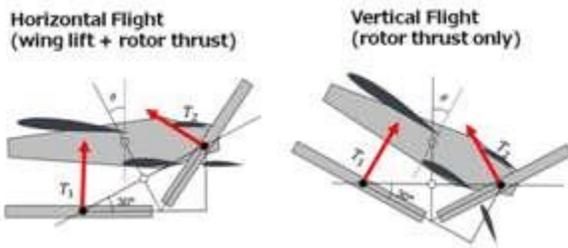
MOUNTAIN VIEW, Calif., Feb. 29, 2020 /PRNewswire/ -- teTra Aviation, a team from Tokyo, Japan, has won the \$100,000 Pratt & Whitney Disruptor Award in the Inaugural GoFly Prize Final Fly-Off, the world's

first global competition to create personal human flyers. The team, captained by Tasuku Nakai, a doctoral student at the University of Tokyo, won the award for its teTra 3 machine.

The GoFly Prize has catalyzed the creation of personal flyers as a first step towards transforming the future of transportation with flying cars, flying motorcycles, hoverboards, jetpacks, human-carrying drones and other personal flyers. Some 854 teams comprising 3800-plus innovators from 103 countries took up the GoFly challenge and, over the past two years have been crafting their machines and testing them as manned, mannequin-bearing, and unmanned machines.



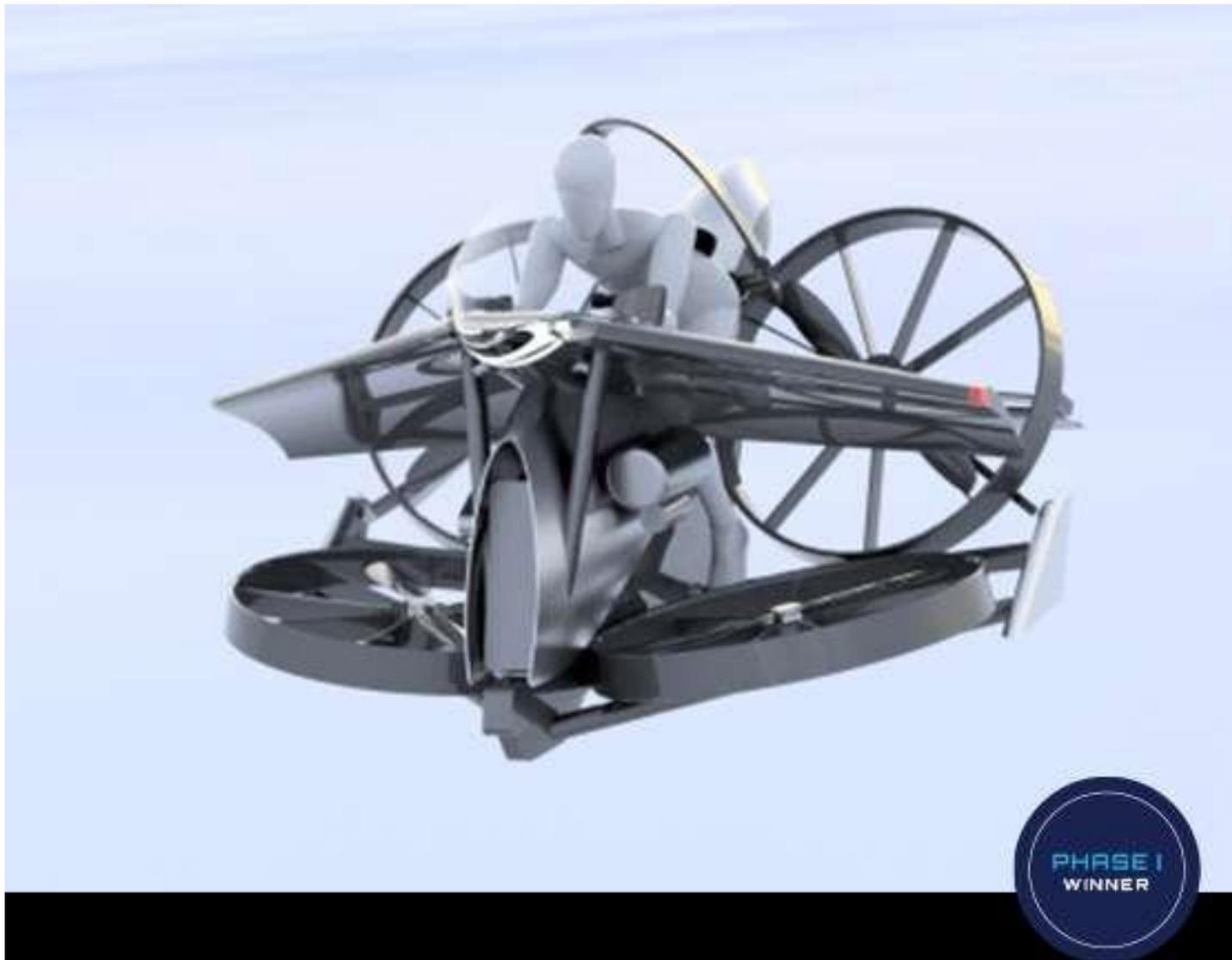
"After much anticipation, we are thrilled to announce that teTra Aviation is the winner of the Pratt & Whitney Disruptor Award," said GoFly Founder and CEO Gwen Lighter. "The team displayed the technical design and creative prowess that we set out to inspire when we created the GoFly Prize. teTra created a unique personal flyer and we look forward to supporting them as they take the next steps towards revolutionizing human mobility."



"Innovation has always been at the core of our DNA at Pratt & Whitney and we applaud GoFly's efforts to transform the industry," confirmed Geoff Hunt, Senior Vice President, Engineering. "We're proud to sponsor such an exceptional competition and we designed the Disruptor Award to recognize the team that challenged the status quo, delivered unique thinking into a complex issue and considered safety, reliability, durability and system integration."

"This is beyond my imagination," said Nakai. "The whole team is glad to celebrate this achievement. Personal flying is the future of transportation and I know there will be a day when every person will be able to take off and land anywhere."

He added, "On behalf of my entire team, I want to say thank you to GoFly and Pratt & Whitney."



Prior to the Final Fly-Off, held at Moffett Federal Airfield during Leap Day, 10 teams were named Phase I winners and were awarded \$20,000 prizes for their concepts, while five teams were named Phase II winners and were awarded \$50,000 for their prototype submissions. At the moment, no team captured the Grand Prize title, but GoFly looks forward to awarding that \$1 million prize in the near future.

The GoFly Prize is supported by Grand Sponsor Boeing, Disruptor Award Sponsor Pratt & Whitney, as well as more than 20 national and international aviation and innovation organizations. All teams participating in the competition also benefited from the guidance and expertise of a dedicated Mentors and Masters program.

For more information about the GoFly Prize, please visit <http://www.goflyprize.com>.

WWII P-51 “Bad Angel”

How a veteran WWII fighter proudly carries a US kill symbol on its fuselage

by John Riley

We were in Hanger #4 of the Pima Air and Space Museum to view the beautifully restored B-29, when I happened to take notice of a P-51 Mustang near the big bomber. It's name? "Bad Angel"

I was admiring its aerodynamic lines and recalled enough history to know that until the Mustangs came into service, the skies over the Pacific Ocean were dominated by Japanese Zeros. Then something very strange caught my eye. Proudly displayed on the fuselage of "Bad Angel" were the markings of the pilot's kills: seven Nazis; one Italian; one Japanese AND ONE AMERICAN.



Huh? "Bad Angel" shot down an American airplane?



Was it a terrible mistake? Couldn't be.

If it had been an unfortunate misjudgment, certainly the pilot would not have displayed the American flag. I knew there had to be a good story here. Fortunately for us, one of the Museum's many fine docents was on hand to tell it.

In 1942, the United States needed pilots for its war planes lots of war planes; lots of pilots. Lt. Louis Curdes was one. When he was 22 years old, he graduated flight training school and was shipped off to the Mediterranean to fight Nazis in the air over Southern Europe.

He arrived at his 82nd Fighter Group, 95th Fighter Squadron in April 1943 and was Assigned a Twin Engine P-38 Lightning. Ten days later he shot down three German Messerschmitt Bf-109 fighters. A few weeks later, he downed two more German Bf - 109's. In less than a month of combat, Louis was an Ace. During the next three months, Louis shot down an Italian Mc.202 fighter and two more Messerschmitt's before his luck ran out.

A German fighter shot down his plane on August 27, 1943 over Salerno, Italy. Captured by the Italians, he was sent to a POW camp near Rome.

No doubt this is where he thought he would spend the remaining years of the war. It Wasn't to be. A few days later, the Italians surrendered. Louis and a few other pilots escaped before the Nazis could take control of the camp.



One might think that such harrowing experiences would have taken the fight out of Louis, yet he volunteered for another combat tour. This time, Uncle Sam sent him to the Philippines where he flew P-51 Mustangs. Soon after arriving in the Pacific Theater, Louis downed a Mitsubishi reconnaissance plane near Formosa.

Now he was one of only three Americans to have kills against all three Axis Powers: Germany, Italy, and Japan.

Pilot Lt. Louis Curdes in his P-51 Mustang "Bad Angel"



Up until this point, young Lt. Curdes combat career had been stellar. His story was about to take a twist so bizarre that it seems like the fictional creation of a Hollywood screenwriter. While attacking the Japanese-held island of Bataan, one of Louis' wingmen was shot down. The pilot ditched in the ocean. Circling overhead, Louis could see that his wingman had survived, so he stayed in the area to guide a rescue plane and protect the downed pilot.

It wasn't long before he noticed another, larger airplane, wheels down, preparing to land at the Japanese-held airfield on Bataan. He moved in to investigate. Much to his surprise the approaching plane was a Douglas C-47 transport with American markings. He tried to make radio contact, but without success.

He maneuvered his Mustang in front of the big transport several times trying to wave it off. The C-47 kept ahead to its landing target. Apparently the C-47 crew didn't realize they were about to land on a Japanese held island, and soon would be captives.

Lt Curdes read the daily newspaper accounts of the war, including the viciousness of the Japanese soldiers toward their captives. He knew that whoever was in that American C-47 would be, upon landing, either dead or wish they were.

But what could he do? Audaciously, he lined up his P-51 directly behind the transport, carefully sighted one of his 50 caliber machine guns and knocked out one of its two engines. Still the C-47 continued on toward the Bataan airfield. Curdes shifted his aim slightly and knocked out the remaining engine, leaving the baffled pilot no choice but to ditch in the ocean.

One of "Bad Angel's" .50 caliber machine guns built into it wings.

The big plane came down in one piece about 50 yards from his bobbing wingman. At this point, nightfall and low fuel forced Louis to return to base. The next morning, Louis flew cover for a rescuing PB4Y that picked up the downed Mustang pilot and 12 passengers and crew, including two female nurses, from the C-47. All survived. Later, Lt. Curdes would end up marrying one of these nurses!



For shooting down an unarmed American transport plane, Lt. Louis Curdes was awarded the Distinguished Flying Cross. Thereafter, on the fuselage of his P-51 "Bad Angel", he proudly displayed the symbols of his kills: seven German, one Italian, one Japanese and one American.

Departing Space Station Commander Provides Tour of Orbital Laboratory

Submitted by John Reilley



[NASA](#)

In her final days as Commander of the International Space Station, Sunita Williams of NASA recorded an extensive tour of the orbital laboratory and downlinked the video on Nov. 18, just hours before she, cosmonaut Yuri Malenchenko and Flight Engineer Aki Hoshide of the Japan Aerospace Exploration Agency departed in their Soyuz TMA-05M spacecraft for a landing on the steppe of Kazakhstan. The tour includes scenes of each of the station's modules and research facilities with a running narrative by Williams of the work that has taken place and which is ongoing aboard the orbital outpost.

Source videos

[View attributions](#)



[Click on the picture above to see an excellent video tour of the International Space Station.](#)

The Secret to a Personal Record 238 MPH with a 48" Foamie?

Ditch the Power System!

By Larry Woodward and Dave Harding



Gregg Bolton's new DS-48

From time to time I have posted pictures and reports from former Propstopper Al Cheung, who relocated to the California coast. With access to world renowned slope soaring venues practically in his back yard, Al has taken to soaring in a big way and is flying with some of the best of the best. Recently he sent us a note about Greg Bolton, who flies in his area, and who just set a new personal speed record with a foam glider. That's right, the fastest models in the air have no power system!

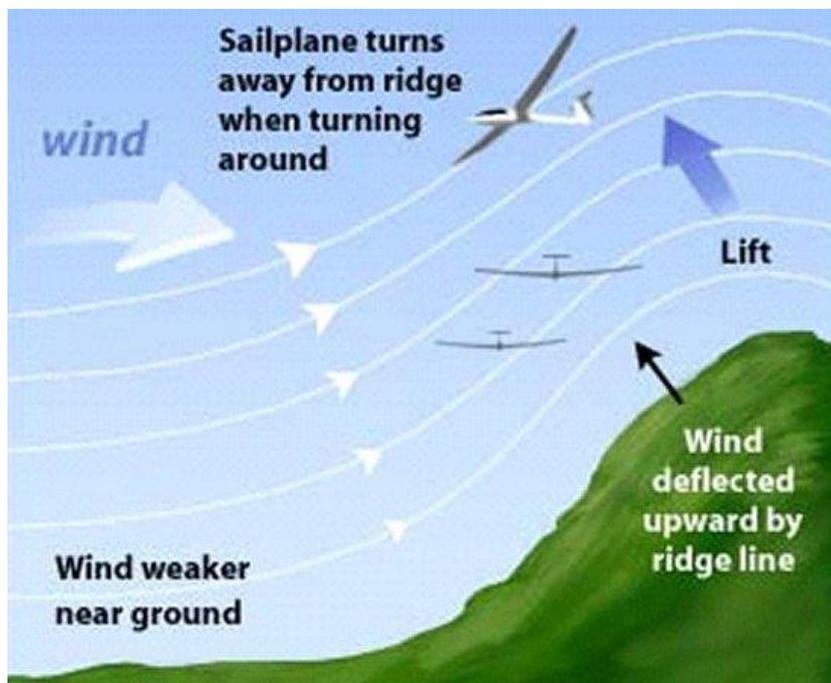
Read on to learn more about how soaring can set new technical records for speed, duration and altitude.

I've reported on some slope soaring I've done on the front of the dunes where I fly at Cape Cod. Although the right conditions don't happen there very often, when it is working I can think of few more satisfying types of flying. The pace is slow and steady and the sense of connection with the wind and the model are really satisfying.

The principle is very simple. As the wind blows off the ocean against the rising beach and sand dunes it is deflected upward.



To reach some of the best locations for soaring, Al has to backpack the last leg of the journey. The view alone would make it worth my while!



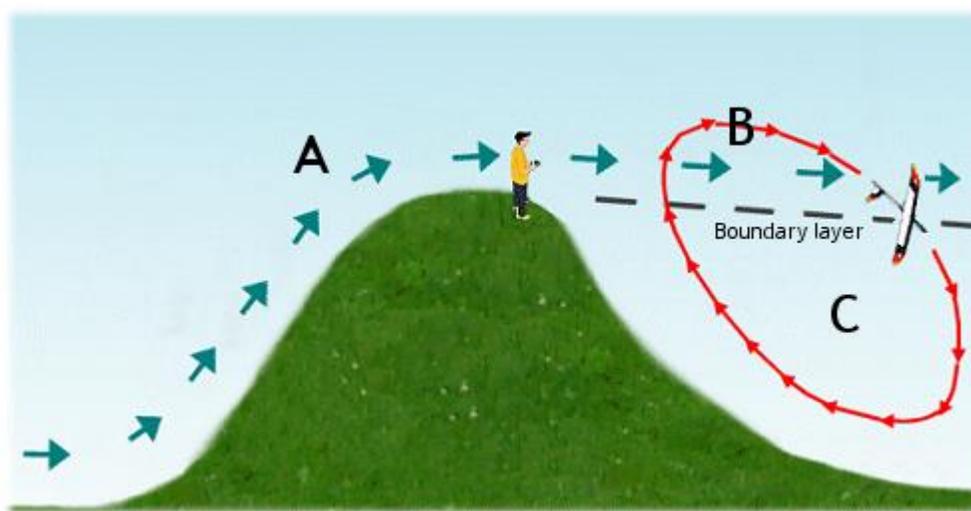
When you fly a model into this updraft the lift, and the lift velocity is greater than your model sink speed, staying in the lift zone constantly turning and flying back and forth parallel to the slope, you can stay aloft as long as you and the wind hold up.

If the updraft exceeds your model's sink speed you can climb and then dive at higher speed, repeating this so long as you stay in the lift.

And normally, it is the kiss of death if you fly out of the lift to the back side of the hill where there is no lift.

For a very excellent explanation of the aviation science behind this process, as well as an interesting introduction to the Southern California sloping community, see this article by Dave Harding on the subject in the [July 2001 Flightline](#).

The maximum speed possible in this maneuver depends on how high you can fly and then your model's terminal dive velocity. This may be quite fast, but slope soarers have discovered, what nature already knew from the flight of the Abatross, that there are conditions and flight maneuvers that allow even higher speeds. This is known as Dynamic Soaring.



The dynamic soaring pilot will let the aircraft fly downwind in the high velocity zone B, where it picks up speed, and then dives into the calm zone C turned around and back up into the high velocity zone. This cycle is then repeated over and over. With the right conditions and good piloting, each time the aircraft completes a cycle it will pick up more speed.

The result is constant increases in speed to simply amazing values. The current [speed record is 505 mph](#) set in 2014 using a Kinetic 130 high performance sailplane.

To picture the principle, imagine a free spinning wheel on a shaft. As you give the wheel successive shoves with your hand, each time you add more speed. Eventually it reaches a point where the rotational friction equals the energy input from your hand. This is the top speed.

With wind speeds in the 50 mph range and extremely efficient air frames, that's how dynamic soaring models are setting all time speed records. For another excellent technical description of this, see Dave Harding's article in the [December 2009 Flightline](#).

Soaring Altitude Records:



If speed is not your thing, how about altitude? Modelers can no longer set FAI altitude records but it is different for manned sailplanes.

FAI high altitude records are set by manned flights soaring in the lee waves created in the jet stream impinging on mountains.

1980s altitude records were set by flying very aerodynamically efficient sailplanes in the waves behind the Sierra Nevada

Mountains. On February 17, 1986, the highest altitude obtained by a [soaring](#) aircraft was set at 49,009 ft by Robert Harris using [lee waves](#) over [California City](#), United States.

Seeking even higher records the Perlan project has been attacking the slope lift from the Antarctic Vortex driving against the mountains of Patagonia.

Read about the Perlan plans from the [January 2010 Newsletter](#) and the current status of setting records AIRBUS PERLAN MISSION II 2019 ARGENTINA WRAP UP; [propstoppers newsletter dec09](#)

Reconnaissance Spitfire

By Andy Peterson



An 18-year-old just out of high school was trained to take pictures of damage done to German targets by B-17's. He flew in a British Spitfire fitted with extra fuel tanks where the guns were. In other words, he flew over Germany, unarmed.

Filmed in a 2005 interview with the now 83-year-old pilot and seeing the expression on his face when he realizes it is him in the cockpit, is something you won't soon forget.

At 18 years old, he was all alone, behind enemy lines, with no guns, no escort, and he gladly did it. They just don't make them like that anymore. It was truly the greatest generation and we owe them so much.



Click this link: [American Spitfire Pilot in WWII](#)

A Moment in Flight:

Flight Video by Pedro Navarro

For a change of pace, this month's selection is the Neptune flying wing model. It makes a beautiful sight cavorting with the clouds and the setting sun.

[Click here to see this month's Moment in Flight.](#)

