FLIGHTLINE

NEWSLETTER OF THE PALM BEACH RADIO CONTROL ASSOCIATION

Vortex Generators

Flight Test Vortex Generator info and video

AMA Club# 1016

ONE OF THE LARGEST AMA CLUBS IN AMERICA
Winter 2025

The Palm Beach Radio Control Association
Current Board of Volunteers

John Scaduto	President/Webmaster/Newsletter Editor
Tom Severino	Vice President
Princeton Rose	Treasurer
David Spielman	Secretary and Membership Chair
Gary Hoffman	Chief Safety Officer
Jon Gerber	Chief Training Officer
Seth Sterling	Director

Please use the following email address to contact any of the Directors:
pbrca.info@gmail.com

Membership Meeting Dates!
Second Saturday of Every Month
ALL DATES ARE TENTATIVE

January	10th, 2026	9:00 AM at Westervelt Field (new time)
February	14th, 2026	9:00 AM at Westervelt Field (new time)
March	14th, 2026	9:00 AM at Westervelt Field (new time)
April	11th, 2026	9:00 AM at Westervelt Field (new time)
May	09th, 2026	9:00 AM at Westervelt Field (new time)
June	13th, 2026	9:00 AM at Westervelt Field (new time)
July	None	Summer Break
August	None	Summer Break
September	12th, 2026	9:00 AM at Westervelt Field (new time)
October	10th, 2026	9:00 AM at Westervelt Field (new time)
November	14th, 2026	9:00 AM at Westervelt Field (new time)
December	12th, 2026	9:00 AM at Westervelt Field (new time)

For more information and upcoming events please visit the Calendar page of the PBRCA Website

https://www.palmbeachrc.com/calendar

A FRIA approved club (FAA-Recognized Identification Area)

John Scaduto
President/Webmaster/Newsletter Editor

The Value of New Blood on Our Club Board

As our club continues to thrive with an outstanding flying field, strong membership, and a tradition of camaraderie and safe flying, it's easy to feel that everything is running smoothly. And much of it is—thanks to the dedication of our current board and long-time volunteers. However, even the best organizations benefit greatly from fresh perspectives and new energy. Bringing "new blood" onto the board is not about replacing what works; it's about strengthening and future-proofing the good things we already have.

New members on the board bring different viewpoints, experiences, and ideas that can spark innovation while preserving our core values. Someone who has recently joined the hobby might see opportunities to attract younger pilots or families that longtime members might overlook. A member skilled in social media or digital tools could help us reach new audiences without changing the welcoming, hands-on atmosphere we cherish at the field. Fresh eyes often spot small improvements, whether in event planning, safety protocols, or field maintenance that keep our club vibrant and relevant for years to come.

Perhaps most importantly, inviting new board members ensures continuity. Relying on the same group of dedicated volunteers year after year, while deeply appreciated, can eventually lead to burnout. By welcoming new voices, we distribute responsibilities more evenly, energize our leadership, and build a deeper bench of experienced members ready to step up when needed. This cycle of renewal is what allows great clubs like ours to endure and continue offering the exceptional experience that sets us apart.

If you've ever thought about contributing more to the club you love, now is the perfect time. The board needs your perspective, your enthusiasm, and your ideas. Stepping forward doesn't mean you have to have all the answers—it means you care enough to help shape our future while protecting the traditions that make our club special.

Please consider putting your name forward or encouraging a fellow member who would bring valuable new energy to the team. Together, we can keep building on the strong foundation we've all worked so hard to create.

Call for Contributions: Make Our Newsletter Even Better!

Our club newsletter is a great way to stay connected, share our passion for RC flying, and celebrate what makes our club special. But it truly shines when it reflects the experiences, knowledge, and creativity of *all* of us, not just a few.

I rarely receive submissions from the membership, and I'd love to change that! Your stories, tips, photos, and ideas would make the newsletter more engaging and valuable for everyone.

Here are some ideas to get you started, no need to be a professional writer; even a short paragraph or a few photos would be fantastic:

- Share a recent build or restoration project, tell us about your latest plane, modifications, or that "winter workbench" masterpiece.

- Write about a memorable flight, a funny mishap at the field, or a lesson learned (we all have those!).
- Offer a quick tip or trick: covering techniques, setup advice, battery care, or how you tackled a tricky repair.
- Review a new model, motor, radio, or accessory you've tried.
- Send in photos or videos of your planes in action or maiden flights
- Anything special you'd like to share that other members would enjoy, perhaps a vintage model, a scale detail you're proud of, or an upcoming project.

It doesn't have to be long or polished, just send it in, and I'll help tidy it up if needed. Email your contributions to pbrca.info@gmail.com with your information saying you'd like to contribute to the Newsletter. Let's make this newsletter *ours*.

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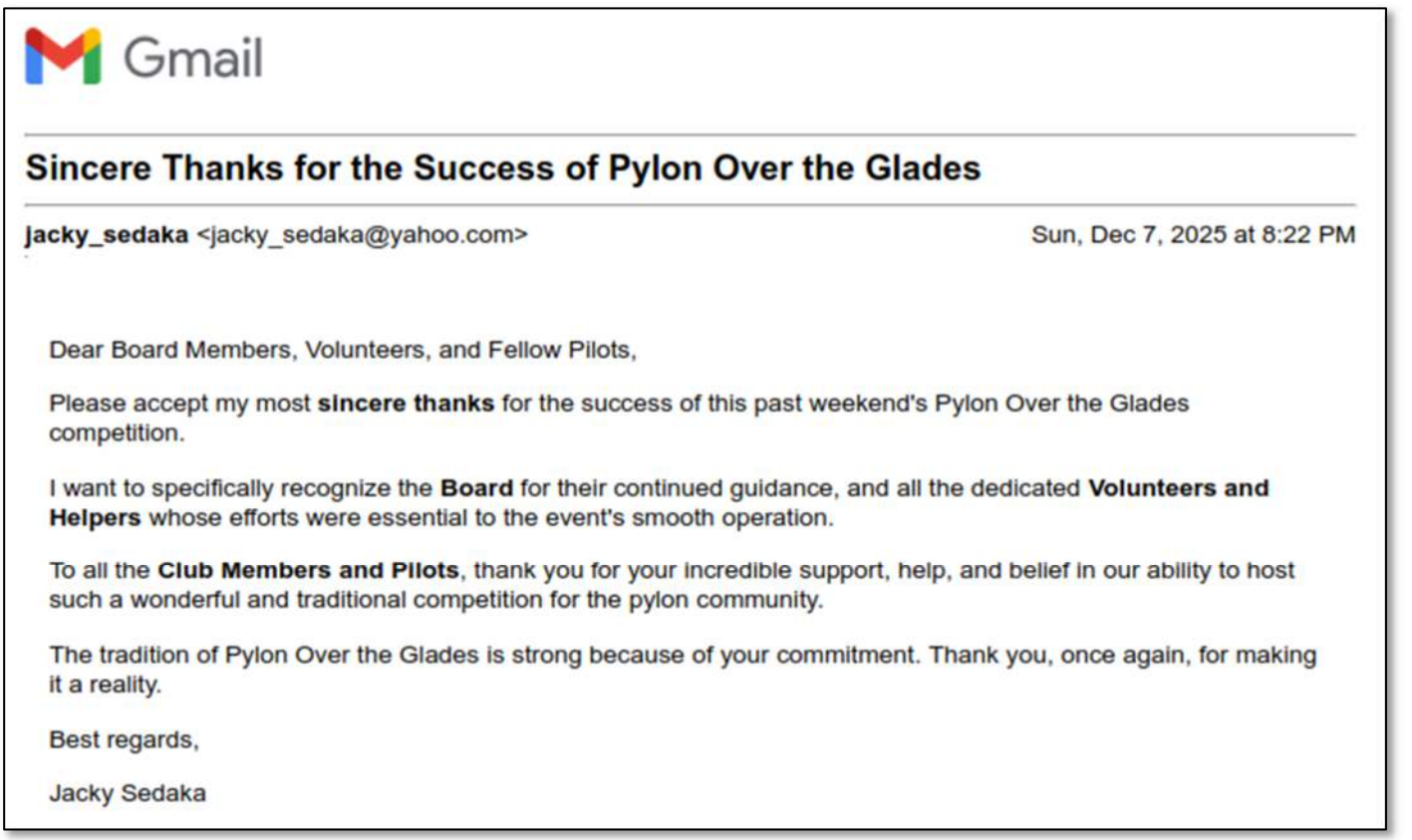
Here's a note from Jacky Sedaka regarding the 2025 Pylons Over the Glades event.



Gmail

Sincere Thanks for the Success of Pylon Over the Glades

jacky_sedaka <jacky_sedaka@yahoo.com> Sun, Dec 7, 2025 at 8:22 PM

Dear Board Members, Volunteers, and Fellow Pilots,

Please accept my most **sincere thanks** for the success of this past weekend's Pylon Over the Glades competition.

I want to specifically recognize the **Board** for their continued guidance, and all the dedicated **Volunteers and Helpers** whose efforts were essential to the event's smooth operation.

To all the **Club Members and Pilots**, thank you for your incredible support, help, and belief in our ability to host such a wonderful and traditional competition for the pylon community.

The tradition of Pylon Over the Glades is strong because of your commitment. Thank you, once again, for making it a reality.

Best regards,

Jacky Sedaka

Here's hoping for fewer TFRs and light winds!
John

Tom Severino

Vice President

Fun with Helicopters

RC helicopters are categorized by blade length or "class" (e.g., 250, 450, 600 & 700mm) with larger sizes offering more stability but higher cost and PF (pucker factor), while smaller ones are cheaper and great for learning. The main rotor system is pretty amazing; a swash plate is the mechanical part that moves up and down for collective (positive or negative lift) and tilts in any direction changing blade pitch throughout its rotation determining direction of flight.

The tail rotor blades also change pitch to counteract the torque of the main rotor system and provides yaw control to “steer” the tail. All this control is generally accomplished with 4 servos, 3 for the swashplate and one for the tail rotor. All this coupled with dozens of parts such as gears, belts, rods, pulleys, and of course your electronics make for a pretty complex flying machine.

Learning to fly RC helicopters is quite difficult and has a steep learning curve, it’s more of a challenge than learning RC fixed wing planes, requiring constant small corrections for stability, and continuous minor stick inputs (throttle, pitch, yaw, roll) just to learn to hover. It takes many weeks of practice, a lot of patience, and a significant amount of spare parts just learning to hover tail in, at times mentally exhausting.

Once you are somewhat comfortable hovering the next challenge is maintaining orientation, being that the helicopter can fly in any direction in any orientation it is easy to lose perspective, not a good situation to find yourself in. Simulator time is quite helpful in learning, no tools or parts required after a simulator crash, which can be many.

So, if you’re looking for a new challenge you may want to consider rotary wing flying.

Princeton Rose

Treasurer

Reflections and looking ahead…….

Reflecting on 2025, I am happy to report that we significantly replenished our coffers following the large investment spending in 2025. During 2025 we hosted several successful fund-raising events that funded our coffers and allowed us to continue supporting a veteran’s organization and spreading joy to several kids at Christmas. Our R/C flying sites and club operations benefitted from club funding for the asphalt pads under three West-Runway carports and installing an asphalt walkway along the West carports to the tarmac by the Press Box. As we discussed at our December 2025 General Meeting, “living within our means remains paramount” which requires

covering operating costs with our primary funding source, membership dues, and so far, we remain balanced.

We can now focus on our evolving 2026 schedule of events which includes our third annual "3D" event in February, another heli event in April, and a pylon racing event in December. In addition to providing thrilling and fun experiences for club members and visitors, we expect a positive monetary impact from these events.

Charitable giving from club activities in 2025 consisted of cash donations to Alexander Nininger Veterans' Nursing Home and Toys for Tots. We also donated several bags/boxes of toys to Toys for Tots. Our participation in the 2025 South Florida National Model Aviation Day fun fly event enabled participating clubs [1] to make another generous contribution to Feeding South Florida. This was our fourth donation in as many years to Feeding South Florida. We again thank our members and supporters for their time, energy, and financial contributions that enabled us to support these humanitarian organizations.

Remaining improvement projects include refurbishing our Field House floor and walls and resurfacing our 18-year-old runway. It goes without saying that responsibly maintaining our wonderful flying sites requires the commitment of our members and their financial support.

Finally, PBRCA operates and funds and maintains the RC flying sites in West Delray Regional Park. This includes the 600-foot paved runway, covered pit areas, multiple tables and aircraft stations, and the portable restrooms, and the safety and security of RC flying activities. PBRCA's flying sites are well equipped and well-run flying sites for both pilots and spectators alike. Historically, investment spending and operating costs have been covered by dues and donations from club members. With rising operating costs and the need to finance the resurfacing of the runway, it is only equitable that going forward, nonmembers wishing to use PBRCA's flying sites pay their share of the costs to operate and maintain the flying sites. As such, effective January 1, 2026, pilots who are nonmembers of PBRCA wishing to use PBRCA's airfields can either buy an annual PBRCA Airfield Pass or join PBRCA. Pilots using PBRCA's airfields must always visibly display either a PBRCA Club Membership Card or a PBRCA Airfield Pass and their current AMA Membership Card.

Happy flying and continue enjoying this awesome hobby!
Princeton
December 2025

[1] Participating clubs were Aero Modelers of Perrine and PBRCA.

David Spielman
Secretary and Membership Chair

Winter 2026 Membership Report

We are off to a new year and a new membership cycle. As of 2026, PBRCA will have calendar year membership.

About half the club is already working with (full) calendar year memberships, and the other half will transition by the end of January. Memberships will be prorated based on when your current membership expires in 2026. If your

membership expires between February and November 2026, your prorated amount has been emailed to you; you will have to pay your prorated amount by the end of January. Simply go online to PBRCA membership services and use the online form to pay by PayPal or print out an application and mail or hand in.

https://www.palmbeachrc.com/2026-payment-scale

I'm excited to change the membership renewals to the calendar year. It simplifies the registration and card distribution process, saving the membership secretary time so he can join you at the field and fly his planes. Once the renewal process is made easier, more people will get their cards faster. Also, with an easier membership maintenance process, more members will find it they can do the membership secretary job, making the membership secretary job more appealing.

We have 275 paid members! That's great, considering the pressure we have with field closures due to presidential trips to Palm Beach. Even with the visits, we get more flying days on our fields than clubs in the Northern states.

Everyone who has a membership expiring in 2026 will have to pay something (a prorated amount) in January 2026 to catch you up for the 2026 year. Please renew your club membership NOW! If you wait past January 2026 to pay your prorated amount for the year, you may be required to pay the full amount of $50.00. We need a simple system of renewal and keeping a prorated schedule running can make membership renewal complex. It's more work for me to check expiration dates and more work means less flying. Renew now with your prorated amount to catch you up for all of 2026.

Important! Wear your membership card! You're a member of a really great club and wearing your membership badge shows your pride and helps everyone identify you as a contributor. *More importantly, it's part of the Club and Parks Dept rules and regulations.*

Your dues help to maintain our facilities: shaded shelters, solar 12-volt battery charging station, field house, first aid supplies, AED, rowboat, helicopter field, drone field, fixed wing field, weather station, field camera and setup areas. This is all paid for and maintained by member dues, Airfield Pass holders and member donations. Official club members also get access to basic fixed wing flight training at no cost. We currently have three club instructors who have club planes and some of our members offer paid instruction after a free introductory session.

Fly Safe,
David Spielman
Membership Secretary and Club Contact
PBRCA Secretary

Gary Hoffman
Chief Safety Officer

Want to hear and see what it's like when a general aviation airplane flies into a TFR? Watch and listen to this approximate six-minute video on YouTube: https://youtu.be/7SSSrAm3qPE

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Thanks to club member Joe Mannino for the following:

“Stopped at the field around 2:00 pm today on my way home. There was no one there and I had my drone in the car with two batteries just under 50% so I decided to try to find some downed planes in the northwest corner of the field.

Walked out to the old, paved circle just before the open trail to the west side canal and flew from there.

Keeping an eye on my drone, I did not see the videos until I got home. Spotted this bad-boy alligator sunning on the path.

EVERYONE STAY ALERT WHEN LOOKING FOR ANYTHING IN THE FIELD AND BEYOND!!

Jon Gerber
Chief Training Officer

Seth Sterling
Director

We can take great pride in our club's achievements and our excellent flying field. This sentiment is frequently echoed in comments I hear from visitors from other clubs, as well as from contacts I've made at our Swap Meets.

Many other clubs face significant limitations, such as short, fabric-covered runways; north-south orientations that force pilots to fly into the sun; close-in obstacles or nearby neighbors; or hazardous and chaotic operations. Moreover, their typical dues are $150 or more—often three times higher than ours.

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TIPS, TRICKS, and other BITS (of possibly useful info)

3M Extreme double-sided tape

Need to attach a receiver, gyro, or other small equipment to the inside surface of your foam fuselage? 3M double-sided Extreme tape, available in the paint supplies aisle at Home Depot works well, staying securely attached to the foam. And if you need to remove it, a short length of monofilament fishing line stretched between your hands can be used to “saw” it off easily.

Do you need a temporary workbench?

Add a plywood top, clamped into place on a portable worktable for a temporary workbench inside a house or garage. Fold-up worktables like this Black & Decker Workmate, are available at Walmart, Harbor Freight, and other suppliers and can be stored in a closet, under a bed, etc.

FEATURE ARTICLES

GP 178 EFI testing and refinement

Gary Hoffman
12/31/2025

I received a new GP-178 EFI (Electronic Fuel Injection) for testing and refinement.

The engine is the same internally as the carburetor version but has a throttle body with a single injector. The system also includes a pump (45 PSI) and an ECU (Electronic Control Unit) and uses Festo push-to-connect Festo plumbing and the entire system is powered by a 6S 1500 Lipo.

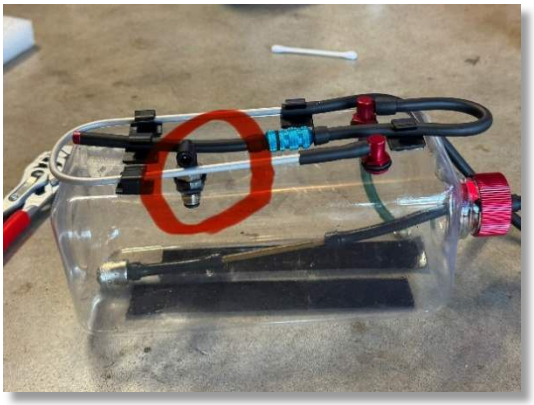
The GP-178 EFI kit

I decided to install this engine in a 114-inch Extreme Flight Slick, and since this plane already had a GP-178 standard version and had flown ~20 times.

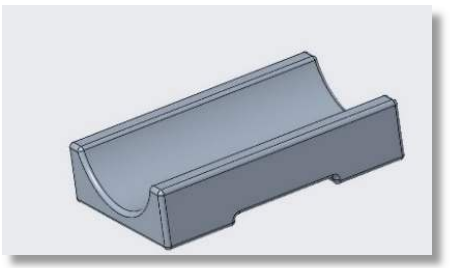
The first thing was deciding the basic layout in the plane, and since the EFI version has better “gas milage” I changed the 1.5L fuel tank to a 1.0L tank.

The only inputs from the receiver are the throttle servo and kill switch. The settings from before were used as is.

The Pump has an input from the fuel tank, an outlet to the fuel injector, and a return line back to the tank to regulate the fuel pressure to 45 PSI. To do this, I used a Festo fitting with an O ring to seal into the tank.

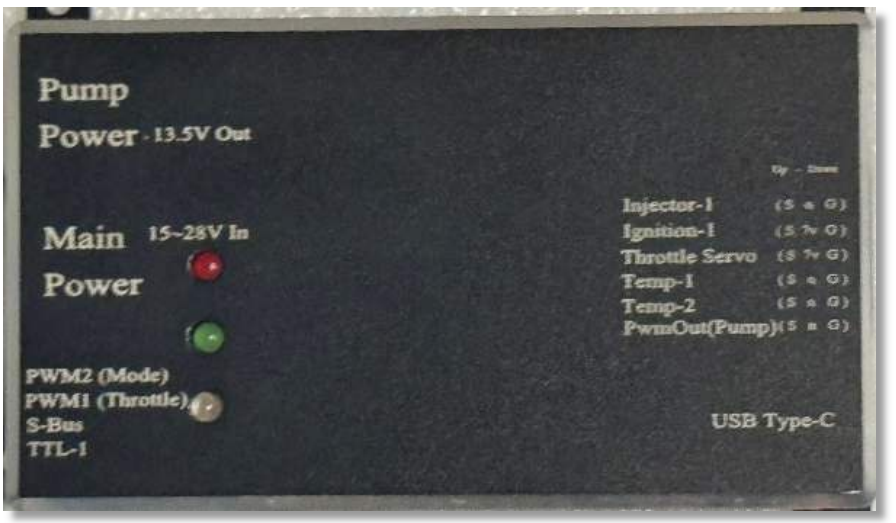


Fuel tank, with Festo return line



I printed a saddle type mount for the fuel pump, then used E-6000 to bond it to the tray next to the fuel tank, and a Velcro strap to secure it.

The ECU is mounted with a big Velcro patch, for vibration isolation and access to the USB and TTL ports to program the fuel injector curve, and to monitor critical engine functions, such as CHT (cylinder head temps, both cylinders), ambient temp, ambient barometric pressure, RPM, an hour meter for scheduled maintenance.



ECU module, note that the USB and TTL ports or on the opposite sides.

When the entire system is assembled, it looks like this:

The ECU is in the upper left of the image, the pump is right, adjacent to the fuel tank, and the printed mount with a 6S 1500 Lipo on the left.

Interior layout, flight ready

To program it, or to simply read the telemetry, the USB and TTL cables are inserted into the USB ports on a PC, and the screen pulls up. You can see the 2@ CHT's, ambient temp, barometer, etc.

The injector curve has the pulse width on the ordinate (vertical) axis, and throttle position on the abscissa (horizontal) axis. This is almost like having 11 carburetor adjustment screws. For example, the first time I ran it, it was sounding lean in the upper range, so I moved the points in the 80, 90, 100.

Programming screen

The injector curve has the pulse width on the ordinate (vertical) axis, and throttle position on the abscissa (horizontal) axis. This is almost like having 11 carburetor adjustment screws. For example, the first time I ran it, it was sounding lean in the upper range, so I moved the points in the 80, 90, 100. % range “up” (more time open is more fuel, aka “richer”) very similar to a Spektrum throttle curve.

So, this is still a bit of work in progress, but it has flown 3X and may need to be a little richer in the 20, 30, 40% range, but so far it runs better than I expected!

Stay tuned for more in the next newsletter!

DC vs. AC/DC CHARGERS

by [FPV Know-It-All]

DC vs. AC/DC CHARGERS

A LiPo battery produces DC electric current. That means you need DC electric current to charge it. That's the job of a LiPo charger: to make just the right voltage and current of DC electricity to charge the battery up safely. So where do you get the DC current from? You might think that's the charger's whole job, right? But it's not, really. The charger's job is to regulate the DC voltage and current so that it's just right, not to create the DC current.

One way to get the DC current is if you've got another, bigger battery. For example, an automotive battery outputs 12v DC. Another option might be a solar panel that charges a 12v or 48v battery. That's DC too. Feed that DC current into the charger and it regulates it down to the right voltage and current to charge the battery.

The problem comes when you want to plug the charger into a wall outlet. That's AC, and the charger can't just pass it to the battery. It has to be converted to DC. That's the job of the power supply (PSU). Assuming that you want to plug your charger into the wall, you need a PSU in addition to the charger itself. Some chargers come with a built in PSU. These are known as AC/DC chargers. Some chargers don't have a built in PSU. These are known as DC-only chargers. If you buy a DC-only charger, know that you can't plug it into the wall. You will either need to run it off a DC power source like an automotive battery or solar system. Or you will need to buy a separate external PSU to let you plug it into the wall.

WELL, THAT'S STUPID

At first, this whole DC-only thing sounds stupid to a lot of people. Obviously, you're going to want to plug the charger into a wall outlet at least some of the time! So why don't chargers always have a built-in PSU?

A lot of hobbyists already own a PSU. For them, a built-in PSU is additional cost for no benefit. The built-in PSU adds weight and size, which means when you take the charger away from home and run it off a DC source, it's bigger and heavier than it needs to be. The PSU is dead weight, if you're not plugging into a wall outlet.

Finally, the built in PSU's in most chargers are significantly smaller than the charger's rated capacity if it's run off an external PSU. This doesn't HAVE to be the case, but it usually is. It doesn't make sense to put a big, 1000 Watt PSU into a single charger. If you're going to buy a PSU that big, you probably want to run multiple chargers off of it. And it's going to be so huge that you wouldn't want to carry it around when you

take the charger on the road. A charger's built in PSU might charge a battery in 2 hrs while an external PSU might charge the same battery in 30 minutes.

If you have a charger that you know you will always run off a wall outlet, then it should be AC/DC with built in PSU. If you have a charger that will sometimes run off a DC source and sometimes a wall outlet, it might make sense for it to be DC-only with separate external PSU. But if you can tolerate the additional size, weight, and cost, taking an AC/DC charger on the road can be very convenient, since you have the ability to plug it into a wall should the need arise.

CHARGER SPECIFICATIONS

The first specification you should check is the **battery type and voltage** that the charger can charge. All the chargers on this page can charge LiPo and Lithium Ion batteries. If you need to charge other chemistries like LiFePO4, NiMh, or Lead-Acid, you should check the product pages and manuals. Most chargers on this page charge between 1S and 6S batteries. It's uncommon, but not impossible to find chargers that only go up to 4S though. And only a few chargers can charge higher voltages like 8S.

Next, check the charger's **Watt rating and Amp rating**. The higher these numbers, the faster you can charge a battery. But keep in mind that you can only charge a battery so fast before it becomes unsafe. So as long as the charger's Watt and Amp rating let you charge the battery as-fast-as-is-safe, you don't need them to be any bigger. Watt and amp rating are a "whichever-comes-first" limitation. If either one is exceeded, the charging rate can't go any faster. Which one you'll hit first depends on whether you're charging a big (high mAh) battery or a higher voltage (6S or 8S) battery.

The full math for calculating maximum charge rate has a lot of factors. But the short version is, take the battery's mAh and convert it to amps. This is your 1C charge rate. **This must be less than your charger's Amp rating.** 1C charge rate takes about 1 hr to charge the battery. If you double that number, that's 2C, and it takes about 30 minutes to charge the battery. 3C takes about 20 minutes. 4C takes about 15 minutes. Charging at higher C rating is more dangerous, but some people do it. Official advice is that 1C charge rate is safest.

Multiply your desired charge rate by 4.2 volts (assuming a LiPo that's charging to 4.2 volts per cell). Multiply that by your cell count (e.g. 6S). This is your 1C charge rate in Watts. **This must be less than your charger's Watt rating.**

For example: 1500 mAh 6S battery. 1500 mAh = 1.5 amps. Let's say I'm going to live dangerously and charge at 4C. That's 1.5 * 4 = 6 amps. Take 6 amps * 4.2v / cell * 6 cells = 151 watts.

For a more complete analysis of how big a charger you need, check out the detailed here.

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A Brief History of the FAA: From Early Skies to Modern Airspace

Since we're so effected by it and it's relationship to RC aircraft, read the following if you're Interested in a brief history of the FAA. This is condensed from the following where you can read about it in more depth:

https://www.faa.gov/about/history/brief_history

A Brief History of the FAA: From Early Skies to Modern Airspace

The Federal Aviation Administration (FAA) traces its roots back to the dawn of powered flight with the Wright brothers' historic 1903 achievement, which sparked rapid advancements in aviation during the early 20th century. Despite early dangers—like navigating by roads and railways or landing by bonfires—the industry grew, bolstered by World War I military use and the 1925 Air Mail Act, which kickstarted commercial airlines like Pan Am and United.

Federal oversight began with the 1926 Air Commerce Act, creating the Aeronautics Branch under the Department of Commerce to handle safety, licensing, and navigation aids. Renamed the Bureau of Air Commerce in 1934, it pioneered early air traffic control (ATC) centers. High-profile accidents, such as the 1931 crash killing football coach Knute Rockne, led to the 1938 Civil Aeronautics Act, establishing the Civil Aeronautics Authority (CAA) for safety and economic regulation. In 1940, it split into the CAA (for operations) and the Civil Aeronautics Board (CAB) for rulemaking and investigations.

Post-World War II, the FAA's predecessor expanded ATC to airports, introduced jets, and faced a pivotal 1956 midair collision over the Grand Canyon, prompting the 1958 Federal Aviation Act. This birthed the independent Federal Aviation Agency, which became the FAA in 1967 under the new Department of Transportation (DOT). The agency navigated challenges like the 1981 PATCO controllers' strike, airline deregulation in 1978 (spurring industry growth), and environmental concerns over noise and pollution.

In the modern era, the FAA focused on automation through the National Airspace System (NAS) Plan in 1982 and the Next Generation Air Transportation System (NextGen) in 2003, enhancing efficiency with technologies like GPS and Required Navigation Performance (RNP). It also absorbed commercial space oversight in 1995 and created the Air Traffic Organization (ATO) in 2004 for streamlined operations. Safety milestones include reducing fatal accidents to near-zero for commercial carriers in the 2000s, while post-9/11 reforms shifted security to the TSA.

Today, the FAA oversees the world's safest and most efficient air transportation system, continually adapting to growth through innovation in safety, capacity, and environmental sustainability.

How This Relates to Aviation and Our RC Airplane Club

The FAA's evolution underscores the broader story of aviation's transformation from a risky novelty to a safe, integral part of global connectivity—principles that ripple down to hobbyists like us in the RC airplane world. Just as the FAA standardized rules for commercial and general aviation to prevent accidents and manage crowded skies, it now regulates model aircraft to ensure everyone shares airspace responsibly. For instance, early FAA efforts in ATC and navigation mirror the guidelines we follow today, like registering RC models over 0.55 pounds, flying below 400 feet, and avoiding manned aircraft or no-fly zones.

This history reminds us that safety isn't just for pros; it's the foundation of our fun. By staying FAA-compliant—through resources like the FAA's DroneZone or community education—we honor aviation's legacy while protecting our hobby from restrictions. It's a great prompt for our club to discuss FAA updates at the next meeting, perhaps even inviting a local expert to share how NextGen tech could inspire advanced RC navigation systems!

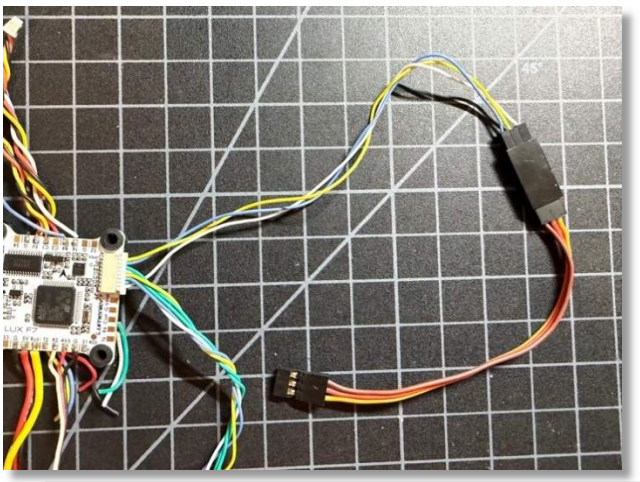
How to program a BLheli_S speed controller.

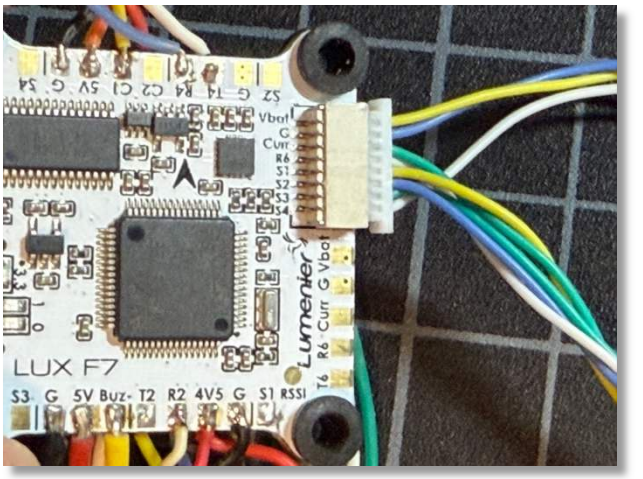
David Spielman

Ahhhhh! There that felt better. I have searched and searched to find instructions for programming my new airplane Blheli_S speed controller with little luck. Yes, I can figure out how to calibrate the throttle range of the speed controller by turning on my transmitter with throttle high, listen to the beeps and then move the stick to low. There are no instructions beyond that.

A Google AI search regurgitates garbage about the theory of manually programming the ESC with the throttle stick. I saw reference to using an Arduino to connect and use BLheli suite, but that is a bit expensive, and I'm not interested in another hobby.

The solution: Break out a flight controller from an old drone and connect it to one of the ESC ports. Luckily, I have a flight controller and also have an ESC cable with sockets that fit a servo extension. I'm in business now! Connect the Vbat to the center pin, Ground and the correct edge and select one of the motor pins to the signal.





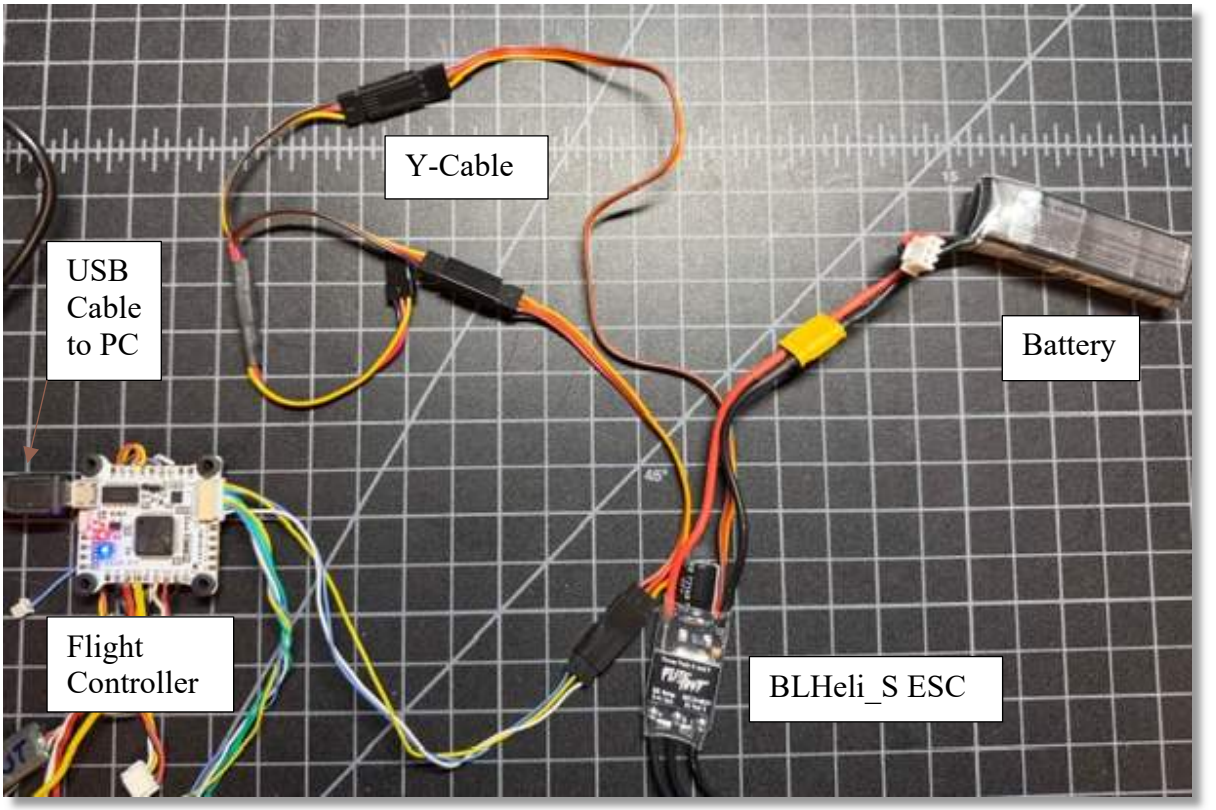
Connect the Flight Controller port to the servo extension. S4 motor is used.

I need a gender changer to connect to the speed controller, and I found a Y-cable that works for that.

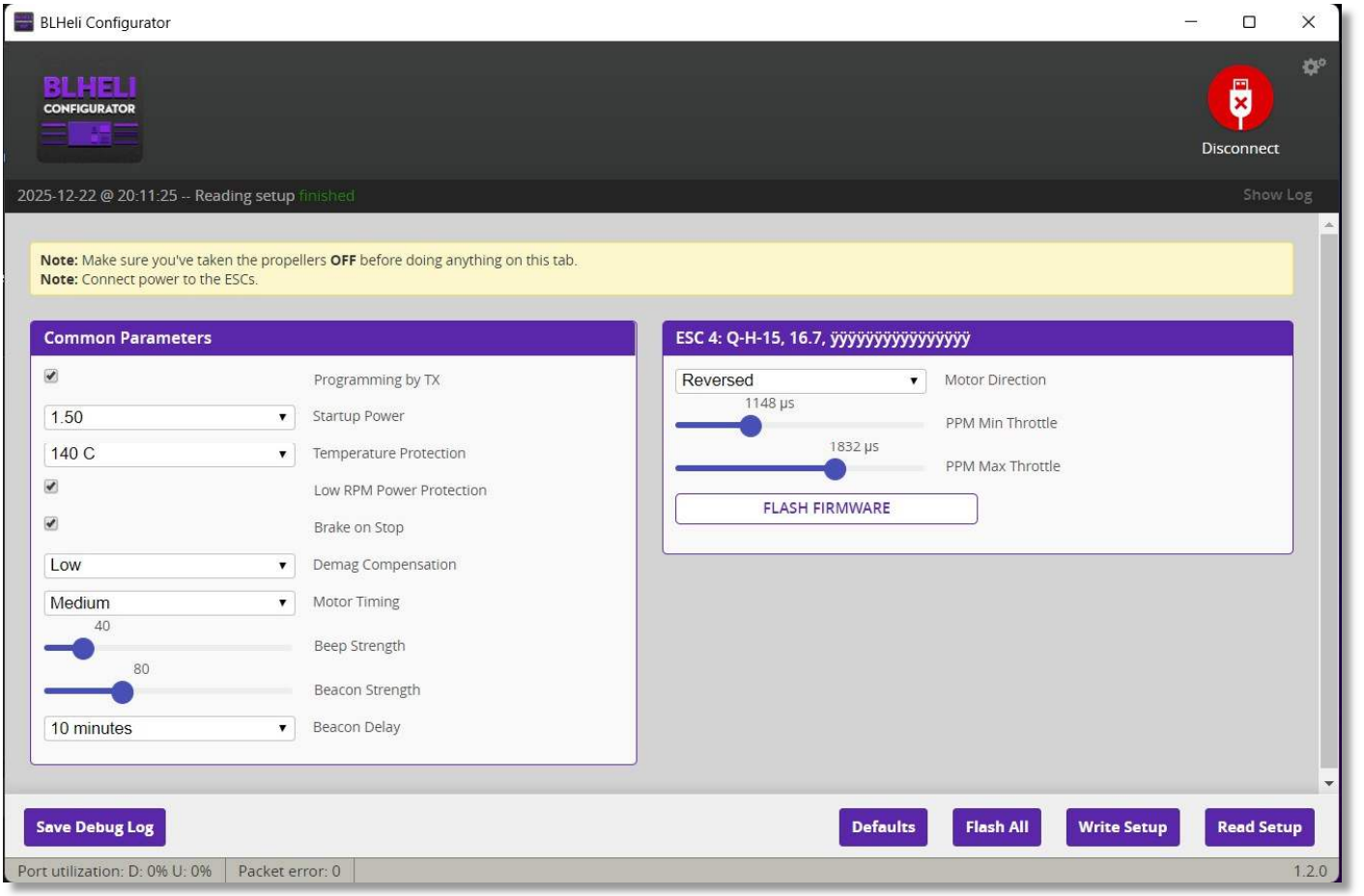
Here's a list of what's needed to set up programming of the speed controller.
Rube Goldberg set up here I come.

Parts List
USB Cable
PC with BLHeli Configurator
Flight Battery
Flight Controller (FC)
ESC Cable to FC
Servo Extension
Y-Cable

With this setup, you can change the ESC settings with BLHeli configurator. I want to change from No break to Full Break. This is great for gliders and flying wings without landing gear.



My BLHeli_S ESC is connected to the flight controller. The ESC must be powered



BLHeli Configurator has some basic ESC settings. After making changes, select the write setup button to store the settings. Once done, power down and disconnect the ESC.

Massachusetts company has been making model airplanes, balsa wood gliders the same way for 100 years

By Chris Tanaka

It could be the perfect holiday gift: Affordable, gets kids away from screens, oozes nostalgia and is made in Massachusetts.

Welcome to Guillow's. The model airplane and balsa wood glider company has been headquartered in Wakefield for 99 years.

The company was founded by Paul Guillow in 1926. He made the gliders in his barn at first, then moved to the current location a few years later.

Guillow's model airplanes and gliders.
American made, American played for 100 years.

"This is an iconic business that we have here. Our gliders and toys have been sold all over the world," company president Tom Barker said.

Barker knows better than anyone. He's been with the company for 50 years.

"Straight out of Wakefield High School. I came here, I started in 1975 and never left," he says with a chuckle.

Barker has seen it all, stewarding advances in manufacturing like laser cutting, while shepherding a tradition built on generations of customers.

"It's a great activity for a father/son or mother/daughter to put something together, go out and fly it, get away from the screen time," he said.

The balsa wood gliders sell for as little as $3, come together in seconds and are just as entertaining as when you were a kid.

"There's not too many toys out there that are actually made in the U.S., and that any kid could play with from 3 years old to 90," Barker said.

You can check out Guillow's lineup of airplanes and gliders here. They even sell “Model Kits!”

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What does Kv mean for electric motors?

Kv is one of the most important specs to understand when choosing an electric motor for your RC airplane.

What Does Kv Mean?

Kv stands for RPM per volt. It tells you how fast a motor will spin for every volt applied, *without a load*. So, if a motor has a Kv rating of 1000, it will spin at 1000 RPM for every volt you supply. On a 3S LiPo battery (which is 11.1 volts), that motor would theoretically spin at:

RPM=Kv x Voltage=1000×11.1=11,100 RPM

This is a no-load speed, meaning the motor isn't turning a prop yet. Once you add a propeller, the RPM will drop due to resistance.

Why Kv Matters

Kv affects torque, propeller size, and battery choice:

- Lower Kv motors (e.g., 400–600 Kv) spin slower but produce more torque. They're ideal for larger props and higher-voltage batteries (like 6S).
- Higher Kv motors (e.g., 1000–2200 Kv) spin faster but have less torque. They're better for smaller props and lower-voltage batteries (like 2S or 3S).

Examples for RC Airplanes

Motor Kv	Battery	RPM (no load)	Ideal Use Case
500 Kv	6S (22.2V)	~11,100 RPM	Large-scale warbirds, gliders
1000 Kv	3S (11.1V)	~11,100 RPM	Sport planes, trainers
2200 Kv	2S (7.4V)	~16,280 RPM	Small foamies, park flyers

Quick Formula

RPM = Kv x Voltage

Just plug in your motor's Kv and your battery's voltage to estimate how fast it'll spin. Keep in mind that prop size and load will reduce actual RPM, and ESC limits must be considered too.
If you're trying to match a glow engine's performance with electric, Kv is a key part of the puzzle.

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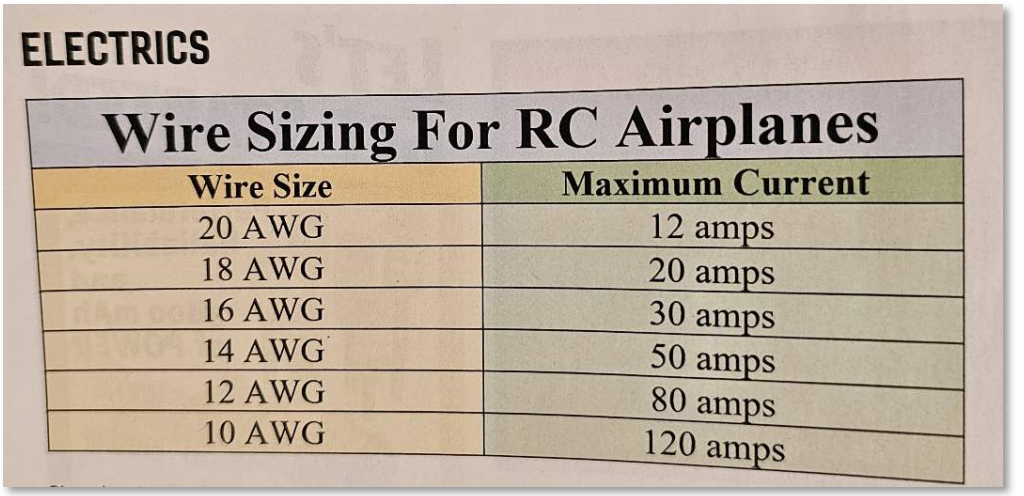
Did you know?



ELECTRICS

Wire Sizing For RC Airplanes

Wire Size	Maximum Current
20 AWG	12 amps
18 AWG	20 amps
16 AWG	30 amps
14 AWG	50 amps
12 AWG	80 amps
10 AWG	120 amps

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Unless you've been living under a rock, you should know by now or at least have heard about Spektrum SAFE (Sensor Assisted Flight Envelope). Here is a brief description:

Spektrum SAFE (Sensor Assisted Flight Envelope) technology is an innovative flight stabilization system developed by Horizon Hobby's Spektrum brand for RC aircraft. It builds on the AS3X (Active Stabilization - 3 Axis) system by incorporating multi-axis sensors and proprietary software to provide attitude awareness relative to the ground, creating an electronic "flight envelope" that prevents extreme pitch or bank angles and counters disturbances like wind, torque, or tip stalls.

Key features include:

- Flight modes: Panic Recovery (automatically levels the aircraft when activated), customizable envelope limits, and optional auto-leveling.
- Beginner aids: Assists with straight-and-level flight, takeoffs (maintaining climb angle), and landings.
- Integration: Commonly found in Spektrum receivers like the AR630, with setup via forward programming from compatible transmitters.

This makes flying smoother and more accessible for all skill levels, turning models into "expertly tuned" performers right out of the box.

There has been some discussion at the PBRCA field, including our club trainers, about whether instructors should teach new RC students with SAFE technology enabled, disabled, or in some intermediate configuration.

It was decided that our trainers may use SAFE technology with students; however, students must demonstrate proficiency in switching the functionality on and off independently.

This remains a somewhat controversial topic. If you haven't already read it, Rich Hanson, President of the AMA, shared his thoughts on the matter in the August 2025 issue of Model Aviation. Dave Scott, who runs 1st U.S. RC Flight School, also has some insights on the subject from December 2025 Model Aviation.

Here's Rich Hanson's view:

"Although SAFE technology is a fantastic tool for beginners by providing flight control assistance and reducing the risk of crashing, it's important to remember that it's an assistive system. Pilots still need to learn fundamental flying skills and eventually learn to fly without reliance on SAFE to truly master the hobby."

"AMA Introductory Pilots are split on whether the use of SAFE technology is appropriate for use in training new RC pilots. Although there is no doubt that this technology is beneficial for those who choose to train themselves by trial and error, some introductory pilots profess that the system instills improper control techniques that lead to subsequent crashes from overcontrolling the aircraft when flying without SAFE technology assistance. Others believe that the penchant to overcontrol that is attained in SAFE mode can be effectively corrected by proper methods of instruction and progressive convergence from beginner to advanced flight modes."

"I believe that SAFE technology is a highly effective tool for beginners who are attempting to fly on their own or for individuals who are learning to fly in a club environment. This assistive feature lowers the risk of crashes, lowers loss anxiety, boosts the confidence and enjoyment of newcomers to the RC world, and shortens the time needed become an accomplished and proficient RC pilot."

Here's Dave Scott's perspective:

"All of this brings us to the big question: Why do so many fliers-even entire clubs care so much about how others are flying, as long as they're safe and having fun? I can't count how many times I've read comments online from pilots who already know how to fly telling a struggling newcomer not to use SAFE technology, yet the posts make it clear that the person is just one more mishap away from quitting."

"I can only presume that this attitude toward SAFE is driven by people feeling validated when others learn the same way that they did. It reminds me of when cars with automatic transmissions first came out. Traditionalists said a manual transmission was superior, but most eventually came around to see the value of reducing the workload to get from point A to point B. Just as people who learned to drive an automatic can go on to learn to drive a stick, pilots who learn with SAFE can go on to learn conventional control."

"There are, of course, pros and cons to both approaches. My point is that arguing over "what ifs" or how a pilot might fly in the future is moot if they don't stick with it. More people flying RC means more product selection and stocked parts, lower prices, more clubs, and a stronger lobby when fighting for our rights to fly. It's a win-win for all!"

Coming Soon!!!


3rd Annual "3D Over The Glades"
Presented by
PALM BEACH RADIO CONTROL ASSOCIATION
Leave the cold up North
Join us in the
Sunshine State
February 19-22, 2026
For Questions contact:
3doverthegladespbrca@gmail.com
FRIA Approved Field!!
Huge Pond For Tail Dunks!
Event Sponsors:
EXTREME FLIGHT
GP
Great Power Engine
AFTERDARK DESIGNS
nightfire
JERSEY MODELER
U.S.A.
KG
AVIATION
-Onsite & Online Pilot Registration
-$35 Landing Fee For The Weekend
-$25 Camping Fee For The Weekend
-A must attend event!!
-No Hookups Available
-Onsite food and beverages available for purchase
-600 Foot Paved AND Grass Runway
-Saturday Raffle with some sweet prizes!
(All proceeds go towards the club)

REGULAR FEATURES

The Recreational UAS Safety Test (TRUST)

What is TRUST?

The law requires that all recreational flyers pass an aeronautical knowledge and safety test and provide proof of passage if asked by law enforcement or FAA personnel. The Recreational UAS Safety Test (TRUST) was developed to meet this requirement.

TRUST provides education and testing on important safety and regulatory information. If you fly your drone recreationally under the Exception for Recreational Flyers, you must pass the test before you fly.

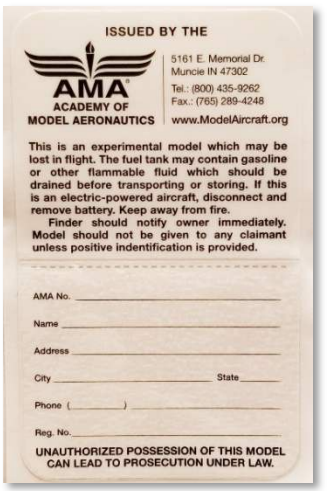
TRUST was developed in collaboration with drone stakeholders to determine content, and how it would be administered. Since June 2021, we have worked with a group of approved Test Administrators to provide TRUST as an online test. We in the FAA provide the TRUST content to the approved test administrators who, in turn, provide the online test to you, the recreational flyer.

Renew your AMA before it expires!

https://www.modelaircraft.org/membership/enroll

Renew your PRBCA club membership before it expires!

https://www.palmbeachrc.com/join-or-renew



To help you comply with the AMA/FAA regulations of having identification on all your airframes, the AMA sells stickers that can help.

This adhesive-backed label has fuel-proof adhesive and space on the bottom for your name and address. A clear plastic flap seals over your information to protect it. One of these stickers on or in your model complies with the Safety Code requirements for identification and will help recover the model if it is lost. 10 labels per pack. Id labels measure 2.125" x 3.5".

Item: 5084 Airplane ID Label 10Pk $3.99 as of today 12/28/2025

Click the link below to get to the respective web page on the AMA site:

https://shop.modelaircraft.org/product/5084-airplane-id-label-10pk/398?cp=true&sa=false&sbp=false&q=false&category_id=16

You MUST have a current AMA membership card and PBRCA membership or Airfield Pass to fly at Westervelt Field. This is a requirement of the Palm Beach County Parks & Recreation Department.

Also, please note that we will not create your PBRCA membership or Airfield Pass card unless you have a current AMA membership card. The Club Membership form and Airfield Pass information is available on the PBRCA web site, www.palmbeachrc.com or at the field in the press box.

Club E-mail Notifications

You should be receiving e-mail notifications for the monthly general membership meetings and semi-annual newsletter publication. If you are not receiving our e-mails, please let David know your e-mail address and we will update our records (David's email: pbrca.info@gmail.com. If you want your name & phone number removed from our website list, also contact David at: pbrca.info@gmail.com.

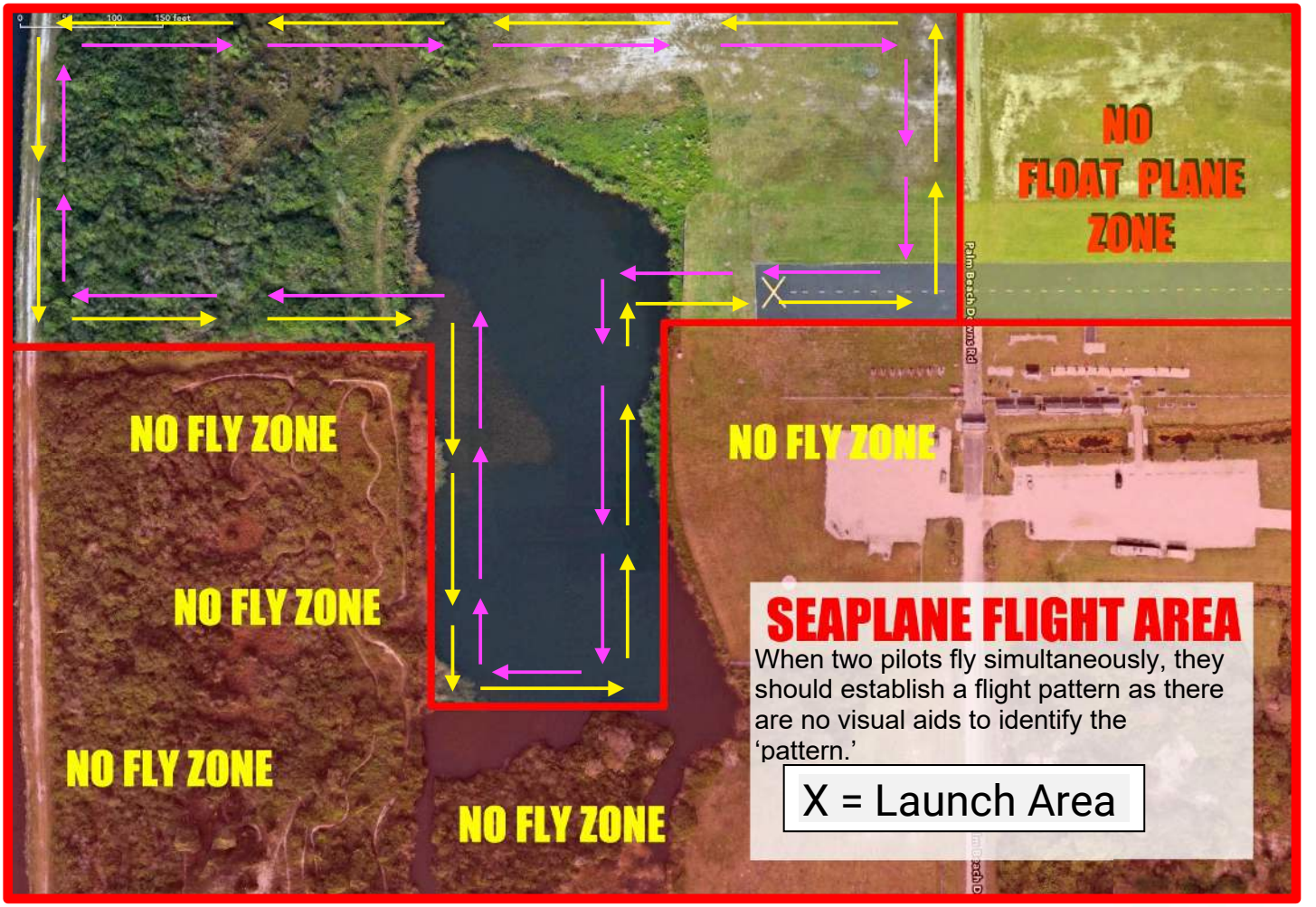
FAA sUAS REGISTRATION

All sUAS (small Unmanned Aircraft Systems - (0.55 lbs. up to 55 lbs.) pilots must register with the FAA. Furthermore, once registered, you are required to affix your assigned FAA Registration number to the 'exterior' of ***every*** aircraft you fly. For more information and registration online go to: https://faadronezone.faa.gov/#/

Click this link for the Club Safety Rules: Flight Safety Rules

Float-plane Flight Area

The membership has approved the proposed rules for flying off 'West Lake' in April 2018. The



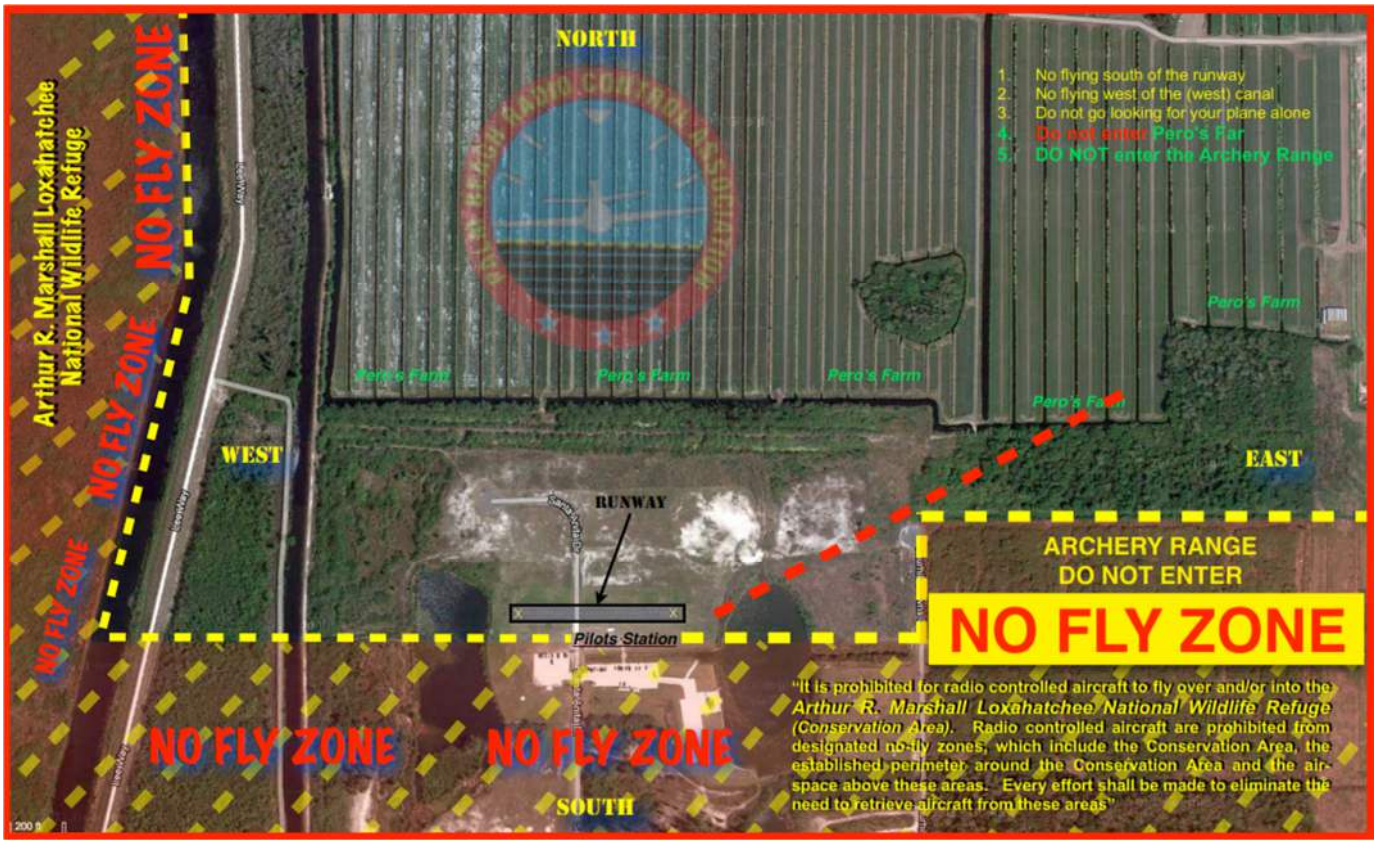
changes and additions are now incorporated into our Safety Rules.

The revised safety rules and the map have been posted on the window of the press box and on our website, and can be accessed at:

Flight Safety Rules

Land-based Flight Area

Palm Beach County has previously established “flying” boundaries and we need to adhere to those restrictions. This is an aerial map showing the boundary lines for West and South flying, and it is also posted in the bulletin board located at the “impound.” Our club has already been warned about flying over the Everglades by a Federal Wildlife Officer. You must fly within the designated boundaries!



PBRCA Battery Charging Station
(Operating Principles)

Note that for fire safety concerns, all battery charging must be done outside of the Press Box and at the charging station. It is against Club Policy to use the 110-volt AC power strip inside the Press Box for charging batteries inside the Press Box.

For the best charging experience while using our DC-volt charging stations, users should keep the following Operating Principles in mind:

- Plan on connecting your battery chargers to the 4mm banana plug connectors on the DC Power Strips, using connecting wires ideally 24" long with banana tip plugs.
- To protect the DC Power Strips from fire, battery chargers and batteries should be placed on the wire shelf below the metal boxes that house the DC Power Strips. Please avoid placing items in the metal boxes.
- Battery charging must only be performed when the Smart Batter Monitor shows the charging system's voltage above 12 volts. For example, in the screenshot

the system is reporting 14.1 volts, so charging would be safe since it's above the minimum 12 volts.

- Users must charge their batteries within the following operating parameters of the DC Power Strips:
  - the maximum output current for each position is 24 Amps, **AND**
  - the total maximum current is 50 Amps.
- Multiple users charging at the same time should coordinate among themselves to stay within the operating parameters of each charging station to avoid overloading the system.
- For safety and convenience, the charging stations are equipped with resettable circuit breakers. In the event a circuit breaker is tripped, first locate, and correct the offending connection(s) and then reset the circuit breaker.

Happy and safe charging!

https://trust.modelaircraft.org/