FLIGHTLINE

NEWSLETTER OF THE PALM BEACH RADIO CONTROL ASSOCIATION

[The Counter Rotating Propeller]

[RARE SCALE RC Martin-Baker MB 5]

AMA Club# 1016

ONE OF THE LARGEST AMA CLUBS IN AMERICA
Fall 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

October	11th, 2025	10:00 AM at Westervelt Field
November	8th, 2025	10:00 AM at Westervelt Field
December	13th, 2025	10:00 AM at Westervelt Field

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

As we gear up for another fall season of soaring through the skies at our beloved flying field, I wanted to take a moment to address something that's been on many of our minds. Our club has always prided itself on fostering a welcoming community for radio-controlled aviation lovers, but we're all painfully aware of pilots enjoying the field without being part of our membership. While it's wonderful to see more people passionate about the hobby, this situation highlights an important opportunity for us all to come together and ensure the long-term health of our shared space.

Let me start by reminding everyone that our flying field, though technically a public county park open to all, doesn't maintain itself. That's where our club steps in—and has for years. As members, we collectively shoulder the responsibility for the runway, pilot station, field house, maintaining safety equipment, windsocks, carports, etc., and even coordinating with the County Parks and Rec to keep everything compliant and safe. These efforts aren't just about upkeep; they're about creating a top-notch environment where everyone can fly with confidence. Our dues and volunteers make this possible, turning a simple park into a dedicated RC haven.

The challenge arises when non-members fly alongside us without contributing. It's understandable—after all, the field is public—but it can feel discouraging to those of us who invest time and money to keep it in prime condition. This imbalance affects morale, and frankly, it's not sustainable in the long run. If more folks continue to use the field without joining, the burden falls heavier on our paying members, potentially leading to higher dues or reduced maintenance quality for everyone.

If you're reading this and are one of those pilots who's been flying with us but haven't yet joined, we invite you to become part of the club! Membership isn't just about paying dues—it's about joining a vibrant community that offers so much more. As a member, you'll gain access to member only events and have a voice in club decisions, helping to shape the future of our flying site. Don't worry however, because by joining, you don't have to come to meetings, even though we encourage your participation, nor do you have to get involved in the politics of the club. It's your financial support that we need to keep things running smoothly.

To our current members let's lead by example. If you spot a non-member at the field, strike up a conversation, share what makes our club special, and encourage them to sign up. Together, we can grow our ranks, distribute the responsibilities more evenly, and enhance the experience for all. A stronger membership means better facilities, more events, and a tighter-knit group of friends who share our passion. In an effort to move in this direction, the Board will be launching a new initiative to support this goal, and we'll share more details soon. Together, let's work toward a vibrant, sustainable future for our club.

Our club is more than just a place to fly; it's a community built on mutual respect and shared effort. By encouraging everyone who benefits from the field to join, we're ensuring it remains a fantastic resource for generations of RC pilots to come. If you're ready to take the next step, visit our website or talk to me at the next meeting. Let's keep our skies friendly and our club thriving!

Blue skies and safe flights,
John

Tom Severino

Vice President

Safe vs Gyro

A gyro is a stabilization system that uses sensors and adjustments to keep an aircraft stable and level by counteracting disturbances like wind, while Safe mode, which is built upon the gyro is a feature that will automatically self-level the aircraft, restrict bank angles, and provides a safety net for beginner pilots by actively returning the plane to a straight and level attitude when the sticks are released. In essence, a gyro stabilizes, whereas Safe mode is a level of operation built on a gyro that provides automatic recovery and protection.

Gyro

Stabilizes the aircraft by correcting minor disturbances and wind, keeping the plane in its last commanded orientation, the gyro makes small adjustments to the control surfaces to maintain stability without completely overriding the pilot's inputs. The pilot is still responsible for actively leveling the aircraft.

Considerations

The gyro must be held perfectly level and still during its power-up and initialization process. If the plane is tilted or moved during this critical moment, the gyro will operate on a skewed reference point, causing erratic and unsafe flight behavior.

Incorrectly setting up a gyro can cause crashes, if the gyro is set to move the control surfaces in the wrong direction the plane will become uncontrollable. Correct direction of movement should always be checked prior to a maiden flight.

If the gyro's sensitivity (gain) is set too high, the plane can over-correct at higher speeds and can cause violent, high-frequency oscillations which can shake an aircraft apart.

An active gyro can mask underlying trim issues with the aircraft, this can prevent properly trimming the plane for neutral, hands-off flight. The initial trim flight should always be done with the gyro off.

Safe Mode

Provides automatic self-leveling and flight envelope protection, preventing the aircraft from entering dangerous attitudes. When the pilot releases the control sticks, the Safe system will automatically return the aircraft to a level flight attitude. It prevents excessive bank angles, making it impossible for the plane to roll too far and in Safe mode the pilot does not need to actively level the plane after releasing the sticks. Safe mode is great for beginners with assisting in taking off and landing and providing a buffer against mistakes and helps you get the plane in the air.

Considerations

New pilots who rely heavily on a gyro's self-leveling or "SAFE" mode may not develop a true feel for how the plane flies; they can become accustomed to "bashing the sticks" and struggle to fly without the electronic assistance.

Over-reliance on a gyro can lead to a false sense of piloting skills, this can result in a crash if the gyro fails or is inadvertently turned off in flight, and the pilot may be unprepared to handle the plane manually.

Some pilots use Safe mode as a "panic button" to recover from an uncontrolled situation, this can be a useful tool while developing piloting skills, but consistently flying in SAFE mode hinders skill development, creates bad habits, and doesn't teach you to control the aircraft directly.

Princeton Rose
Treasurer

Up, Up, and Away……

Hard to believe that we have three months remaining in 2025. Time certainly flies when you are having fun. I am happy to be able to continue reporting that club finances remain stable and strong, and our operating expenses remain in line with expectations. We thank you for your financial support without which we would be unable to provide the facilities and amenities that we use both at, and away from, our lovely flying sites.

As we discussed at the September 2025 General Meeting, PBRCA operates the 57 acres of flying space and 600-foot paved runway at West Delray Regional Park. These are PBRCA's flying sites. The Club funds and maintains the runway, covered pit areas, the West runway asphalt pads and walkway, multiple tables and aircraft stations, and the Press Box housing the solar-powered DC power supply, battery charging station, and video streaming equipment. The Club also pays for two portable restrooms and for fire ant control at the runway and heli flying sites.

Like other organizations, the Club faces rising operating costs and with the large capital investment needed for restoring the runway, it is fiscally prudent for the Club to ensure that all users of PBRCA's flying sites contribute towards the maintenance of the flying sites. This is why effective January 1, 2026, users of PBRCA's flying sites who are not members of PBRCA will need to contribute towards the maintenance of the flying sites by buying an annual PBRCA Airfield Pass.

Monies from airfield pass fees are exclusively used for maintaining the West Delray Regional Park RC flying sites. Please note that PBRCA club members will not need to buy a PBRCA Airfield Pass. More information on the new PBRCA Airfield Pass will be available on PBRCA's website in the coming months.

About flying site improvement projects, nothing major is planned for the rest of 2025.
Improvement projects for 2026 and beyond include refurbishing our Press Box floor and walls and, of course, resurfacing our 18-year-old runway. Building our "Runway Restoration Fund" is "Job One" for the next two years, which is ideally when we should resurface the runway.

Happy flying and continue enjoying this awesome hobby!
Princeton

David Spielman
Secretary and Membership Chair

Membership Secretary's report Fall 2025

Our membership continues to be strong with 275 paid members. This is good news after the Winter, early spring TFR restrictions and a hot humid summer. The value of being a member of PBRCA is definitely a high priority for many of us. For only $1 per week, members have full access to our incredible facilities.

Being a current member of PBRCA is special, and each of us benefits when we keep our dues payments up to date. The club stopped giving away some benefits to non-members. In May we limited the field camera, newsletters, and weather station to members only with password access. Getting your members' access is easy. Simply contact the club by emailing pbrca.info@gmail.com and ask for the access code. Don't share this code and don't assume that regular pilots whom you fly with you are members unless you see a current badge. You received this benefit because you paid your dues. Wear your club membership card and show others your commitment and club spirit.

Next year our membership will be changing to calendar year membership rather than matching up with the AMA renewal date. It has been confusing for members and when people have paid late and hoped to get more time added to their membership. That's made it tough for me and the other members of the board. Another new thing is that the membership secretary will only check to see if your AMA is current for the month you are paying. This means that your PBRCA card does not tell you when your AMA expires and you need current AMA to fly.

To transition to a calendar-year membership, we will prorate your 2026 membership based on the months already paid, provided you renew by January 31, 2026. Look for a discount table and detailed information about the membership change in upcoming communications, starting soon. Tom, Princeton and John stayed up late working out all the kinks and they did an awesome job!

We are saving up to refurbish our main runway in about three years. We will need these improvements to keep the quality level that attracts members and supports events like Warbirds Over the Glades, 3D Over the Glades, Helis Over the Glades and National Model Aviation Day. Your dues and event participation will help us reach the financial goal to be able to refurbish your runway. Help us do that.

Safety note:
Think first before you wander into the everglades. This July one of our members went into the woods North of the field house to retrieve his plane. Luckily, he brought his phone because he got stuck in mud in one of the gullies and with the extreme summer heat he became too weak to climb out. He was smart and called emergency services to rescue him. In his words, "I was going to die out there". Thanks to quick thinking, he didn't.

Tech-Tip:
I've been flying an e-Flite T-28 with Spektrum AR631 telemetry receiver for a few years and it's become my go to plane. Lately I've been getting a telemetry warning for ESC high temperature. I chalked it up to the hot summer and ignored it. Well, I was wrong. Turns out, an aileron servo had a lot of resistance. That would account for the excess speed controller temperature. The BEC was working overtime. Lesson learned: pay attention to your telemetry if your radio provides the functionality.

Fly Safely
David Spielman
PBRCA Secretary

Gary Hoffman
Chief Safety Officer

If you are new to gasoline RC engines, here is a great article written by aircraft designer, Terry Wiles, which simplifies the process:

VERY IMPORTANT! Read each step and follow exactly and move the sticks exactly as I indicate, there is no slow stick movement when checking the H and L needles. Since both needles work together, slowly throttling up or down will tell you very little when doing your base needle settings.

Don't omit any steps and don't do any steps out of order and IT WILL WORK, follow each step and do exactly as described:

Before starting the tuning process you will need to:

1 - Tune the engine when it is warm, and double check the tune after your first flight. Start the engine and run it for a good few minutes with varied throttle and some full throttle run ups to get it nice and warm.

2 - If you have not done so, adjust the servo travel for a consistent low idle, does not need to be perfect as long as it is as low as it will reliably run for at least 10 seconds or so. **You cannot properly tune the low needle if it is too high!** Once you are done with tuning and after your first flight you will want to double check your low idle and high idle settings.

3 - For smaller engines set the low as low as it will reliably run and you can adjust after tuning.

You will NOT use a high idle setting during tuning as you cannot tell exactly where the low needle is on a high idle. A good low idle should stand still on the ground while idling. An idle up should just make the plane want to roll on the ground.

Now that you have that set up, lets proceed with tuning:

4 – **If you have not done so already, look in the owner's manual for your engine and set your needles according to the settings suggested by the manufacturer.** These are always a suggested starting point; your tune should end up close but will most likely be different slightly. Even if the manufacturer runs the engine before shipping, they likely did not tune it and even more likely the tune will be completely different for your location.

Keep in mind on a new engine you will need to re-tune after several dozen flights as the engine breaks in. You can tell this because the engine will begin to run noticeably richer on the low end. Generally, you can't tell much difference on the high end after break in but always check it as well.

5 - **Tune low needle first.** Now run the engine up to clean it out with a couple full throttle run ups and then go to low idle. **Listen to the engine**....how long does it take to start to "load up" or start to slow down in RPM? If it is rough right away you are likely way to rich.

Remember, on gas carbs adjustments are VERY small, like the width of a screwdriver blade or 1/16th of a turn or less. Making large adjustments can make you go from rich to lean and then you'll be chasing your tail from there out. Small adjustments and sneak up on it.

A good "safe" tuning on the low needle you should be able to clean it out with some run ups, return to idle and it should have a nice steady low idle for at least 15-20 seconds before it starts to load up. If it does this it is still just a "touch" rich but will not die on you and it will run nice and smooth.

6 - **How Low should react**. Now that you have it running, clean out the engine and let it go to idle. Let it sit for 10 seconds or so and then slam the throttle to full, not slow, nail it!! Listen to what it does. If it dies or almost dies, you are too lean. If it stumbles and works its way up (may see smoke in exhaust) you are rich. As tuned in number 5 above, it should run up quickly with very little or no noticeable stumble. Check this several times before proceeding to the H needle.

7 - **Now tune the High needle**. There are several ways to do this with RPM, but you can get in serious trouble tuning a gas engine for maximum RPM and likely end up with dead sticks!!! I do NOT recommend using a tachometer for the tuning process.

The simplest way for a safe needle setting is this. With the engine warm and the low needle tuned run the engine up to full throttle for about 5 seconds. Now chop it in one quick motion to low. Listen to what it does then.

- If it returns exactly to a steady idle, you are very close, you may possibly a touch lean.

- If the idle goes way low and works its way up to a steady idle you are too rich (engine has residual fuel from the top).

- If it stays at a high idle and then slows down you are too lean (engine got hot at the top).

- If it dies you are either way too rich or way too lean. With the H at 1.5 on a 120cc you should not be too lean.

8 - **How should the High react**. Ideally you will have at least some residual when quickly chopping from H to L. So, in other words from a 5 second full run up and chopping to low the RPM should just barely dip and then return to your normal low idle. That's nearly a perfect H tune that allows some residual fuel for high-speed downwind passes and down-lines when the RPM's will pick up. This will also leave a little fuel left in the engine to compensate for atmospheric changes and elevation changes if you fly at various locations.

9 - **When H is set return and double check the L and then double check the H.** Then it's time for a flight. Listen to the engine carefully for all of the noted symptoms while you are flying.

One engine test I do in-flight is for the H needle. Get the engine nice and hot, maybe a high-speed pass or something. Now do a full throttle straight up line. Listen! Engine should be smooth and steady until you can't go higher. If it starts to sag at all, land immediately and richen the H needle just a tad and try it again.

NOTE: This fade can also be caused by overheating not tuning related so make sure your engine is properly baffled. Also make sure you have adequate air exit from the engine and consider a low-pressure lip on the cowl to suck air out. Lack or air exit can cause the cowl to pressurize when effects the carburetor to pump too much fuel and be rich in the air.

There you go, pretty simple and really only takes a few minutes once you get the process down.

Jon Gerber
Chief Training Officer

Seth Sterling
Director

Tricks, Tips, & Odd Bits of Info

First, here's a quote from the supplier of SMC brand Lipos:

Always store the battery between 3.7 to 3.85 V per cell. Never leave a battery fully charged for more than 2 days. Doing so will increase natural cell expansion/swelling and will decrease cycle life."

They also recommend storing them in a safe container and away from heat and humidity, and both SMC and HRB brand Lipos call for not discharging below 3.6-3.7v per cell.

To make a new foam-type airplane's colors shine and stay cleaner, and help keep decals from lifting, try spraying on several light coats of Minwax Polycrylic clear gloss, available at major retailers.

To help keep your transmitter's trim tabs operating properly, especially if they don't get much use, you may want to work each of them periodically, since over time any electrical switch can benefit from having its contacts lose any dirt or corrosion buildup.

Lastly, several pilots using EDF jets with potentially counterfeit EC5 connectors reported difficulty disconnecting the battery after flights, as the blue plastic components fused together despite not being hot.

FEATURE ARTICLES

Hello new pilots! You've just joined PBRCA and want to get some instructions. Maybe you're a little rusty and want to hone your skills or have a plane pre-flight checked or maiden. You may be totally green and need an instructor with a plane to show you the ropes. We have an answer.

Currently PBRCA has four instructors. Three instructors are free to PBRCA members, and one charges a nominal fee after a free 1/2-hour lesson. Jon Gerber, our chief instructor, has been chief instructor for about 3 years.

- Jon has a long history in a few AMA clubs on the east coast.
- Jules Harper is a retired Naval Aviator who has flown upwards of 200 missions. Jules also wrote a book on his adventures flying off aircraft carriers in Vietnam. Jules can supply a variety of student planes while you are deciding on what to purchase for yourself.
- Luis Cadavid is our newest instructor and can train pilots in electric or fuel powered planes. Luis can supply is own plane for buddy boxing or train you on your own plane.
- John Tice is our fourth instructor and a previous club president. John has a variety of planes he uses to train students. John is a paid instructor and offers a free half hour of training prior to your paid lessons.

You can request training directly from any of the four pilots. Contact information can be found on the members only page found on our website. You will need a password to access the members only area of our website.

Fly safe,
David Spielman

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David Spielman <dspielma@gmail.com>
Sat, Aug 16, 2025, at 5:38 PM

Great day at NMAD today everyone! Thanks for coming out and making the event a success. We had a lot of participants at the buddy box's today and one reluctant youngster found it was a lot of fun, so much so that he purchased a raffle ticket for one of the raffle planes and won! I had to persuade both the father and son to try to fly. I worked to assure them that it was ok to join in and that the trainers were waiting for students. The before and after flight attitude was amazingly positive. Expect to see a new trainee at the field soon.

Thanks,
David Spielman

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Mark Stephenson <mark-stephenson@live.com> Tue, Sep 16, 2025 at 3:25 PM To: PBRCA PBRCA <pbrca.info@gmail.com>

Good Afternoon,

As per our last meeting, I use the Android Air Tag to help recover my RC Drone and Aircraft if lost beyond my sight! My wife and I landed a drone in the woods and located within 10 minutes! I have included both Apple and Android cell phone tags in this email, please feel free to contact me with questions.

Lmrbelec Android Tracker Tags
https://a.co/d/iHtMZUP

https://a.co/d/3whLoig

Mark Stephenson, USN (RET)

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I'm sharing a video (linked below) of a recent incident in which an RC airplane unfortunately crashed into a crowd at a local event in California:

Remote-controlled plane crashes into crowd at Watsonville barbecue

Thankfully, it appears no one was seriously injured. Still, this serves as a powerful reminder of how swiftly things can go wrong—even when our intentions are good and our skills are solid.

Why Safety is Non-Negotiable

- Risks Aren't Theoretical: The video clearly shows that even a momentary loss of control or unexpected wind gust can turn a model airplane into a dangerous projectile.
- Responsibility to Others: Whether at club meets, public demonstrations, or casual demos, we share the airspace with fellow hobbyists and spectators. It's on each of us to prioritize everyone's safety.
- Protecting Our Hobby: Accidents, especially in public spaces, can attract attention from media, policymakers, or landowners, and may threaten our access to flying sites in the future.

How We Can Reinforce Safe Practices

1. Pre-Flight Checks: Always inspect your gear—battery levels, control surfaces, transmitter range, failsafe settings—before each flight.

2. Safety Zones: Establish and adhere to well-marked flight lines, spectator boundaries, and pilot stations. If we're flying near crowds or shared spaces, let's enforce these boundaries collectively.
3. Familiarize, Don't Assume: Before introducing new pilots to high-traffic areas or public events, take time for thorough training and controlled practice sessions.
4. Weather Awareness: RC aircraft are highly susceptible to wind, thermals, and turbulence. Monitor forecasts and adjust or reschedule flying tasks when conditions aren't optimal.
5. Safety Briefings: At every event—whether official meets or informal fly-ins—let's have a short briefing to remind everyone of standards and expectations.
6. Report and Reflect: If an incident or near-miss occurs, even if minor, please report it. We can learn from each other and improve club-wide safety together.

No hobby is without risk—but in RC aviation, we have the tools, experience, and community to manage those risks effectively. Let's all recommit to flying smart and looking out for one another, so that our club remains a safe and welcoming place for everyone.

Please share any additional safety tips you practice—or suggestions for improving our processes.

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Think you've seen everything that CA glue can do?

Want to try something different for your non-structural repairs?

Can you think 'out of the box' (of noodles)?

Check out this video and see if you're up for the ramen noodle RC plane repair challenge!

[Ramen instant noodles to 'repair' broken things]

2025 National Model Aviation Day

Quick run-down of the numbers:

With participation from: **Aero Modelers of Perrine (AMPS)**

Thank you, AMPS!!

Pilots: ~27

Buddy Box Flights (adults and youth): ~22.

Buddy boxing plays a vital role in our club's mission. Not only does it offer a valuable opportunity to welcome new members, but it also allows us to share our passion for model aviation with others—an effort that aligns closely with both our values and those of the AMA. As the Academy of Model Aeronautics states: *"The mission of the Academy of Model Aeronautics (AMA) is to promote, develop, educate, advance, and safeguard modeling activities."*

Net intake for charity - Feeding South Florida: $1,600.00

Thanks to all club members who came out in support to fly, donate and/or volunteer.

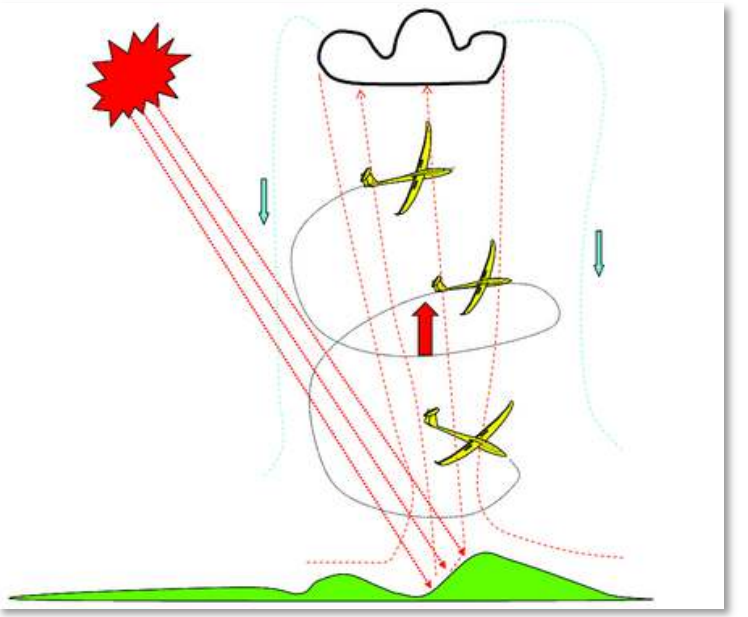
Getting Started in Radio Control Sailplanes

One very popular category for Radio Controlled aircraft is the glider or sailplane. It is also an excellent way to get into the R/C aircraft hobby as it is less expensive and somewhat less complex than powered aircraft. Even though a glider is not powered, it can sustain flight for quite long periods of time, and some glider designs can reach quite high speeds. Many gliders are light and very stable making them an excellent choice for a beginner to learn to fly.

There are three basic ways for a glider to retain or gain altitude once airborne and these are, electric motor, thermal lift and slope lift.

Thermal Soaring

Thermal lift is created by areas of warm air rising from the land. As the land heats up with the warmth of the sun, the air above it will begin to warm by the heat radiating from the land. This is especially true over terrain such as a freshly plowed field or a paved parking area. As the air heats, it will begin to rise and allow cooler air to move in to replace it. This air, in turn, will heat up, rise, and you will get a continuous current of rising air. As long as the air is rising at a rate greater than a glider sinks while in flight, the glider can sustain lift.



Gliders designed for thermal soaring are generally of similar shape with long, slender wings for greater lift and a sleek body for low drag. Many will have wings with polyhedral (a multiple dihedral), and the tail surfaces may take several forms such as a conventional tail, crucifix tail, T-tail, or V-tail. Thermal gliders are generally grouped into four different classes.

Hand Launch The smallest is the hand launch glider with a span up to 1.5 meters (59”). These models are, as the name implies, launched by hand and it is up to the pilot to remain airborne for as long as possible. It would certainly help to have a good throwing arm with these models! Hand Launch is perhaps not the best class with which to start with for the beginner as generally these models are small enough to require miniature radio equipment, which is more expensive than the standard size equipment.

Two Meter The second, and most popular size of glider is the 2-Meter with a wingspan of up to 2 meters (78”). These models will usually accommodate standard radio equipment and require 2 channels of control, the rudder for steering and the elevator for pitch. Many have detachable wing panels for easy transportation and storage. Launching is best accomplished by either electric motor, hi-start or winch as will be discussed later.

Standard Class The third class of sailplane is the standard class with wingspans of up to 100”. These models will accommodate standard radio equipment of 2 to 4 channels, the additional options being flaps and spoilers. Again, launching is best accomplished by either hi-start, electric motor, or winch as discussed later.

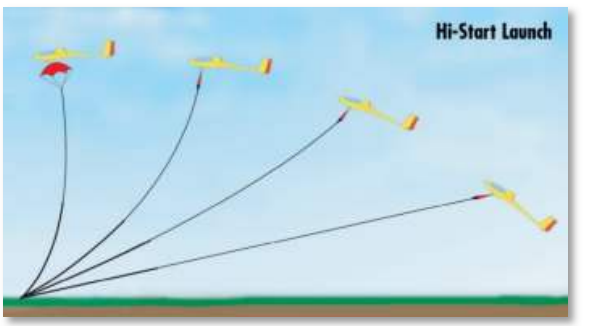
Open Class The fourth and largest size of sailplane is the open class, and this encompasses all gliders including those over 100" span. Again 4 channels of control are the norm, and launching is best accomplished by electric motor or winch as will be discussed later.

Once airborne, if lift is poor or the pilot is unskilled, the glider may only remain aloft for a couple of minutes. But if there is reasonable lift and the thermal pilot has a bit of experience, he should be able to keep his craft aloft for 5, 10, 15 minutes, or as long as there is lift.

Slope/Ridge Soaring

Slope/Ridge lift is generated by a breeze hitting the face of a cliff or sloping land as depicted in the accompanying diagram. As the breeze hits the vertical surface, it has nowhere to go but up. As with thermal soaring, as long as the upward movement of the air is greater than the sink rate of the glider, the craft will remain aloft.
All classes of glider will work well in slope lift although some are suited better than others, depending on the amount of wind. Gliders designed for thermal soaring are better suited to light winds when slope soaring unless they can be ballasted for a higher wing loading.
When there is lots of wind available, take out a glider that is designed specifically for slope soaring for a really exciting time. These craft are usually designed with shorter, swept wings, sleek fuselages, and are extremely fast and agile. Many look like jets, are capable of most aerobatic maneuvers and will sustain flight as long as there's a breeze!

Launching Methods
Launching a glider in slope lift is as simple as tossing the model out over the slope, however, launching for a thermal flight takes a bit more equipment. There are four basic ways of getting a thermal model into flight, a hi-start, a winch, a glow engine power pod, and an electric motor.



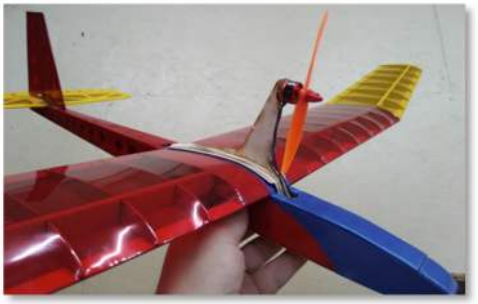
Hi-Start – allowed at PBRCA

The hi-start is basically a very long sling-shot. It consists of a length of surgical tubing (usually 50 to 100 feet) staked to the ground at one end and fastened to about four times as much nylon line (200 to 400 feet) at the other. A parachute/ring assembly on the end of the nylon line is clipped to a hook on the bottom of the glider at approximately the center of gravity. The tubing is stretched to almost four times its length. When the pilot lets go of the model, it will soar at a very steep angle until the tubing has relaxed, and the model is at peak altitude (anywhere from 250 to 400 feet). At that time, the line will drop off the hook and the parachute will guide the line back to the ground. Since launches are always made into the wind, the parachute will carry the line back toward the general location of the launch. The hi-start is an excellent choice for the beginning sailplane pilot.

Winch – allowed at PBRCA

The winch will launch a glider in a manner very similar to that of a hi-start, but the mechanism to accomplish this is much more complex and much more expensive. Generally, winches are homemade and consist of an electric motor, powered by a 12-volt car battery, driving a drum onto which the nylon towline is wound. Again, a parachute is used for retrieval of the line. The motor is operated by a foot switch which is quite often pumped by the operator so as not to overpower smaller gliders. The power of a winch is substantially greater than that of a hi-start and that is why it is more suitable for the larger models found in open class.

Power Pod



The third method of glider launch is by glow engine power assist. This is basically a small engine mounted in a pod atop the center of gravity of the model. It is used to bring the model to altitude and then it is shut off or runs out of fuel. This is a great way for attaining very high altitudes with your model, but gliding performance will suffer with a pod mounted engine due to the extra drag.

Electric Motor

A fourth method, which has become very popular with the advancement in Lipo and NiCd technology, is an electric motor launch. The electric motor is mounted in the nose of the aircraft and will quite often have a folding prop which will fold back against the fuselage to reduce drag when the motor run has completed. If a separate motor control is utilized, the motor may be turned on and off during flight to regain altitude if lift is poor. The disadvantage of the electric motor launch is that the extra weight of the battery will increase wing loading and reduce the glide ratio.

What You Will Need

The Glider

Just as with powered aircraft, there are some glider kits that are better suited to the beginner than others. A good choice would be something in the 2-meter class requiring only 2 channels of control, a kit with a sturdy construction, and good building instructions. This type of aircraft is recommended regardless of whether you plan to thermal or slope soar. Models designed specifically for slope soaring are quite a bit faster and not as conducive to learning to fly. Save one of these for your second model.

As with powered aircraft, you have the choice of building a model completely or just doing the final assembly of an Almost-Ready to- Fly (ARF) kit. Your choice should simply be driven by your desire to build. There are a few additional items you are bound to need to complete your model, but the list is much shorter than that required to finish most powered aircraft.

The Radio

Along with your sailplane, you will need a radio to control it. Since many sailplanes have only two moveable control surfaces (rudder & elevator) you can often get away with a simple, inexpensive 2-channel system. Although your first glider will most likely only need two channels of operation, you may wish to opt for buying a four+ channel system. If you recharge before you go flying each time, you will know the condition of the batteries and won't end up with radio malfunction due to dead batteries mid-flight not pretty.

One thing you may want to look for when buying your first radio is buddy box capability. The buddy box is where two radio transmitters may be connected together through a cable or wireless, the instructor holding one and the student holding the other. The student can have control over the model as long as the instructor holds a trainer switch on his transmitter. If the student gets into trouble, the instructor releases the switch and regains full control of the model. This can greatly decrease the learning time and also be good insurance against accidents with the novice pilot.

Tips for Storing RC Planes

Here are practical, up-to-date tips for storing RC planes, drawn from community discussions and guides from 2023-2025. These focus on protecting models from damage, dust, and moisture while maximizing space, preventing "hangar rash" and extend plane longevity.

General Organization and Space-Saving Tips

Use Adjustable Shelf Racks: Opt for systems like Rubbermaid Tough Stuff tracks with brackets for flexible storage. They allow high-density packing (e.g., 10+ planes in a small footprint) and easy reconfiguration as your fleet changes. Print custom nylon adapters for PVC shelves to cut costs but avoid heavy loads to prevent sagging.

PVC Pipe Racks for Versatility: Build freestanding or wall-mounted PVC racks (e.g., based on Andy Graber's DIY design) for cheap, customizable storage. Cut pipes to fit wingspans, add foam insulation for padding, and stack smaller planes (like flying wings) under larger ones. Great for garages with varying model sizes.

Ceiling or Wall Hangers: Hang planes using 3D-printed hooks (free STLs on Thingiverse) or metal rods with foam padding (e.g., pool noodles or 16-gauge wire strung across ceilings). Angle hooks 45° for easier installation and prop planes nose-up to avoid prop warping. Ideal for basements or high-ceiling club sheds.

Freestanding Stands for Larger Models: For balsa or 67-inch spans, use Home Depot shelving braces or IKEA table legs as props. Position high enough to walk underneath and add paracord with 3M strips for secure hanging without drilling.

Protection and Maintenance Tips

Breathable Covers and Dust Shields: Cover planes with lightweight, moisture-permeable fabric bags to block dust while allowing airflow—avoid plastic that traps humidity. Label covers by model for quick access, and store in cool, dry areas (50-70°F) away from direct sunlight to prevent glue degradation.

Padding and Separation: Always use foam (from packaging or dollar-store noodles) between contact points to avoid scratches or dents. For foamies, tuck in corners or prop nose-down on gear; for fueled models, store nose-up to drain residual oil from engines.

Custom 3D-Printed Solutions: For prized planes, design tail-cone holders, or magnetic cradles (e.g., for EDF jets) to stack vertically without floor space. Limit to 1-2 per setup, as scaling up is time intensive.

DIY Wooden Stands: Construct simple pine stands with nylon straps for a concave hold, inspired by Model Airplane News plans. Add locking hinges for stability and extra dowels for accessories—perfect for lightweight trainers like the Sig Kadet.

Product/System	Date	Key Features	Best For
Banana Hobby RC Airplane Storage Rack (33.5")	Nov 2023	Modular PVC with foam padding; holds 5-7 planes upright.	Beginners with small fleets; easy assembly under $50.
EDF Tail Cones (3D-Printed)	Oct 2023	Custom-fit for jets; stackable on shelves.	EDF enthusiasts; super affordable DIY.
Adjustable Garage Hooks with Pool Noodles	Jun 2024	Wall-mounted; customizable spacing.	Wall space optimization in garages.

These tips come from enthusiast communities like Reddit's r/RCPlanes and Facebook groups, plus hobby sites— all post-2023 for freshness.

Understanding RC Electronic Speed Controller: What Is It and How Does It Work?

Kyle Hilson – 2024

Written from the perspective of RC cars, but still applicable and adapted to all ESCs including Aircraft ESCs.

When it comes to the diverse field of RC (remote control) vehicle/airplanes, including airplanes, there's a little magic wand, a secret puppeteer if you will, that often doesn't get its due: the electronic speed controller, or ESC. Think of it as the backstage director, controlling and regulating the speed of your electric motor, thus deciding how your RC vehicle/airplane performs. It's not just vital – it's pivotal. In fact, research indicates that over half the control functionality of your RC vehicle/airplane – yup, you read that right, 50% of it – is attributed to this unsung hero, the ESC. So, there's no overstating its role – much like getting the right actor for a crucial role in a movie, getting the right ESC can drastically alter your RC vehicle/airplane's performance. Understanding its role, its functioning, and how to choose the right one, is like understanding the pulse of your RC vehicle/airplane.

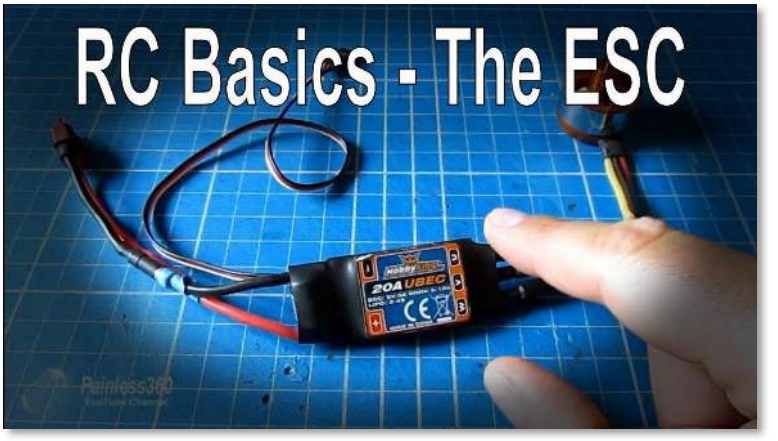
Understanding the Inner Workings of an RC Electronic Speed Controller

Unraveling the mystery of what is an RC electronic speed controller can be fascinating. Dismantling the intricacies, an ESC, at its core, is backed by three crucial components, namely the microcontroller, the power stage, and the communication interface. The microcontroller, often compared to the brain of the ESC, sends out commands to the motor according to the input it receives from the user's transmitter. This bartender-like tradeoff between the microcontroller and motor is where the magic of speed control happens.

The power stage or the 'brawn' of the ESC, meanwhile, is responsible for supplying the motor with the power it needs, taking its cue from the microcontroller. The power stage pulses high voltages and currents to the motor, manifesting itself as varying speeds.

Lastly, the communication interface receives the signals from your RC transmitter and passes it on to the microcontroller. You can compare it to a translator - decoding your commands into a language that the microcontroller understands. So, every time you rev up your RC car or advance the throttle on your Apprentice, remember that the interpreter has been hard at work.

These three parts working together are like an exquisite symphony conducted by the ESC, allowing your RC vehicle/airplane to perform stag leaps or meander through obstacles with finesse. As with any orchestrated performance, the synchronization and harmony between these parts are key to a well-functioning ESC. Just imagine being the conductor of your very own, incredibly fun, RC vehicle/airplane orchestra!



What are the three crucial components of an RC electronic speed controller?

So, you're keen on learning about the heart of your RC model's performance – the electronic speed controller, fascinating stuff! Let's dive right into it. The key components you need to remember are, first and foremost, the microcontroller. Picture it as the brain of the operation, directing actions based on the input it receives. Secondly, you join the party with the power transistor. This guy controls the power supply to the motor, adjusting its speed. Finally, there's the oscillator. The unsung hero, it offers reference signals to the controller – kind of like a heart's rhythm. With these three components, your RC model has the spine of its performance, helping maneuver your RC model with precision and prowess. Great to see your interest in this, keep that curiosity alive!

Types of RC Electronic Speed Controllers

Digging into the world of RC Electronic Speed Controllers, it's clear that there are several types to choose from, each offering a range of features that cater to specific needs.

- The first type is the brushed ESC, which typically are less expensive and simpler to install. These are perfect for those just starting out in the RC realm.
- Second, we have many variations of the brushless ESC. These are more complex, offering a longer lifespan and a more efficient power use – a feature loved by the serious RC vehicle/airplane enthusiasts.

Online platforms like HobbyKing and Horizon Hobby offer an extensive range of ESCs, providing a wealth of information including their specifications and applications. This allows RC hobbyists to make confident and informed decisions when choosing the right controller.

Say, for instance, you are looking at the Castle Creations Sidewinder Micro ESC. You would notice that it is rated at 2-3s LiPo (a measure of voltage), has multiple programming options, and is small in size, adding minimal weight to your RC vehicle/airplane.

Understanding what is RC electronic speed controller and the options available to you plays a pivotal role in shaping your RC vehicle/airplane experience. By investing time in learning about the types of ESCs and their features, you'll be one step closer to maximizing the performance and control of your RC vehicle/airplane!

Where can I find information about the specifications and applications of different types of RC Electronic Speed Controllers?

Well, sourcing information about different types of RC Electronic Speed Controllers is a piece of cake for the tech-savvy enthusiasts amongst us. You can unpack the world of this distinct and complex RC technology on hobbyist websites, forums, and online stores that specialize in RC vehicle/airplanes and components. Websites like HobbyKing or RCGroups forums overflow with experts and hobbyists sharing their wisdom and experiences.

Also, don't skip out on manufacturers' websites, they usually provide exhaustive spec sheets and application guides for their range of products. That said, there's nothing quite like delving into the depth of a YouTube tutorial. Plenty of experienced users post helpful step-by-step videos, sharing practical tips for using and understanding these intricate devices, so you can navigate your own RC journey with confidence.

It's a quest, no doubt, but remember – the RC community is full of people just like you, who were once where you are now. So don't be shy and feel free to ask your questions, engage in threads and join discussions. We've all been there, mate, and it's that shared passion that brings the RC world together. Happy exploring!

Key Factors to Consider for Your RC Electronic Speed Controller

When it comes to making the critical choice of what is an RC electronic speed controller for your hobby vehicle/airplane, there are several factors you need to take into account. First and foremost, focus on the continuous current rating. As the name suggests, it's the maximum current that the ESC can handle continuously without overheating. Ideally, opt for an ESC with a slightly higher rating than your vehicle/airplane's motor, to avoid any potential burnouts.

Next up, consider the voltage. Your ESC voltage needs to match the voltage of your battery, ensuring a seamless power supply to the motor. Here, using websites like RCGroups can help you find out what voltage is appropriate for your specific RC vehicle/airplane.

Don't overlook compatibility either. Remember, not all ESCs are going to be compatible with every motor. It's crucial to check if the ESC you're looking at fits your motor type, be it brushed or brushless. A quick visit to HobbyKing or similar RC enthusiast websites can be invaluable in determining compatibility.

Brand is yet another crucial factor. As with any technology, there are brands that are trusted by the RC community due to their reputation for quality products and customer support. Brands like Castle Creations often come highly recommended.

Last but not least, there's the question of cost. It's essential to strike a balance between affordability and quality, ensuring you're getting a product that's both reliable yet won't break the bank. Keep in mind that investing in a good ESC from the get-go can save you money in the long run, preventing expensive motor replacements.

- Continuous Current Rating
- Voltage
- Compatibility
- Brand
- Cost

Taking these considerations into account when selecting your ESC will ensure that you're well-equipped for hours of smooth and enjoyable RC vehicle/airplane operation.

What are the trusted brands for RC electronic speed controllers?

So, you're delving into the world of RC electronic speed controllers, huh? Well, you're in luck. As an RC enthusiast, I've been in your shoes—looking for the trusted brands that can make or break your RC experience. It's no easy task, but don't sweat it; let me guide you through it. You might want to consider brands like Castle Creations. These guys are well-respected for their excellent build and reliability. Another fascinating brand to check out is Traxxas, well known for its user-friendly components that are perfect for both beginners and pros. Let's not forget Hobbywing, a brand that's been steadily gaining ground because of its top-quality speed controllers and, of course, we have Tekin, a big player in the RC world known for its superior performance and cutting-edge

designs. Each of these brands have their unique strengths but are united by their commitment to quality and performance, which is exactly what you need for that smooth and enjoyable RC experience!

Breaking Barriers: The Evolution of RC Electronic Speed Controllers

Incredible advancements and innovations are reshaping what we know about RC electronic speed controllers (ESCs). We're witnessing the dawn of a new era where the tech features of these ingenious devices are revolutionizing the RC vehicle/airplane experience. One such product leading the charge is the Castle Creations 010-0155-00 Mamba Monster X 8S. This ESC is raising the bar with its impressive durability and revolutionary features, making it a game changer in the RC world. It's as if we're standing on the shoulders of giants, reaching new heights in the evolution of ESC technology.

Another great leap forward is the rise of smart ESCs. For instance, Hobbywing, a popular brand in the domain, is known for their EZRun Max8 V3 ESC. It stands out with an in-built electronic switch, capacitors, and a robust BEC (Battery Eliminator Circuit) system. The switch increases the ESC's lifespan while the capacitors enhance its performance, providing steady voltage even at high speeds.

Moreover, sites like Horizon Hobby host a variety of innovative ESCs equipped with high-performance software. This provides users with unprecedented control over RC vehicle/airplane speed, leading to an enhanced driving or flying experience. Indeed, the leaps in innovation and technology are changing the game in terms of what an RC electronic speed controller can do. These exciting strides forward are paving the way for even more refined and efficient RC vehicle/airplane control, painting a promising picture for the future of RC tech.

What are some features of smart ESCs and how do they enhance the RC vehicle/airplane experience?

OK, let's dive straight into this! Smart ESCs (Electronic Speed Controllers) ramp up the excitement for all RC (radio controlled) vehicle/airplane lovers, like you and me. They're like the heart and soul of our lovable RC vehicle/airplanes. These bad boys manage the nifty dance between the battery and the motor, deciding how much power goes to those roaring engines.

Talking about their features, well, these hi-tech devices are evolutionary! They're endowed with telemetry capability, which is a game changer. Telemetry opens a window into the inner workings of your RC vehicle/airplane, providing live data on battery voltage, RPM, temperature and more. This feeds you with invaluable insights to optimize performance and prevent any unfortunate "under the hood" incidents.

Who hasn't been unsure about their battery life while driving an RC car or flying an airplane? Well, the smart ESCs with their real-time battery voltage readings are here to the rescue. No more guesswork, you know when it's time to head in and re-juice! And let's not forget about the thermal overload protection. This feature ensures your motor doesn't overheat. It's like having your own pit crew monitoring your car's health, giving you that much-needed peace of mind.

In essence, these smart ESCs just make the whole RC experience smoother, safer, and more enjoyable. You get to unlock the full potential of your vehicle/airplane, squeeze every inch of performance, and play with confidence knowing that you're well-equipped to prevent any surprises. Now, isn't that worth a shot? RC hobbyists, it's time to embrace this nerdy tech and elevate your fun to brand new heights!

Understanding RC Electronic Speed Controllers

In summarizing the importance of an Electronic Speed Controller (ESC) in Remote Control (RC) vehicle/airplanes, the critical role of an ESC cannot be overemphasized. It's not just about its contribution to over 50% of the functions within any RC setup, but also how it allows users to precisely control the speed, balance, and direction of their RC vehicle/airplanes. When you consider 'what is an RC electronic speed controller,' it's essentially the 'conductor' managing the 'orchestra' that is your vehicle/airplane, ensuring everything runs harmoniously.

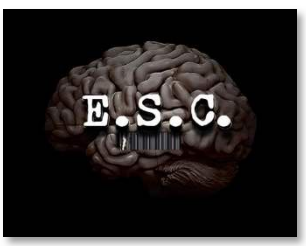
The difference between various types of ESCs further paints a picture of their individual relevance. You have options like brushed and brushless types that accommodate varying motor requirements. Brands like Horizon Hobby and HobbyKing offer numerous choices, each with different sizes and specifications, catering to diverse needs. More importantly, picking the *right* ESC according to factors like current rating, voltage, compatibility, brand, and cost can literally 'drive' the performance of your RC vehicle/airplane, proving just how crucial the ESC is.

Recent advancements and innovations have ensured that products like the Castle Creations 010-0155-00 Mamba Monster X 8S stay on top, incorporating revolutionary tech features and improved durability. Such products exemplify how far the realm of ESCs has evolved and continues to evolve, much like standing on the shoulders of giants. Ultimately, the exploration of ESCs is a fascinating journey, promising to make your RC vehicle/airplane experience significantly better if you make the right choice.

What factors should be considered when choosing an electronic speed controller for an RC vehicle/airplane?
When diving into the wide world of RC vehicle/airplanes, the choice of an electronic speed controller (ESC) is a crucial factor that could make or break your experience. First off, you've got to consider the type of motor you are using – brushed or brushless, as this determines your ESC type. ESCs are not universal. Trust me, it's like putting diesel in a petrol car. Simply disastrous!

Next up, consider the continuous and burst ratings of current. Your ESC should be able to handle the maximum current your motor can draw. 'Go big or stay home' doesn't really work here folks, an ESC with much higher current ratings than your motor could lead to control issues.

You should also consider the voltage. Select an ESC that can handle the voltage from your battery pack. Under-voltage can leave you stranded, while over-voltage won't do your RC's electronics any favors.
Lastly, consider the additional features: multiple running modes, programmable brake types, motor timing or even thermal protection. These are like the cherry on the cake, not always necessary, but definitely add some flavor to your RC experience.



Remember, the ESC is like the brain of your RC. It controls the speed, braking, and direction. Choose wisely because a happy ESC equals a happy RC vehicle/airplane. It could seem like a maze but with the right approach, picking the perfect ESC can be as fun as cruising your RC vehicle/airplane itself.

And so, dear reader, by plunging into this fascinating world of RC vehicle/airplanes, with a keen understanding of 'what is RC electronic speed controller', you have taken your first steps towards mastering this adventurous hobby. Remember, an ESC is not just a component, but the brain of your remote controller – directing power, maintaining balance, and navigating your RC vehicle/airplane just the way you want it to. Before you get behind the wheel of your RC vehicle/airplane, ensuring you have the perfect ESC armed is the best way to enhance your driving experience. And with the constant innovations emerging in ESC tech, the options are only getting more exciting.

So, buckle up, tune into the thrill of RC flying, and let the adrenaline rush sweep you off your feet. Kindest wishes and happy flying!

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.

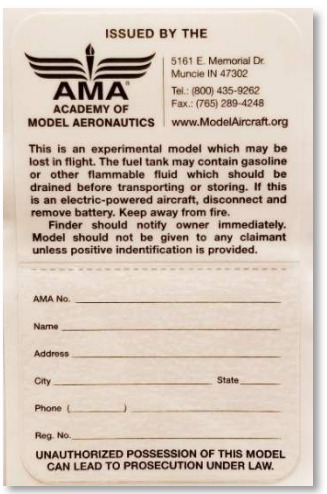
TRUST was developed in collaboration with drone stakeholders to determine content, and how it would be administered. Since June 2021, we have worked with a group of approved Test Administrators to provide TRUST as an online test. We in the FAA provide the TRUST content to the approved test administrators 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 10/1/2025

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 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 card unless you have a current AMA membership card. The Club Membership form 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.

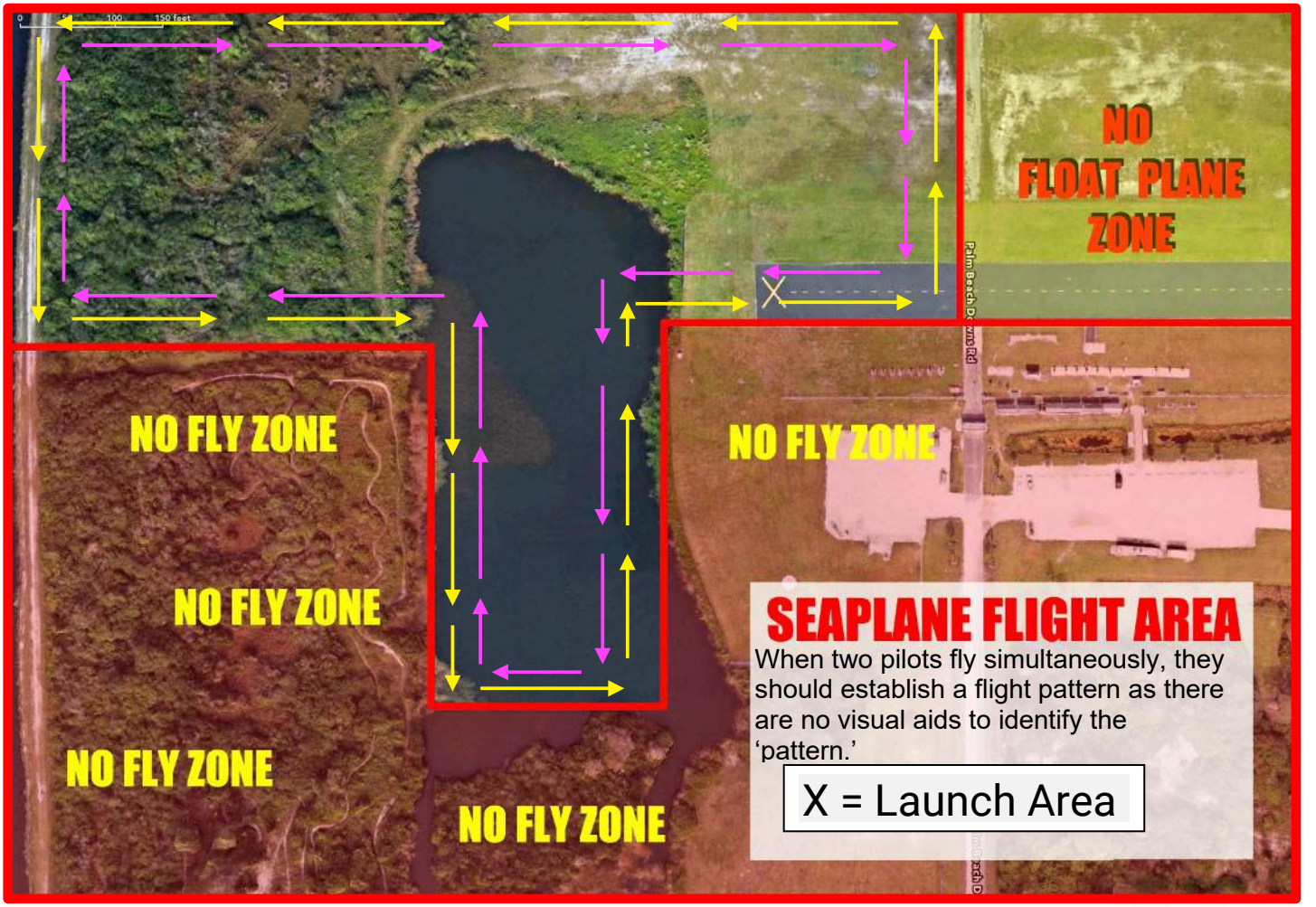
FAA sUAS REGISTRATION

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



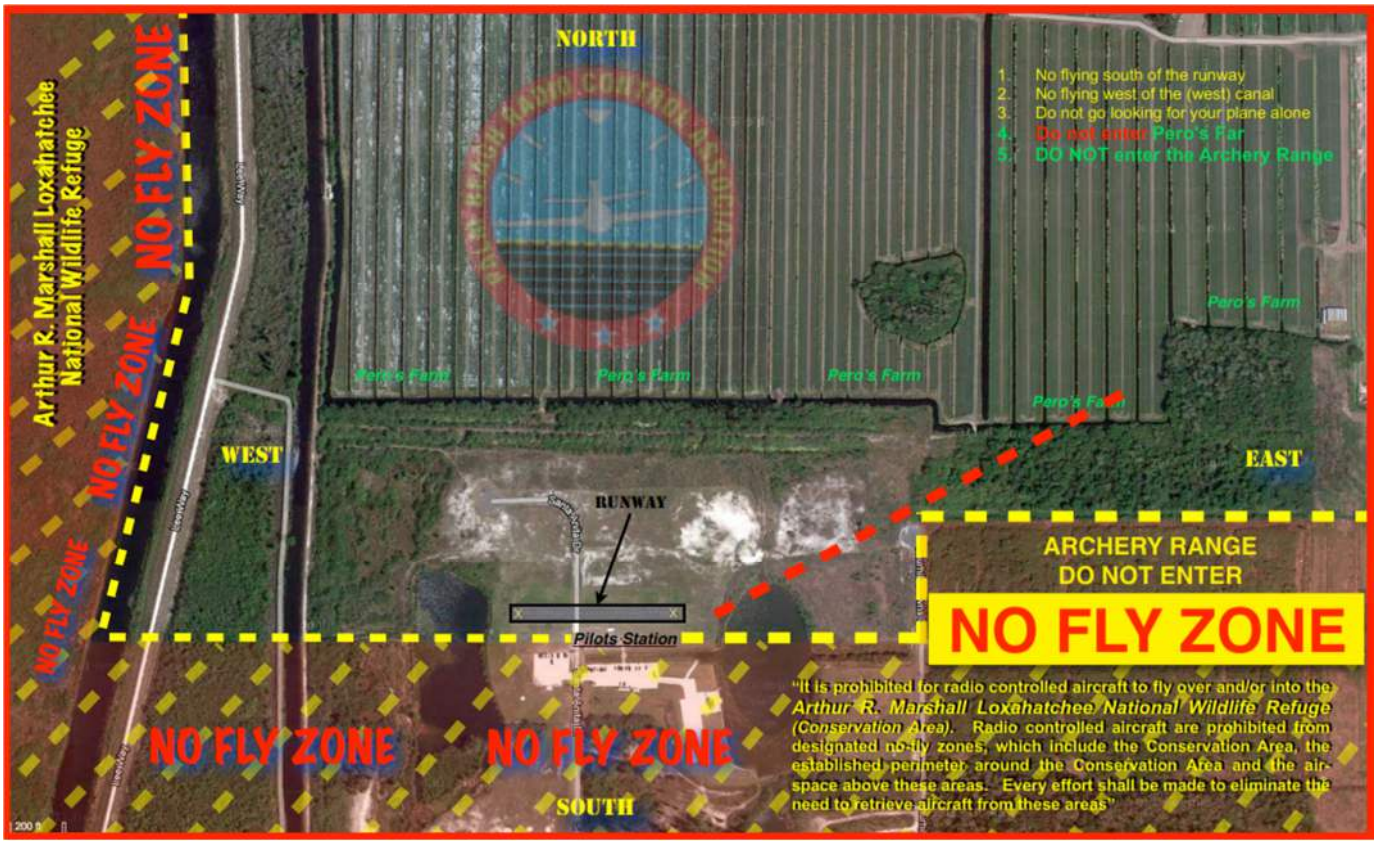
changes and additions are now incorporated into our Safety Rules.

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/