Tri City Radio Control Modelers

AMA FRIA

5001 Beardsley Rd.
Richland Wa

TCRCM Leading Edge

April 2026

2026 Officers

President:
Gary Grosso
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VP/Web Admin:
Dave Holland

Secretary/Newsletter:
Camille Page
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Treasurer: John Patton

Safety Officer:
John Pulsipher

Comm. Liaison:
Scott Page

Field Marshall:
OJ Brooks

Lead Instructor:
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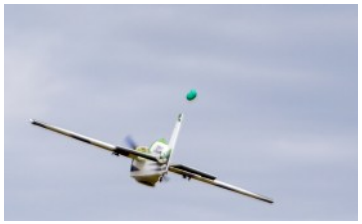
Calendar of Events



- April 11, 2026, 10:00 Annual **Egg Drop Fun Fly** for TCRCM bragging rights (Saturday after Easter)
- Beginning Wednesday, April 15, 7:00 club meeting at the field. **Night Flying** is planned after each club meeting at the field.
- April 23 First rtegular **Float Flying** will be held each Thursday at Wye Park. Time may be adjusted according to weather forecast. **Email tri.city.rc.modelers@gmail.com to be added to the float fly contact list**
- May 2, 2026, **Takeoff And Grow** (Learn to Fly) We will need all hands on deck!
- May 16-17, 2026, NSRCA **Pattern Contest**
- June 20, **Parachute Drop** Fun Fly, 10:00
- July 18, **Touch and Go** Fun Fly, 10:00
- August 22, National RC **Model Aviation Day Fun Fly**, 10:00
- September 26, **Climb and Glide** Fun Fly, 10:00

From the editor:

What is this hobby to you?

For many of us, RC airplanes are more than just machines—they're a reason to connect. While the thrill of flight keeps us coming back, it's the people we share the field with who give the hobby its real meaning. This is an experience that crosses generations, bringing together family, friends, and fellow enthusiasts in a way few hobbies can.

One of the best ways to deepen that experience is by investing in those relationships. With the technology at our fingertips, it's easier than ever. You can check the field webcam to see who's flying, post in the club's Facebook group before heading out, or send a quick message to invite others along. What might have been a solo outing can quickly turn into a shared experience.

And remember—even on days when you're not flying, you're always welcome. Come out, watch, visit, and enjoy the camaraderie. Share your knowledge, your stories, and your passion. That's what strengthens the club and keeps it thriving. Maybe even mention us in your will.

In the end, it's not just about the airplanes—it's about the people.

Message from the President

Dear TCRCM Members,

Spring is here, temperatures are climbing, and the flying weather is improving by the day. If we could just dial back the wind a notch, it would be just about perfect.

We've got some great news to kick things off—the lease with the city has been officially renewed for another three years. That's a big win for the club and gives us a solid runway and a great facility for the seasons ahead.

April is shaping up to be a busy and exciting month. The Egg Drop is set for April 11th at 10 a.m.—always a fun event and a great way to launch the season. Night Flying follows after the club meeting at the field on the 15th, and then on the 23rd we'll kick off Float Flying with an early afternoon start at 2:00. If you'd like updates and confirmation for float flying, be sure to get on the notification list by emailing the newsletter editor at mailto:tri.city.rc.modelers@gmail.com

Looking ahead, the Pattern Contest is coming up May 16th and 17th. Lyle has generously offered to help first-timers at no cost to members. It's a fantastic opportunity to try something new, sharpen your skills, and challenge yourself in a different style of flying.

Don't forget to check out the webcam and weather station on our website—it's a great tool for planning your time at the field.

I remain committed to strengthening our club—our facilities, our camaraderie, and our presence in the region. The progress we've made is a direct reflection of members stepping up, supporting each other, and working together.

Let's keep the momentum going, continue to respect one another, and make this another outstanding season for TCRCM.

With appreciation,
Gary Grosso
president@tcrcm.com

Minutes from March 18 Club Mtg.

1.Membership: Currently 44 members, 17 present at the club meeting plus one guest. Our three newest members were introduced, Donn S., Paul M., and Richard M. Welcome!

2. Financial: Treasurer John Patton explained that we probably have enough money to start repairs on two of the irrigation issues. Our annual field expenses and fees run about $5000, and money is encumbered for geotextile replacement/repair. **That still leaves us about $15,000 short for repairing the pump VFD**.

3. So far, grants have not born fruit. There will not be a grant available from the City of Richland, but they may be able to help with the labor for repairs of valves. TBD.

4. Safety: John Pulsipher, our new safety officer, reminded us to fly with a buddy. Also, go out into the desert with a buddy to retrieve a downed plane.

5. Irrigation: Potable water will be turned on this coming weekend. The main irrigation water will be turned on around April 1.

6. Field maintenance: Please toss errant tumbleweeds over the fence. O.J. welcomes volunteers to help with mowing, field cleanup, etc. People can volunteer at https://tcrcm.com/flying-site/field-maintenance/.

7. Calendar: Egg Drop- **April 11,** 10:00. Lyle and Dave are the event coordinators.
April 23 and 30- soft opening for Float Flying, 2:00 p.m. at Wye Park (same place as last year).

May 2- TAG- Takeoff And Grow- we need all hands on deck!
May 7- Regular float flying at Wye Park on Thursdays, 9:00. As weather warms, beginning time will be adjusted.

8. Next Meeting: **April 15**- BOD meeting 6:00, Club meeting 7:00 AT THE FIELD. Night flying follows.

9. Sharing- Scott showed an ESR meter and offered to help club members check their batteries. He also demonstrated a wireless flight simulator.
Dave shared his using Velcro thin tape on very small batteries, suggested the RCPlaneLab podcast (available on Spotify), and mentioned Dumas Products is closing down. Grayson Hobbies will be mail-order only, B&B Hobbies in Spokane will be closing down June 26, 2026 if not sooner.

10. O.J. Brooks was the winner of the drawing for an RCBattery.com prize.

Rules for the Egg Drop Contest

Saturday, April 11, 10:00 am. Yes, the Saturday after Easter.

- The contest will consist of three rounds.
- Pilots will drop, bump, or toss plastic eggs one at a time onto the field. Fixed wing aircraft only.
- The landing area features three painted circles, each with different point values.
- A minimum of one point will be awarded for any egg landing outside the circles but within the designated landing area.

The pilot with the highest total score at the end of all rounds wins—along with ultimate bragging rights!

Exciting News: TCRCM Launches Weekly Float Flying Sessions at Wye Park! By Scott Page

Spring is in the air, and so are our RC planes—literally! We're thrilled to announce the start of our weekly float flying gatherings at Wye Park on Columbia Park Trail. Our flying area (FRIA) is located between the south bank of the Columbia River and Bateman Island. Officially beginning **Thursday, April 23**, we'll be hitting the water most every Thursday for some exhilarating float flying action. This is your chance to dive into one of the most rewarding aspects of RC aviation right here in the Tri-Cities!

How It Works

To ensure everything runs smoothly and safely, we'll send out a confirmation email every **Tuesday** throughout the season. This update will **verify that we have a rescue boat on standby** (just in case of any unexpected splashes) and that the **weather forecast looks promising for float flying**. Mother Nature can be unpredictable, but we'll keep you in the loop so you can plan accordingly. To be added to this email list, send a request to tri.city.rc.modelers@gmail.com. Sessions will kick off in the afternoon in Aripl and when it's warmer we'll transition to morning session ending by lunch. Exact times will be included in the weekly email.

Why Float Flying?

Boost Your Skills with Less Stress

If you've been sticking to land-based flying, float flying is a game-changer! It's a fantastic way to sharpen your piloting proficiency in a low-pressure environment. Imagine perfecting your takeoffs and landings on the forgiving surface of the Columbia River—no more worrying about cross wind or narrow runways, because your runway is the river. The water absorbs those "oops" moments, reducing the stress associated with tricky landings and helping you build confidence faster. Whether you're a seasoned pro or just getting your wings, float flying offers a relaxed yet challenging path to mastery.

Of course, preparation is key. Beyond equipping your RC plane with floats, we recommend ensuring your Electronic Speed Controller (ESC) is waterproofed or specifically designed for wet environments. This simple step helps protect your ESC from splashes and keeps the fun going without interruptions. Electric brushless motors run fine when wet. Receivers are best protected from a thorough dousing and servos are fairly tolerant. ESC's will fail with a tiny bit of water unless waterproofed. I dunk my ESC's in corosionX and then wipe off the

excess and am willing to do the same for any prospective water dog. Of course landing right side up and staying that way is the best preventative.

The Social Side:
Fun, Friends, and Front-Row Wildlife Views

At TCRCM, float flying isn't just about the flights—it's about the fellowship! These Thursday sessions are all about gathering for good times, sharing tips, and enjoying the camaraderie of fellow RC enthusiasts. Laugh over near-misses, celebrate epic loops, and swap stories. And the best part? **Any AMA member is welcome to join**, regardless of your local club affiliation. We're all about inclusivity and growing our community—whether you're from the Tri-Cities, Yakima, Walla Walla, up north, or just passing through, come on down!

Plus, Wye Park isn't just a prime FRIA (FAA-Recognized Identification Area)—one of only four float flying FRIAs in the nation—it's a front-row seat to nature's show. We frequently spot osprey and eagles soaring overhead, otters playing in the water, deer on the island, mink on the shore, and herons, pelicans, and water foul wading nearby. It's like having courtside seats for surprise wildlife viewing, adding an extra layer of magic to every outing.

Ready to Make a Splash?

Mark your calendars for May 7th and keep an eye on your inbox for those Tuesday confirmations if you so request. If you're new to float flying or need advice on setups, reach out to us at TCRCM—we're here to help. Follow us on Facebook for updates, photos from past floats, and more RC inspiration.

Let's make this season unforgettable on the Columbia River. See you at Wye Park!

Aviation First Steps

Your TCRCM BOD in the community

Aviation came alive for local homeschool students on March 6, 2026, when members of the Tri-Cities Radio Control Modelers club teamed up with a nonprofit aviation outreach group to bring the science of flight directly into the classroom. Four members of the Tri-Cities Radio Control Modelers (TCRCM) of Richland, Washington joined Steve and Diane Lambert of Aviation First Steps, a nonprofit dedicated to introducing young people to aviation, to visit the Mid-Columbia Partnership homeschool co-op.

The presentation introduced students to the principles of flight and the excitement of aviation through radio-controlled model aircraft. The TCRCM team included four club members, three of whom are Academy of Model Aeronautics (AMA) Introductory Pilots—volunteers trained to provide safe first-flight experiences for new participants. Working together with Aviation First Steps, the group provided students with an engaging introduction to aerodynamics, model aviation, and the many paths that can lead to aviation careers. Th e program began with a slideshow presented by TCRCM Vice President Dave Holland. The presentation covered the principles of flight—how airplanes generate lift, stay stable in the air, and are controlled by the pilot. The presentation set the stage for a series of hands-on learning activities. Camille Page demonstrated the use of an RC transmitter and buddy-box using an AeroScout from the club's instructional program.

Students participated in pairs rotating through five discovery stations designed to explore aviation concepts in an engaging way. At the flight simulator station, Scott Page helped students experience the basics of flying using a computer simulator. At another station, Diane Lambert demonstrated "human radio transmitters," illustrating how radio control signals travel from a transmitter to a model aircraft.

At the balsa airplane station students experimented with small gliders and observed how changing flap positions affects flight performance. Lyle Laughery helped students try flying small RC helicopters while learning the control inputs needed to keep them stable.

Finally, Steve Lambert led an experiment showing how radio signals behave when passing through different materials, helping students understand the technology that makes RC flying possible.

Students left with brochures and handouts from the AMA and TCRCM, along with a new appreciation for the science behind flight. The event blended science, technology, and hands-on discovery, giving students a memorable introduction to aviation while allowing club members to share their hobby and inspire the next generation of flyers.

Recruiting With Magazines

Promote the RC Hobby in your neighborhood

If you've been around RC pilots for more than five minutes, you've probably noticed a curious phenomenon: stacks—no, *towers*—of Academy of Model Aeronautics *Model Aviation* magazines quietly colonizing homes, shops, and hangars. They appear in neat piles, chaotic piles, and the occasional "structural support column" pile.

These magazines are not just reading material—they're a lifestyle. They hold wisdom, inspiration, and just enough nostalgia to make you say, "I might need that article from 1997 someday." Some pilots have even been spotted relocating entire *crates* of magazines during a move, as if they were priceless artifacts. Historians may one day refer to this as *The Great Magazine Migration.*

But let's face it—there comes a point when your collection begins to look less like a library and more like a mild hoarding situation. Throwing them out feels wrong (borderline sacrilegious), so what's a conscientious pilot to do?

We've got a solution that's both noble and slightly mischievous: **set the magazines free into the wild.**

Last month, Scott stumbled across a brilliant idea in a recent issue of *Model Aviation*. We grabbed a couple of magazines, taped

our club business cards—complete with flight training info—to the front, and deployed them into neighborhood Little Free Libraries. That's right, we turned unsuspecting book nooks into recruitment stations for future pilots.

Now it's your turn.

Pick up some pre-printed business cards from Scott, grab a few magazines from your "archive" (or "leaning tower"), tape, and start distributing. Little libraries are just the beginning—consider other prime locations where curious minds gather:

- Waiting rooms (nothing says "take up a hobby" like a 20-minute delay)
- Schools and community centers
- Clubs and coffee shops
- Bus stops
- And yes… even the offices of proctologists and denturists (captive audiences are the best audiences)

Somewhere out there is a future pilot who doesn't yet know they need balsa dust in their life. Your gently "pre-loved" magazine could be the spark.

I challenge YOU!

So go ahead—**I challenge you**- declutter with purpose. Spread the joy. Recruit the next generation. And most importantly, create just enough space on your shelf… to start stacking again.

Parallel Charging by R. Scott Page

Charge multiple batteries from a single charger port

What is parallel charging? Parallel charging involves the use a charging board that allows you to charge multiple batteries with a single charger in the same amount of time that you can charge a single battery. Depending upon the parallel board you can charge either 4 or 6 identical batteries at a time. savings of time and hassle is a no brainer, but parallel charging is not all rainbows and unicorns.

Parallel charging done incorrectly can result in a disastrous fire. If you follow one single safety rule you take the risk out of parallel charging. Specifically; **Only charge identical batteries** using the parallel method. Do that and you're good. Broken down that single rule goes like this. It's **critical** that all batteries in parallel have the same cell count – absolutely critical, this is the most important thing. It's **critical** that all batteries have both main leads and balance connectors connected to the balance board. It's **important** that all of the batteries have similar capacity (mAh). It's **recommended** that all batteries have similar resistance and state of charge, so don't charge old worn or puffy batteries parallel with new batteries.

Invariably people want to know how far they can stray from the primary rule, and some variance is possible. "Can I charge an 1800mah battery in parallel with a 2200mah battery?" Clearly that's a violation of rule #1 – they are not identical; **however** they are very similar in size so you can probably do that. Would I recommend it? No. Have I done it? Yes. "Can I charge a 5000mAh 4 cell with a 5000mAh 6 cell of the same brand?" **Absolutely not!** <u>You WILL have a fire</u>. Matching the cell count is absolutely essential whether parallel charging, or parallel discharging. Can I charge a 3 cell 2200mah battery with cells at **3.75v** along with a 3 cell 2200mah battery with cells at **3.85v**? No problem, those are close enough. So – cell count absolutely must match, voltage similar – say within about a fuzzy 0.2 volt/cell, Capacity should be similar, within about a fuzzy 20% capacity. I would not wander out of those bounds.

How Does Parallel Charging Work?

First thing to understand is how a LiPo is 'seen' by a charger when it gets connected and how it charges the battery. When you plug in the main connector (XT60, XT90, EC3, EC5, etc) the charger will see the total voltage of the LiPo. When you plug in the balance connector the charger can now see and monitor the voltage of each individual cell.

At this point I should say that regardless of what you read elsewhere you should ALWAYS balance charge batteries. Balance

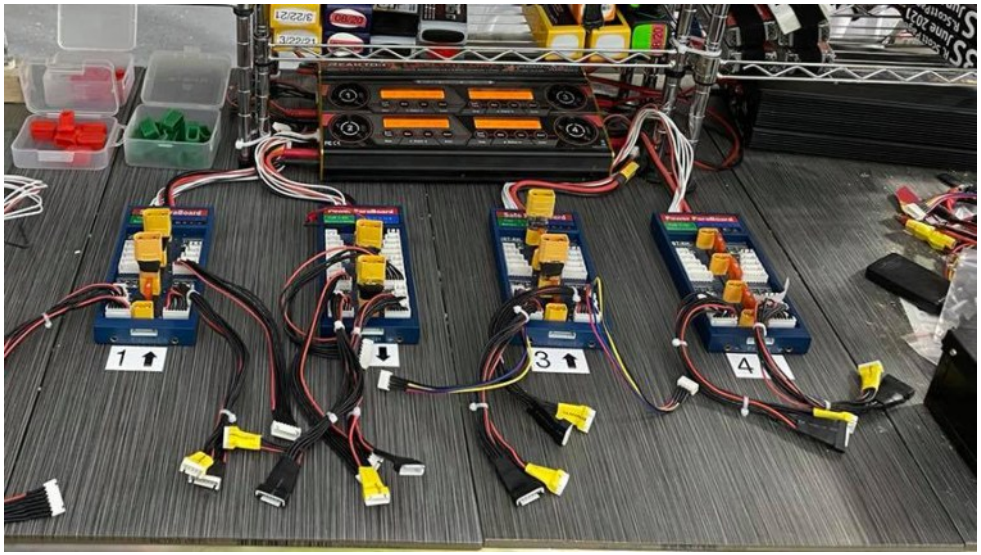
Parallel Charging continued

charging may take longer, but I'll trade this time for safety every time. The charger can now send voltage into the battery (at the predetermined rate) to get the battery to the "full charge" voltage or 4.2 volts per cell. At the same time cells that are higher than others are balanced to make them match the lowest cell ensuring that when the battery is fully charged all the cells are balanced and matched. The charger will send current into the battery until the difference between the charger voltage and the battery voltage is zero. It will then lower the amperage and maintain the battery at that set voltage while it continues to balance the cells and ensure that the resting voltage of the pack will stay at the set voltage once the charger is turned off.

Knowing this, let's assume I am going to charge one of my 2200mAh 6s LiPo. I would plug in the XT60 and balance lead. Most chargers will now give me a read out of the overall voltage and you can see the individual voltage of each cell (Depending on your charger you will either find the individual cell voltage on the main screen or on a secondary screen). I would set the charger to charge at 1 C which I figure out by dividing the capacity of the Lipo by 1000 (2200mah/1000=2.2 amps) and then start the charger.

Now that it is clear how the charger is going to send voltage to the pack we must also understand how connecting multiple batteries will affect how they charge. By connecting two 2200mah 6S batteries in parallel; the charger 'sees' one 4400mah 6S battery. (If they were in series it would see one 2200mah 12S battery) By connecting them in parallel the charger still sees a 6s battery and the charging characteristics don't change, **just the overall capacity changes**. That change in capacity means the C value changes from 2.2 amps (for one) to 4.4 amps (for two in parallel). By using a parallel board we can combine up to 6 batteries together and have the charger charge them as 1 larger battery. To do this we simply adjust the charger to maintain 1C charging by calculating the new capacity of the parallel batteries.

Capacity	Battery number	1C formula	1C Rate
2200mah	1	2200mAh/1000	2.2 Amps
2200mah	2	4400mAh/1000	4.4 Amps
1800mah	3	6200mah/1000	6.2 Amps
2200mah	4	7400mah/100	7.Amps



Parallel Charging

The parallel board plugs into the charger with the main leads (XT60, EC3 or whatever) and a 6S balance lead. Battery main leads and balance connectors are then plugged into the balance board. The charger will be able automatically detect the number of cells being charged – but be sure the number of cells is the same for all batteries on a balance board.

In practice – I almost always charge below 1C because conservative charge rates will extend the life of the battery. Since I'm charging several at a time I'm still finished much faster than charging at 1 C one at a time. It's a classic case of The Tortoise and the Hare.

When choosing a Balance board I'd suggest getting one with replaceable fuses. I recommend this 4 battery board https://alofthobbies.com/four-battery-fused-parallel-charge-board.html While it's native plug is XT60 it's easy to use adapters to accommodate XT90, Deans, or EC3 and EC5.

If charging where you can't monitor the process in person, **I recommend using a video baby monitor which will alert you on your cell phone** in the event of noise, or motion. I don't have a particular model to recommend, however I'm currently testing the Nooie Baby Monitor which I purchased from Amazon for $40.

Important Safety Practices for charging:

⇒ When charging batteries indoors always have a smoke detector above your charger.

⇒ Visually monitor the batteries while they charge, either in person or using video surveillance such as a baby monitor.

⇒ Have a fire extinguisher near (but not too near) the charging area or a large bucket of dry sand. Do not try to extinguish a LiPo fire with water.

⇒ Charge on a nonflammable surface.

⇒ LiPo batteries should be charged within a temperature range of 50F to 80F.

⇒ This is not a complete list of safety guidelines, but includes some that may not be common sense. For a more complete list of safety practices see https://www.icharger.co.nz/buying/resources-faq/lipo-lithium-battery-safety-guide/

Disclaimer: I don't claim to be an expert on the subject of parallel charging or Lipo batteries. Apply any information from this article at your own risk. Improper or misuse of LiPo batteries can cause explosions and/or fire.

Setting Up Rates and Expo in EdgeTX

A Clean, Intentional Way to Program Your Aircraft

by Scott Page

Modern radios running **EdgeTX** give us enormous flexibility. But with that flexibility comes the temptation to "just make it work" instead of setting things up cleanly and intentionally.

This article explains:

- How to set up **rates (weight)** and **expo**
- Why we assign rate switches opposite the control hand
- Why rates and expo belong in **Inputs**, not Mixes
- Whether you should reverse channels in Outputs

First: What Are Rates and Expo?

Rates (Weight)

"Weight" in EdgeTX is simply your maximum control surface travel percentage.

If Weight = 100 → full stick = full servo travel
If Weight = 70 → full stick = 70% of normal travel

Rates control how aggressive the aircraft feels.

Expo

Expo softens the center of the stick when a positive value. (Note, some other radios such as Futaba use a negative value to soften the center value.

- Small stick movement = gentler control response

Large stick movement = full authority still available
Expo makes an airplane feel smoother and more precise around neutral.

Philosophy First: Inputs vs Mixes

In EdgeTX you'll see:

- **Inputs**
- **Mixes**

Outputs
You *can* technically put rates and expo in Mixes; but you shouldn't. Here's why.

* Inputs = Pilot Intent
* Mixes = Aircraft Behavior

Inputs represent **what the pilot is doing with the sticks**.

Mixes represent **what the airplane does with that command**.

Rates and expo change how *your fingers feel* — not how the airplane is mechanically configured.

So:

* Rates and expo belong in **Inputs**
* Aircraft behavior logic belongs in **Mixes**

Keeping that separation:

- Makes models easier to debug
- Makes dual rates consistent across mixes
- Keeps flaperons, snapflap, crow, etc. clean

Prevents exponential compounding errors
When rates live in

Inputs, every mix that uses that input automatically respects the rate and expo.

Clean. Predictable. Professional.

✈ Switch Philosophy: Opposite Hand Control

We'll assign:

- **Elevator rates → Switch A**
- **Aileron rates → Switch B**

Rudder rates → Switch G

This places the rate switch on the **opposite hand** from the control stick.

Why?

Because when adjusting sensitivity mid-flight:

- Your flying hand stays on the control
- Your opposite hand flips the switch

No control interruption

For Mode 2 pilots:

- Elevator/Aileron = Right hand

Rudder = Left hand

So:

- Elevator/Aileron rate switches on left side

Rudder rate switch on right side

It's a subtle ergonomic decision that makes you safer and smoother in flight.

✈ Step-by-Step Setup in EdgeTX

1 Go to the INPUTS Page

You'll typically see:

- I1: Ail
- I2: Ele
- I3: Thr

I4: Rud

We'll edit Ail, Ele, and Rud.

Elevator on Switch A

Edit the Elevator input (I2).

Create three lines:

Low Rate

- Weight: 70
- Expo: 25

Switch: SA↓

Medium Rate

- Weight: 85
- Expo: 20

Switch: SA–

High Rate

- Weight: 100
- Expo: 15

Switch: SA↑

Now SA controls elevator sensitivity.

Ailerons on Switch B

Edit Aileron input (I1).

Example setup:

Low Rate

- Weight: 65
- Expo: 30

Switch: SB↓

Medium Rate

- Weight: 80
- Expo: 20

Switch: SB–

High Rate

- Weight: 100
- Expo: 10–15
- Switch: SB↑

Rudder on Switch G

Edit Rudder input (I4).

Example:

Low Rate

- Weight: 75
- Expo: 20

Switch: SG↓

High Rate

- Weight: 100
- Expo: 10

Switch: SG↑

Rudder often doesn't need three rates unless flying aerobatics.

Why Not Put This in Mixes?

If you put rates in Mixes:

- Flaperon mixes can stack weirdly
- Snapflap behavior changes with rates
- You risk doubling expo

Debugging becomes painful

Putting rates in Inputs means:

"This is how my stick behaves, period."

Every mix downstream receives a clean, predictable signal.

Should You Reverse in Outputs?

Yes.
Almost always.

Reversing should be done in the **Outputs page**, not in Inputs or Mixes.

Why?

Inputs define pilot movement direction.
Mixes define aircraft logic.
Outputs define servo behavior.

If a servo moves backward:

Reverse it in **Outputs**.

That way:

- Expo remains correct
- Logical switches stay correct

- Mix math stays correct

Your radio logic remains clean
Reversing earlier in the chain can create strange behavior later.

Outputs is the final mechanical correction point.

A Simple Programming Hierarchy

Think of EdgeTX like this:

1. **Inputs** → How the pilot moves sticks
2. **Mixes** → How the aircraft interprets movement

Outputs → How servos physically move
Keep each job in its proper place.

When you respect that structure, your programming becomes:

- Easier to troubleshoot
- Easier to expand
- More transferable between models

Final Thought

Rates and expo are not about limiting performance — they're about shaping feel.

Low rates build precision.
High rates unlock authority.
Expo adds smoothness without removing capability.

And placing those adjustments in the right place inside EdgeTX keeps your programming elegant instead of chaotic.

Fly smooth. Program clean.

Night Flying– AMA Requirements

NIGHT TRAINING For night flying, AMA requires that aircraft be equipped with anti-collision lighting that can be seen from 3 statute miles away **unless it poses a hazard or distraction to the operator**. Other lighting must be used in such a way that allows you to determine attitude and direction of flight. Hand-held illumination systems by themselves are inadequate for night flying operations. Night flight presents visual perception challenges. Since your vision and depth perception can be altered in darkness, night flying requires that you need to complete AMA video training through modelaircraft.org/night-operations, through introductory pilots, or by a club's safety officer.

"Night" means the time between the end of evening civil twilight and the beginning of morning civil twilight.

It's important to know that there are many factors that can affect your vision when flying at night:

⇒ Identifying objects in the daylight is relatively easy for most. However, detail resolution is poor at night and identification of objects can be more difficult.

⇒ Things like fog, smoke, dust, and ice particles can have more of an impact on your vision at night than in the daytime.

⇒ Eye disorders, such as near sightedness, farsightedness, or astigmatism may also have more of an impact on your night vision.

⇒ Just as in daylight, your night vision can be impacted by stresses such as self-medication, alcohol consumption, and fatigue.

⇒ Flickering lights, anti-collision lights, or other aircraft lights, may cause interference with brain function. Pilots can turn off anti-collision lights if it creates such a hazard.

⇒ Learning to fly safely at night takes time and experience. Model aviators should practice their maneuvers at night including straight-and-level flight, climbs and descents, level turns, climbing and descending turns, and steep turns.

⇒ Everyone has their own their abilities and limitations, and night flying requires that pilots remain aware of these limitations. Be sure to spend time on preparation and planning before flying at night. To watch AMA's training video on nighttime operations visit https://www.modelaircraft.org/night-operations

 For additional information on the effects of night vision see FAA-H-8083-25 (current version)

YOUR PASSION. HOBBY. ONE COMMUNITY.

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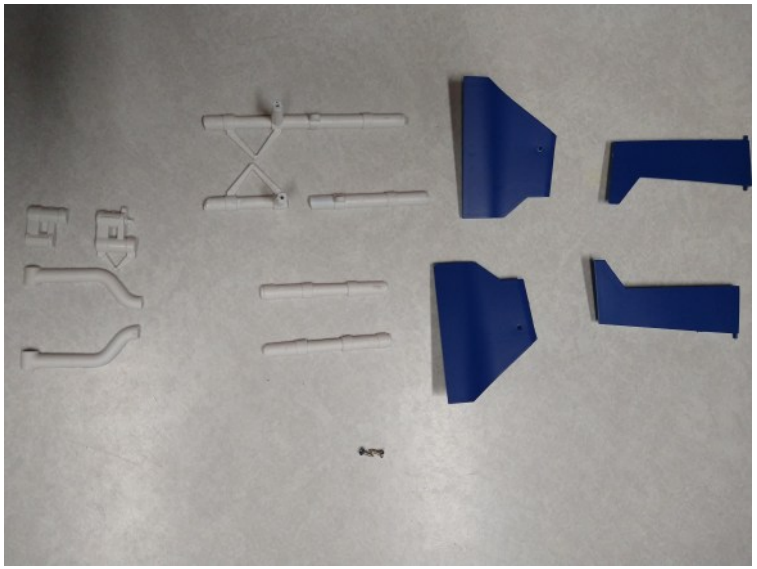
- *Just as in daylight, your night vision can be impacted by stresses such as self-medication, alcohol consumption, and fatigue.*
- *Flickering lights, anti-collision lights, or other aircraft lights, may cause interference with brain function. Pilots can turn off anti-collision lights if it creates such a hazard.*
- *Learning to fly safely at night takes time and experience. Model aviators should practice their maneuvers at night including straight-and-level flight, climbs and descents, level turns, climbing and descending turns, and steep turns.*
- *Everyone has their own their abilities and limitations, and night flying requires that pilots remain aware of these limitations. Be sure to spend time on preparation and planning before flying at night.*

To watch AMA's training video on nighttime operations visit https://www.modelaircraft.org/night-operations
For additional information on the effects of night vision see FAA-H-8083-25 (current version)

Bryce Wilson

Durafly T-28 Trojan Naval Aviation Centennial Edition. Beautiful scale T-28 with an attractive blue/white paint scheme. Wingspan is 1100mm (43") length is 930mm (36.6"). Uses a 3536-750kv brushless outrunner motor that spins a scale 10x6 3-blade propeller. The T-28 features an elevator, ailerons, a rudder, large flaps, a dive brake, servoless retracts with gear doors, a steerable nose wheel, bright LED lights, and an FPV capable canopy. The FPV mount is already installed within the canopy, but the FPV equipment is not included. The recommended battery is a 4S 2200mah LIPO with an xt60 connector. The wing is detachable and is attached to the fuselage with two screws. The scale plastic cowl is also removable and is held on by two screws. The center of gravity (CG) has been marked on the underside and the top of the wing. All electronics within the model have been tested and they function properly. Original ESC has been replaced and upgraded with an HSD 40A ESC with a Deans to XT60 adapter. I have also replaced and upgraded the original plastic nose gear servo with a 9-gram metal gear servo. The scale landing gear accessories have been removed from the retracts but are sold with the model. The original two screws are included with the other landing gear accessories but the two springs that held the landing gear covers are missing. The landing gear accessories must be glued onto the landing gear if you wish to apply them. A receiver is not included; sold in a Plug and Play configuration. Requires a 6 – 9 channel receiver. The T-28 flies very scale and looks beautiful in the air. It has enough power for loops, rolls, and short vertical climbs. Takes off great. Flaps work well for take-offs and are great for slowing down the model during landing. The dive brake can be used with the flaps for extra speed reduction. The LED lights are visible in sunlight and work well for evening flights. I recommend this model for intermediate or experienced RC pilots. This model has accumulated only 4 flights. **Selling for $165. Trades are acceptable. Please call or text Bryce at 541-993-8452 if interested**.



“C” Stands for Crap

Predatory marketing in the hobby— By R. Scott Page

The “C rating” printed on LiPo batteries is often treated as a measure of performance and reliability—but in reality, C rating is a marketing tool rather than a meaningful specification. In theory, the C rating is supposed to indicate how quickly a battery can be safely discharged relative to its capacity. For example, a 100C battery should be able to deliver 100 times its capacity in amps. In practice, these numbers are not verified or standardized, and manufacturers simply invent them to make their products appear powerful. Theoretically a 80C 6S battery should be able to deliver 400 amps. (laughs) Most 80 C packs when tested range from 20C to 25C.

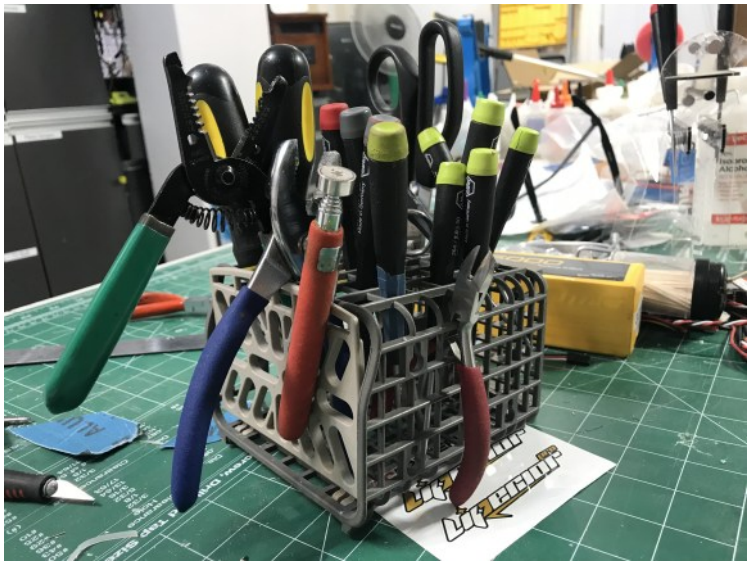
When tested with an ESR (Equivalent Series Resistance) meter, many low-cost batteries—especially those commonly found on Amazon—fail miserably. High ESR indicates greater internal resistance, which leads to voltage sag, heat buildup, and reduced performance under load. Generally, these “bargain” batteries are not even worth their lower price, as they underperform and have a shorter usable lifespan.

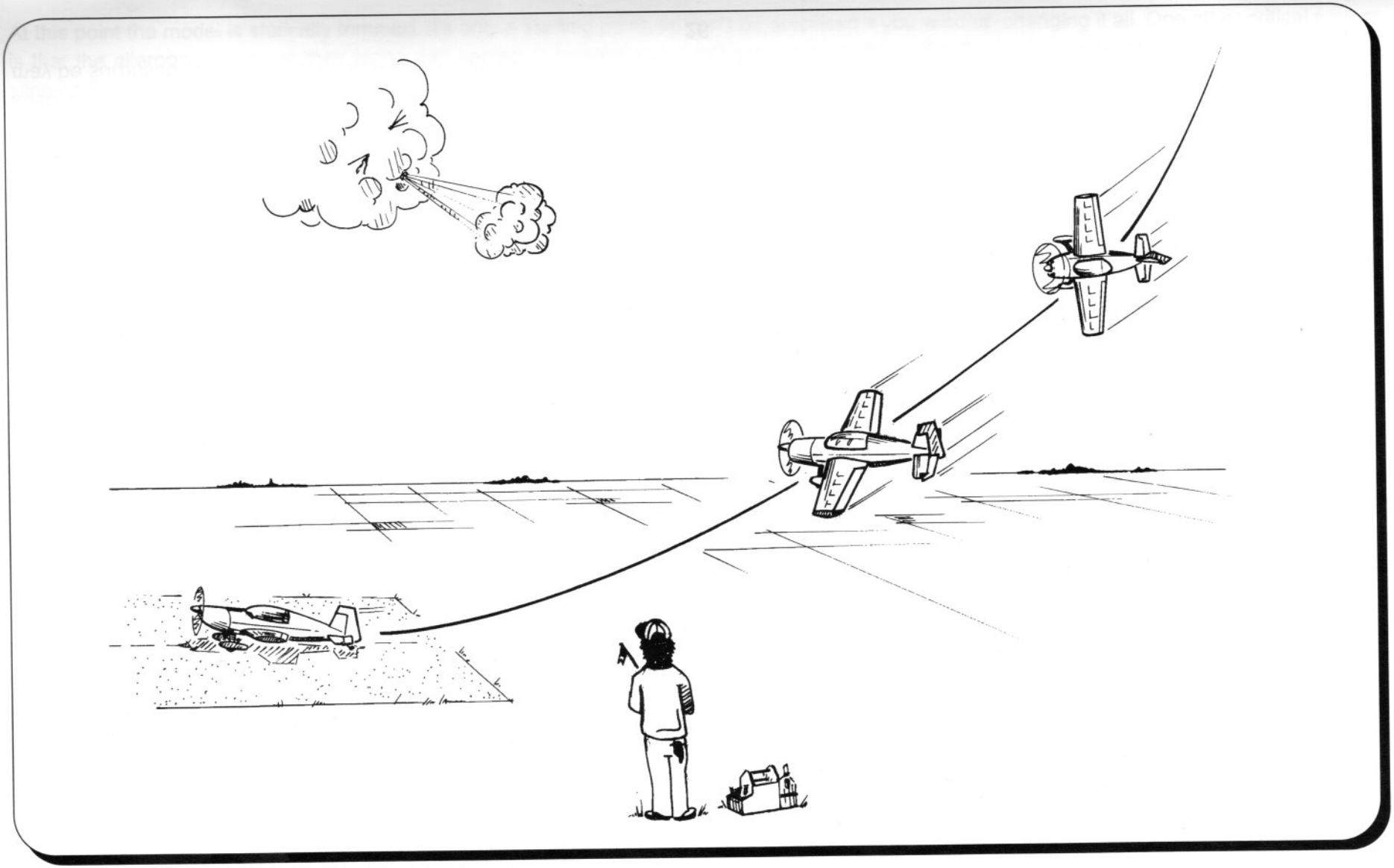
Unfortunately, higher price does not always guarantee quality. Some premium-priced batteries are also poorly constructed but rely on strong branding and marketing to justify their cost. This makes it difficult for hobbyists to know what they are truly getting.

The most reliable way to determine a battery’s real capability is through proper testing. Measuring ESR provides a far better indication of a battery’s true performance and, more importantly, its safe continuous amp draw.

For club members interested in learning the actual performance of their batteries, testing is available. If you would like your batteries evaluated to determine their true C rating—or more importantly, their safe operating limits—you can contact one of the members with an ESR meter. Scott Page has volunteered to test batteries for anyone who is interested.

If you ever have an extra silverware caddy from a dishwasher, it can be turned into a desktop tool holder. I bet it would work for knitting needles, too!





KNIFE EDGE SLIDE

A Knife Edge Slide is a unique landing approach which MUST be practiced with plenty of altitude until complete confidence is gained. Assuming your prevailing wind is from the left, start from several hundred feet of altitude and off to the right end of the field, rotate left to Knife Edge, throttle back and apply full right rudder. Allow the aircraft to descend rapidly Knife Edge, gradually rolling the aircraft upright into a slip as it approaches the runway, then set the plane on the runway on its gear. This maneuver takes LOTS of courage and even more practice, so be sure to practice the landing phase of it at a hundred feet or more until you get comfortable, then gradually work the plane down.

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