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# *The Seminole Flyer*

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AMA Chartered Club 216, Founded in 1969



A Gold Leader Club for over ten years

## **In This Issue**

- Busy fall season
- Do you want to be a better pilot?
- Understanding Exponential
- State Guard drone training
- Club Meeting News

## **Next Club Meeting**

Thursday, September 18, 2025  
The Wine House  
1355 Market Street

## **Busy fall season**

Jeff Owens

As I am writing this, it is a relatively cool 73 degrees this morning. It actually felt refreshing as I walked outside. That means that fall is nearly here. Of course, we will no doubt have our share of hot days in the near future, but it does feel nice this morning.

As schools begin their next semester and football again occupies the weekends, it is also time to check out our schedule of events. Our annual Workers Appreciation lunch for the park workers is on Friday September 19, followed by the Children's Miracle Network fund raiser on Saturday the 20th. There will be a lot of stuff to auction off that day, including Theo's RC equipment and aircraft.

There will be another auction coming in October - more details will follow in the near future. And then there is our Veterans Day Fun Fly in November. I will update the web site as I get more information. So be sure to check there to see what is coming.

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## **Do You Want to be a Better Pilot?**

Jeff Owens

That may be a rather silly question - of course you do! After the initial trauma and confusion of those first flights there is the progression that follows up to the point that you can takeoff, fly your plane, and land it one piece in such a condition that it can be flown again. After that, new pilots typically fly around and enjoy the feeling that they are (at least somewhat) in control of their model. Perhaps eventually one tries a loop (full throttle, up elevator, and wait) or perhaps a roll (full aileron deflection and wait.) Combinations of loops and half rolls can be used to perform a split S or an Immelmann turn. But how does one progress in the process of learning to be fully in control of the aircraft? Boring holes in the sky will not lead to substantial improvement. Ideally, one would like to be able to have complete control of the model and one way to do this is the challenge yourself to fly precise maneuvers. Sure, you can do a loop of sorts, but can you put it in a precise location and make it truly round? Can you do two identical loops in the same spot? These both require precise control of the model. How about a roll? Can you do one in a precise location? Can you do two - or three - in a row? Can you do them at the same altitude? If you answer yes to all of these you are well on your way. But if you are starting out, how do you get to this point?

You might try talking to Troy Emmett. I was chatting with him at the field one day and we were talking about precise flying. He allowed that doing the kind of 3D maneuvers we have all seen him do is fun, but it isn't necessarily precise. He had been trying some sequences of pattern maneuvers and was reminded how challenging they can be - 3 loops, 3 rolls, a 3 turn spin, and so on. I was also chatting with Kevin Parsons about the same topic and he expressed an interest in learning some of those maneuvers in order to feel more in command of his aircraft.

So, what can one do to learn better aircraft control? One method is to pick a maneuver and challenge yourself to fly it as precisely as you can. It helps to have someone watch and comment on your flight, as it is often hard for you to see subtle mistakes. Such feedback will make you a better pilot. How about learning inverted flight? Then how about learning to do it at a constant altitude? Again, you will learn better aircraft control.

If this sounds like a good idea, then you might be wondering where to find these various maneuvers. You could look at the pattern rule books link on the main menu on our web site. There you will find all sorts of maneuvers to try. The magazine Model Airplane News has a website ([modelairplanenews.com](http://modelairplanenews.com)) with all kinds of informative and entertaining articles. Some of these are descriptions of various airborne maneuvers with a detailed description of how to fly them and figures showing what they should look like.

The point of all of this is that if you challenge yourself to learn how to fly new maneuvers and to do so precisely, you will become a better pilot. Who knows, your model may thank you and then return the favor by giving you a much better sense of control.

The following article from Model Airplane News supplied by Steve Warmath addresses the uses of exponential and how it can help with precise aircraft control. If you haven't set up any expo on your transmitter you should give it a try. You may find that it helps your flying.

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## Understanding exponential - Steve Warmath

I recently received this article from my subscriber account with Model Airplane News and thought I would pass it along so pilots can understand why this is such a useful transmitter set up for aircraft.

“When flying an RC airplane, precision and control are paramount. One of the key adjustments available in modern RC transmitters is “exponential,” often abbreviated as “expo.” This setting can significantly affect how an aircraft responds to stick inputs, making it an essential tool for both beginners and advanced pilots. In this article, we will explore what exponential is, why it matters, how to set it up, and how it impacts flight performance.

### What is Exponential in RC Airplanes?

Exponential (expo) in RC airplanes refers to a non-linear response curve applied to the control inputs from the transmitter. Normally, the movement of the control sticks on the transmitter has a direct, linear relationship with the movement of the control surfaces (ailerons, elevator, and rudder). That is, if you move the stick 50% of its range, the corresponding control surface moves 50% of its maximum deflection.

With exponential applied, the response is modified so that smaller stick movements result in even smaller control surface deflections, while larger stick movements retain their full response. This softens the controls around the neutral position, making the aircraft easier to control for fine adjustments while still allowing full deflection for aggressive maneuvers when needed.

Exponential is typically expressed as a percentage and can be either positive or negative, depending on the transmitter brand. Futaba and some other brands use negative values for softening controls; while Spektrum, JR, and others use positive values for softening controls.

### Why Use Exponential?

Exponential is beneficial in many situations:

**Improved Precision in Level Flight.** Small corrections are often needed when flying straight and level. Exponential allows these fine inputs to be more controlled without over-controlling the aircraft.

**Smoother Landings.** Pilots often find that landings are easier with some expo, as it prevents jerky corrections close to the ground.

**Better Handling of High-Performance Aircraft.** Fast or aerobatic aircraft can be overly sensitive at high speeds. Exponential makes them more manageable without limiting their overall capability.

**Increased Stability in Windy Conditions.** Gusty winds can cause a pilot to overreact, leading to unnecessary over-corrections. Exponential dampens the effect of minor stick movements, resulting in a smoother response.

### The Effect of Different Exponential Settings

To visualize how exponential works, consider a transmitter set up with different expo values:

**0% Exponential (Linear Response):** Stick movement directly corresponds to control surface movement in a 1:1 ratio.

**30% Exponential:** Small stick movements result in smaller control surface deflections, making center-stick movements less sensitive.

**50% Exponential:** The response near the center of the stick is significantly softened, useful for very

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touchy aircraft.

**80% Exponential:** A very soft response near the center, only for extreme cases like 3D aerobatic flying. Most pilots find that an exponential setting between 20-40% is a good starting point for general sport flying, while 50-70% is often used in extreme aerobatics.

**How to Set Up Exponential** Setting up exponential is a simple process and can be done directly through most computerized transmitters. The steps typically involve navigating to the “Dual Rates and Expo” or “Exponential” menu under control-surface adjustments. 1. Select the Correct Channel: Apply expo to each control surface separately (ailerons, elevator, and rudder). Start with around 30% expo for ailerons and elevator, and adjust based on preference. 2. Test and Adjust: Perform a test flight and observe how the aircraft responds. If controls feel too sluggish, reduce expo. If they still feel too sensitive, increase expo.



**Common Myths and Misconceptions** There are several misconceptions about exponential that should be addressed:

**Myth 1:** Exponential Reduces Overall Control Authority. False. Exponential only changes the response curve but does not limit full control surface movement. Full stick deflection still results in full control surface deflection.

**Myth 2:** Exponential is Only for Advanced Pilots. False. Even beginners can benefit from mild expo settings to make flying easier and more stable.

**Myth 3:** More Expo is Always Better. False. Too much expo can make controls feel unresponsive, requiring excessive stick movement to make corrections. This can be problematic in quick-reaction situations.

**Exponential vs. Dual Rates** It is important to understand the difference between exponential and dual rates, as they serve different purposes. Exponential modifies the response curve, making small stick movements less sensitive while retaining full range at maximum deflection. Dual rates limit the total deflection of the control surface, effectively reducing sensitivity across the entire range of motion. Many pilots use both together: exponential for smooth center-stick response and dual rates to limit overall sensitivity when needed.

### Practical Applications of Exponential

**Training.** Beginners often struggle with over-controlling the aircraft. A small amount of expo (20-30%) can help smooth out inputs and make learning to fly easier.

**Sport Flying.** For everyday sport flying, a moderate expo setting (30-40%) can make an airplane feel more stable and less twitchy.

**Aerobatics.** Pilots performing aggressive aerobatic maneuvers often use higher expo (50-70%) to maintain fine control in slow-speed maneuvers while still having full deflection for snap rolls and spins.

**Jets and High-Speed Aircraft.** Fast-moving aircraft require precision control, and expo is crucial to

prevent over-corrections that could lead to loss of control at high speeds.

### BOTTOM LINE

Exponential is a powerful tool in RC flying that allows pilots to fine-tune their aircraft's control response. By softening stick sensitivity around the neutral position while preserving full deflection at the extremes, exponential helps improve precision, stability, and overall flying experience. Whether you're a beginner trying to smooth out your flights or an advanced pilot pushing the limits of aerobatics, understanding and properly setting exponential can significantly enhance your RC flying skills.

If you haven't experimented with expo yet, try adjusting your settings and experience the difference for yourself".



## September 20th Fun-Fly.



**Pilot landing fee \$20.00\*\*.**

**The gross proceeds from the pilot fees and lunch will be donated to our local Children's Miracle Network.**

**Flight line opens at 8 am closes at dusk.**

**No restrictions on any type of Aircraft flown. So, bring what you want and fly what you bring.**

**Flight training will be available, 10 till 1.**



**RC items donated by the Theo Titus family will be auctioned immediately following lunch. If you have other items to donate for the auction, please contact President Jay.**

**Lunch served 11:30 AM – 1 PM while supplies last**

**Enjoy all you care to eat, burgers, dogs, and more, plus drinks and the fixins' \$10.00 per adult, children under 10, \$5**



**Apalachee Regional Park, 7550 Apalachee Parkway (Hwy 27)**

Directions and map can be found at [www.seminolrc.com](http://www.seminolrc.com)

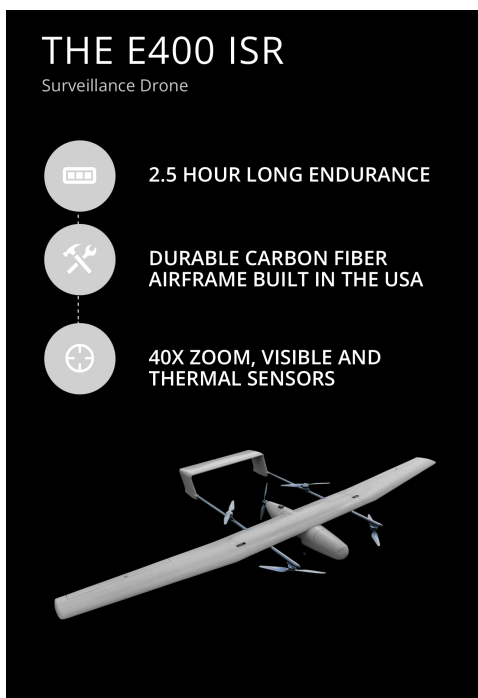
**\* All fliers must have current AMA membership.  
Normal AMA and SRCC safety rules are in effect**



## Florida State Guard Drone Training

Jeff Owens

New member Jesse Cortez is a member of the Florida State Guard and he is the pilot of a rather large drone. Recently he was at the field doing training session. As shown below, the size and capabilities of this drone are both significantly greater than what we are used to seeing at the field. Keep an eye out for this one. I am sure that we will be seeing more of it at the field.



### **Club Meeting News - Jeff Owens**

The August meeting was called to order by President Jay Wiggins at 7:00 PM on August 21, 2025 with 14 members present. New members Jack Horning and John Thompson briefly introduced themselves.

**Member Recognition** - Steve Warmath for his TAG (Takeoff and Grow) flight training work and for coordinating with various groups; Ed Budzyna for weed trimming; Mike Atkinson for training and weed trimming; Ken Kushner for garbage detail; Ed Budzyna, Sam Varn, Jay Wiggins, Mike Atkinson, and Jeff Owens for moving Theo's RC equipment and planes; July Fun Fly - Jim Ogorek and Geoff Lawrence for training; Chris and Claudia for cooking; Sam Varn for organization; David and Deborah Coury for supplies; Container prep - Ed, Kevin, Jim, Gordie, Geoff, Mike, and Sam; Jeff Owens for the Newsletter; Gordie Meade for winning Sport scale and 2nd in Expert at the Nats and Judging at the World Helicopter event in Romania.

**President's Report** - Jay presented a slide show of the painting of the container and reported on the 10 year warranty against peeling. Also shown were pictures of the Florida State Guard training on 8/19 including shots of the drone and the 12S 30,000 mah batteries it uses.

**VP report** - Chris and Sam worked on the grill in preparation for the fall events.

**Treasurer's Report** - the May report was approved as published in the June Newsletter.

**Secretary's Report** - the minutes of the June meeting were approved as published in the June Newsletter.

**Field Marshall Report** - Gordie reported that the starting tables will be repaired/replaced soon - once the temperature drops a bit. The mower has been serviced.

**Training and Safety Report** - there must be a constant emphasis for everyone to respect the Flightline and to not fly behind it.

There were no other items for new or old business. The meeting was adjourned at 8:01 PM.

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## The Seminole R/C Club Tallahassee, FL

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### Officers

<b>President</b>	Jay Wiggins ( <a href="mailto:moonangelb@gmail.com">moonangelb@gmail.com</a> )
<b>Vice-President</b>	Sam Varn ( <a href="mailto:sgvarn@yahoo.com">sgvarn@yahoo.com</a> )
<b>Secretary</b>	Jeff Owens ( <a href="mailto:jfolso@comcast.net">jfolso@comcast.net</a> )
<b>Treasurer</b>	Marcy Driscoll ( <a href="mailto:mdriscoll@fsu.edu">mdriscoll@fsu.edu</a> )
<b>Field Safety Officer</b>	Mike Atkinson ( <a href="mailto:nexnbax1@comcast.net">nexnbax1@comcast.net</a> )
<b>Field Marshall</b>	Gordie Meade ( <a href="mailto:lmeade@fsu.edu">lmeade@fsu.edu</a> )
<b>Training Coordinator</b>	Mike Atkinson ( <a href="mailto:nexnbax1@comcast.net">nexnbax1@comcast.net</a> )

### Media Managers

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<b>Newsletter Editor</b>	Jeff Owens ( <a href="mailto:jfolso@comcast.net">jfolso@comcast.net</a> )

### Flight Training

Primary flight training is available by appointment on Saturdays from 10:00 AM until 2:00 PM when the weather is nice and not too breezy. Contact the Training Coordinator or one of the instructors to make an appointment:

Geoff Lawrence 850-591-6879  
Jeff Owens 850-545-7482

Jim Ogorek 850-766-2477  
Mike Atkinson (Tuesday only) 850-251-2694  
Troy Emmett (Large Aircraft) 770-546-6199

### Field Hours

**All Aircraft:** 30 minutes before sunrise until 30 minutes after sunset 7 days/week

**Please note:** Although restrictions have been removed on flying hours for fueled planes, this is on a trial basis until further notice from Leon County. All gassers and nitros must have a suitable muffler.

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