

# THE SLOW ROLL

## APRIL 2018

**President—Lou Pfeifer IV**  
**Vice President—Andrew Schear**  
**Treasurer—Nate D'Anna**  
**Secretary—Robert Poe**  
**Editor—Bob Purdy**

*The Slow Roll is published by the Sun Valley Fliers by and for its membership to all others interested in the building and flying of radio control aircraft.*



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**SVF CLUB Starting 43 years**

**SVF MEETING April 3 @ 7 PM**



## Presidents Report For April 2018

Hello all,

The great weather is here and see a lot of members coming out to the field again. It is good to see such activity. As you are all aware of from my emails that I sent out, this is the time of the year that also brings a **CHANGE IN OUR GATE CODE ON APRIL 1ST!** **YOU ALL SHOULD HAVE RECEIVED THESE EMAILS DUE TO NONE WERE RETURNED.** The gate code was included in these emails! Please read your emails!

The SVF Cactus Classic drew 42 pilots. Congratulations to Bryant Mack for 1<sup>st</sup> place unlimited! Thanks to our hosts Ernie Mack and Brad Beedy. Thanks to the following members for their help EVERYTIME WE ASK. [Charlie Beverson](#), [Paul Brown](#), [Robert Poe](#), [Harold Meeker](#), [Bob Purdy](#), [Bob True](#), [Wayne Robinson](#), [Jeff buck](#), [Ron Anderson](#), [Bobby Santoro](#), [Mark Overhage](#), and I. Hope I have you all, sorry if I missed anyone.

We have had a Deer Valley Tower Call to me On Saturday at the IMAC EVENT as you are all aware of by now. The board and I will discuss this issue at our Board meeting this month. **This is getting very serious! We have had TOO MANY CALLS related to altitude!** I will keep you informed as to our decision in this matter. Please all be AWARE of your altitude and act appropriately. We can lose our field if this keeps up!

**Our Membership Meeting will be held at Deer Valley Airport Restaurant at 7:00 PM.**

If you plan on eating please get there early.

In closing please have fun at the field, be SAFE, and be aware of your altitude with full Scale planes!

*Lou Pfeifer IV.*

President



## Sun Valley Fliers General Membership Meeting Minutes – 3/07/2018

Meeting called to order by Lou Pfeifer at 7:01pm. There were 22 members present.

### **Executive members in attendance**

- President – Lou Pfeifer, VP.- Andrew Schear, Treasurer- Nate D'Anna, Secretary- Robert Poe

### **Board Members in attendance:**

- Scott Johnson, Wayne Layne, Steve Myers, Ernie Mack, Wayne Robinson, Bob True, Bob Santoro.

**Absent:** Tom Kametz, Bryant Mack,

**Open:** Scott Johnson was honored for his efforts over the last few years on behalf of the Club.

**Guests:** Tristan Martin

**New Members:** Micah Martin, Ron Anderson

**Solo Pilots:** Micah Martin, Ron Anderson. Lou presented the solo certificates.

### **Secretary's Report –**

- Minutes from the **02/07/2018** meeting were approved as published in the **Slow Roll**. Approved: 1) Wayne Robinson 2) Andrew Schear

### **Treasurer's Report – Nate D'Anna**

- Treasurer's report was approved as written. Report on file to see by request. Approved: 1) Lou Pfeifer Sr. 2) Steve Myers
- **Membership Director's Report – Bob True/Scott Johnson**
- 25 members as of 3/07/2018

### **Safety Officer's Report – Ernie Mack**

- **IMAC event on March 25<sup>th</sup> will need club member participation, Event is all day Saturday and all day Sunday (7-4). Gate will be bungied and must be keep closed at all times. IMAC Hangar event is from 6-9 pm on Saturday March 25<sup>th</sup> at Scottsdale Airport. RSVP please and event is \$25.00 with dinner included. All money goes to the SVF Club.**
- **No safety issues to report.**

### **Old Business**

- **Gate lock change coming**, Bob True will submit reconciled membership list for final count. Email to go out to those who did not renew revoking flight privileges. Visitors are welcome if they observe club protocol and safety rules. Visiting pilots need to have valid AMA cards.
- IMAC spotting and communication procedures with Deer Valley ATC will be determined before event.
- Field use agreement with flood control district is status quo but SVF is assured that it will be completed.
- Private hangar event with banquet and 3 full scale IAC pilots and planes on display. Event is \$25.00 and benefits the SVF Club. Contact Brad Beedy at bradbeedyinsurance.com or 602-369-4163 for reservations.

### **New Business -**

- Runway repair to be revisited in January of 2019 due to funding issues.
- **Jeff Buck was honored for his field maintenance work on behalf of the club.**
- **Lou would like to encourage all members to perform basic maintenance if you see a need.** Special call out for fuel overflow containers that are not emptied. PLEASE EMPTY THEM.
- **Watch for non members out at field flying without authorization.**

### **Door Prize Winners:**

- Micah, Bobby, Robert Poe, Lou Sr, Bruce Bretschneider

### **50/50 Winner:**

- Lou Sr.

### **Show And Tell:**

- None

The meeting adjourned at 7:48 pm 1)Norm Pilcher, 2) Nate D'anna  
Respectfully submitted,

*Robert Poe*



## Sun Valley Fliers BOD Meeting Minutes – 03/12/2018

Meeting called to order at 6:34 pm. By Lou Pfeifer IV.

Executive Members in Attendance:

• President-Louis Pfeifer IV., Andrew Schear - VP, Treasurer- Nate D'Anna, Secretary- Robert Poe  
Board Members in attendance:

• Scott Johnson, Steve Myers, Wayne Robinson, Wayne Layne, Ernie Mack, Jamie Edwards, Bobby Santoro  
Absent: Bob True, Tom Kametz, Bryant Mack

Open: **Nate D'Anna is not running for Treasurer again. Thanks to Nate for a difficult job well done!**

Members/Guests:

- None

Guest Statements:

- None

Secretary's Report – Robert Poe

- **Minutes** from **02/12/2018** meeting were reviewed and approved. 1)Wayne Lane 2) Jamie Edwards

Treasurer's Report – Nate D'Anna

- Financial report for **02/12/2018** were approved and on file for review. 1) Wayne Robinson 2)Bobby Santoro

Membership Director's Report – Bob True/ Scott Johnson

- 2018 increase of 25 members
- 212 members to date
- Bobby reviewed new website hosting possibilities replacing Go Daddy to lower costs and increase speed. Bob True is reviewing and culling the group email to take out the non paying former members.
- **Lou reiterated the need to watch for non members and flyers without AMA cards.**

Safety Officer's Report – Ernie Mack

- None, no issues

Old Business:

- Ernie reviewed IMAC event. Looking at 40-50 pilots at this time for IMAC event. Ernie has communicated with Deer Valley ATC contact and gave him an overview of event activities.
- Volunteers are needed for event especially in spotting. Kitchen is staffed up for both days.

New Business:

- **Watch for non members flying on field!**

Meeting adjourned at 7:16 pm 1) Nate D'Anna 2) Wayne Lane

Respectfully submitted,

*Robert Poe*

# What's Happening



Left: Ron Anderson—Lou— Micah Martin. Lou presenting their Solo Certificates.



Bryant Mack shown here after scoring high in the recent Cactus Classic



Received this from G but no name for the man in the photo



# Cactus Classic with Brad Beedy



# Cactus Classic with Brad Beedy



# 2018 GUNSMOKE with Tony Quist



# Gunsmoke Scoring Results

## Gunsmoke 2018 US ScaleMasters Qualifier Scoring Results

Reg#	Pilot	Builder	Location	Class	Place	Aircraft	Static	Flight Rnd 1	Flight Rnd 2	Flight Rnd 3	Flight Rnd 4	Flight Avg	Total Score	Qualified?
12	Jim McEwen		Tempe, Arizona	Advanced	1	Rafale	94.5	77.75	87	90.25	86	87.750	182.250	Yes
26	Noel Hunt		Mesa, Arizona	Advanced	2	Spad 13	94.25	76.5	86.5	79	90.5	85.333	179.583	Yes
8	Robert Wagner		Camarillo, California	Advanced	3	Laird-Turner Racer	94	80.25	89.75	80.5	0	83.500	177.500	Yes
13	Mike Peck		Phoenix, Arizona	Advanced	4	Piper J-3 Cub	92	75.5	87.25	71.75	86.5	83.083	175.083	Yes
32	Corey Dail		Saugus, California	Advanced	5	P-51D Mustang	88.25	79.5	86.75	81.5	0	82.583	170.833	
5	Charlie Nelson		Mesa, Arizona	Advanced	6	Piper J-3P Cub	97.75	56.5	0	0	0	18.833	116.583	
2	Brad Osborne		San Pedro, California	Expert	1	Fairchild PT-19B Cornell	99.75	82.75	81	92	0	85.250	185.000	Yes
20	Bob Root		Ventura, California	Expert	2	Aeronca C-3	98.75	75	86.75	70.75	78.5	80.083	178.833	Yes
24	Ron Marshall		Phoenix, Arizona	Expert	3	Szekely Flying Dutchman	82	30.25	85.75	14.25	91.25	69.083	151.083	
1	Tim Dickey		Chandler, Arizona	Expert	4	Flybaby	99	74.25	47.75	0	0	40.667	139.667	
3	Tim Cardin		Garden Grove, California	Expert	5	T-50 Cessna Bobcat	98	76.5	0	0	0	25.500	123.500	
17	Tony Quist		Glendale, Arizona	Pro Am Pro	1	F6F-6 Cougar	5	87.5	89.25	95	85.25	90.583	95.583	Yes
14	Bill Adams		Mesa, Arizona	Pro Am Pro	2	Cessna 150 Aerobat	5	86.75	87.75	85.25	93	89.167	94.167	Yes
31	Cole Thornton		Clarkdale, Arizona	Pro Am Pro	3	P-47 Thunderbolt	5	87.5	84.5	92.5	85.5	88.500	93.500	Yes
25	Randy Wegner		Tucson, Arizona	Pro Am Pro	4	RV-4	5	81	82.75	85.25	88.75	85.583	90.583	Yes
6	Rick Marshall		Litchfield Park, Arizona	Pro Am Pro	5	Helicat	5	81.75	82.5	91.5	82.25	85.417	90.417	Yes
11	Frank Migliaccio		Rancho Santa Margarita, CA	Pro Am Pro	6	F4U Corsair	5	81.5	78.75	90	76.25	83.417	88.417	
9	Tim Dickey		Chandler, Arizona	Pro Am Pro	7	Fairchild PT-19A	5	82	83.75	80.75	0	82.167	87.167	
18	Ken Rhoads		Glendale, Arizona	Pro Am Pro	8	Pilatus PC-21	5	76.25	83.25	67.75	82.25	80.583	85.583	
30	John Geyer		Phoenix, Arizona	Pro Am Pro	9	Ultimate 10-300	5	75.5	85.25	67	80	80.250	85.250	
27	Derek Mico		Phoenix, Arizona	Pro Am Pro	10	I-16 Rata	5	80.5	72.5	87	72.25	80.000	85.000	
19	Howard Kennedy		Phoenix, Arizona	Pro Am Pro	11	Fairchild PT-19A	5	76.25	85.25	69.75	74.75	78.750	83.750	
33	Jason Neves		Scottsdale, Arizona	Pro Am Pro	12	Spacewalker	5	74	83	0	0	52.333	57.333	
29	Ray Hoffman		Chehalis, Washington	Pro Am Pro	13	F4U-1A Corsair	5	79.25	16.5	0	0	31.917	36.917	
35	Tom Mulder		Oceanside, California	Pro Am Pro	14	Stearman N2S	5	18	8.5	0	0	8.833	13.833	
10	Anthony Miologos		Scottsdale, Arizona	Pro Am Pro	15	F7F-3P Tigercat	5	0	0	0	0	0.000	5.000	
34	Alex Drelling		Queen Creek, Arizona	Pro Am Sport	1	P-47 Thunderbolt	5	84.75	82.75	85	91.75	87.167	92.167	Yes
16	Keith Hoffman		Cave Creek, Arizona	Pro Am Sport	2	Extra 300	5	77.25	86	73.5	42.5	78.917	83.917	Yes
4	Allen Hess		Riverside, California	Pro Am Sport	3	Super Cub	5	77	0	71.75	76.25	75.000	80.000	Yes
36	Mike Dolan		Phoenix, Arizona	Pro Am Sport	4	P-51D Mustang	5	64.5	84.5	0	0	49.667	54.667	
15	Jerry Morescki		Mesa, Arizona	Pro Am Sport	5	Piper Trn Pacer	5	69.5	0	64.75	0	44.750	49.750	
21	John Dugan		Ojai, California	Pro Am Sport	6	Firecracker	5	43.25	0	54.25	0	32.500	37.500	
37	Keith Small		Mesa, Arizona	Pro Am Sport	7	Mr. Mulligan	5	0	52.25	0	0	17.417	22.417	
7	Bill Adams	Kevin Hopwood	Chandler, Arizona	Team	1	Spitfire Mk IX	94.5	88.5	88.5	84	87.75	88.250	182.750	Yes
28	Chris Spangenberg	Darryl Bergstrom	Camarillo, California	Team	2	Sopwith Pup	96.75	78	87.5	74.25	82.25	82.583	179.333	Yes
23	Curtis Kitteringham	Ron Peterka	Ramona, California	Team	3	Stinson SR5	93.5	85	71.5	0	0	52.167	145.667	
22	John Pomroy	Roger Hoover	Chandler, Arizona	Team	4	SBD Dauntless	81.25	0	0	0	0	0.000	81.250	



# Dave Scott at the SVF Field

Dave from 1st US RC FLIGHT SCHOOL



# Bob Poe Camera at the IMAC



# AIRPLANE SETUP METHODOLOGIES

Optimum setup rules-of-thumb for the way you fly

Written by Dave Scott

There is probably no other subject with more varied opinions than how to best set up an airplane. Yet, if you could rank all of the different setup methodologies based on the results obtained within four or five days, you would quickly discover that certain setups promote faster rates of learning and better results than others.

This article features the setup rules of thumb that have proven to produce the best overall results in the shortest amount of time during 1st U.S. R/C Flight School's solo and aerobatics courses.

RC pilots are regularly trying new setups that promise to improve their flying, but if they could objectively evaluate their performances, they would realize that in some cases they actually flew better before the new setup. However, instead of returning to what worked best, they hope to overcome the new challenges with more practice.

The tricky part of airplane setup is knowing what really helps, what sounds good in theory but isn't, and what may be applicable to some forms of extreme flying, but would be detrimental to most or all of your flying.

## Balance

Where you chose to balance your model will have a huge impact on how it handles in the air and how well you fly it.

When an airplane pitches up or down, it pivots around a point on or near the wing's thickest point (Figure 1a). When the CG is located at this pivot point, the airplane tends to be "neutral," or prone to doing only what you tell it to do.

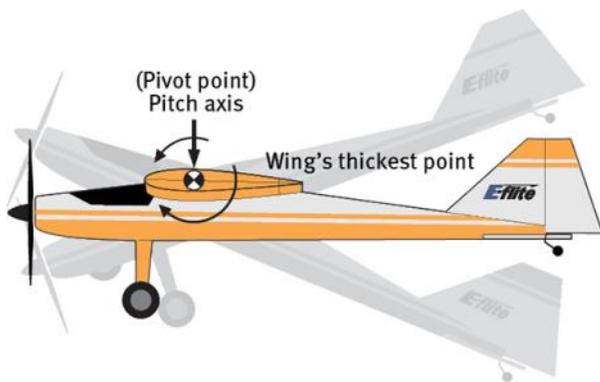


Figure 1a. As a rule, airplanes in flight pivot around a point on or near the wing's thickest point.

When the CG is aft of the pivot point (tail-heavy), the airplane will tend to be unstable (Figure 1b). Similar to shooting an arrow backward, a tail-heavy airplane would be inclined to swap ends in flight if it were not for the tail and the pilot's corrective inputs.

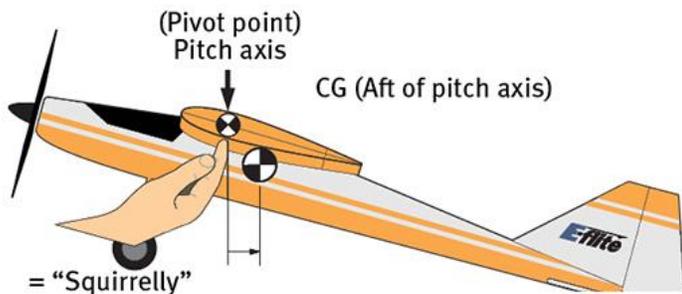


Figure 1b. When the CG is aft of the wing's thickest point, the airplane will be unstable at all speeds and require more effort to fly.

A tail-heavy condition does increase maneuverability at the extreme ends of the flight envelope, but as a consequence the airplane requires much more effort to fly the rest of the time, especially at slower speeds when the tail forces are less firm. A nose-heavy airplane tends to be less stable and less maneuverable, and will behave differently depending on the speed.

A neutral CG location at the wing's thickest point provides the best overall handling without restricting maneuverability (Figure 1c).

Figure 1c. When the CG is neither forward nor aft of the wing's thickest point, the airplane neither resists nor exaggerates what it is told to do and behaves basically the same at any speed.

## Engine Thrust

Setting up your airplane with engine right- and downthrust will cause it to fly more true.

As the propeller turns, it produces a spiraling slipstream or propwash that strikes the left side of the vertical tail and tries to yaw the airplane to the left.

Propwash is generally held in check at higher speeds by the faster airflow over the tail. However, at lower airspeeds with high power, such as during takeoff or approaching the top of a loop, the pilot has to correct the propwash. Building in a couple of degrees of engine right-thrust helps to counter the effects of propwash, therefore reducing the demands on the pilot (Figure 2).

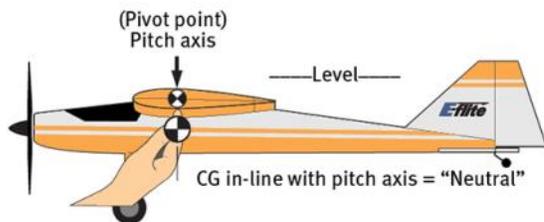
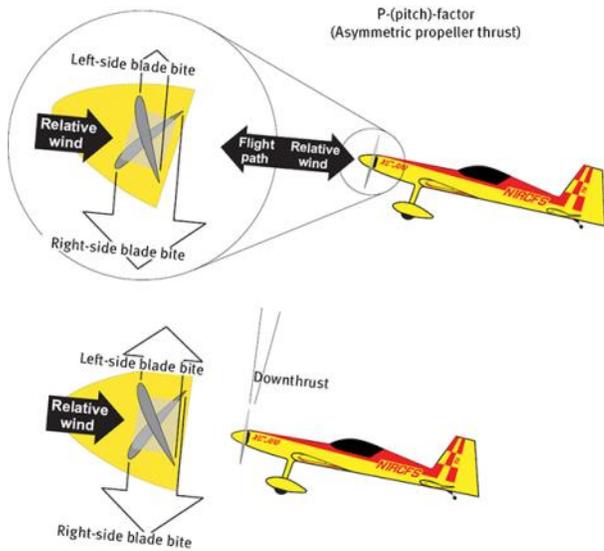


Figure 2. Building in a couple of degrees of right thrust helps to reduce the left-turning tendency caused by the propeller slipstream/propwash.

P-Factor is a left-turning tendency that occurs when the airplane is at a positive angle of attack, because the propeller blade on the right side of the air-

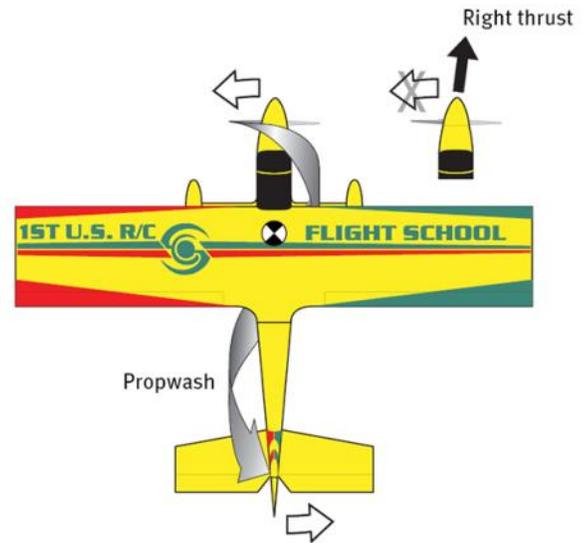
plane is biting more air and producing more thrust than the blade on the left (Figure 3).

Figure 3. At positive angles of attack, the propeller blade on the right side of the airplane bites more air and produces more thrust than the blade on the left. Building in a couple of degrees of downthrust places the propeller at slightly less of an angle to the relative wind to achieve more equal bite on both blades during inside maneuvers.



Building in a couple of degrees of downthrust places the propeller at slightly less of an angle to the relative wind to achieve a more equal bite on both blades during inside (up-elevator) maneuvers, reducing P-factor and demands on the pilot.

Another benefit of downthrust is providing a down force to counter excess wing lift when an airplane is flying at higher speeds. This is especially important with flat-bottom-wing airplanes.



## Control Surface Travel Rules of Thumb

As a rule, how an airplane responds to control inputs is a function of how fast and how far the control surfaces deflect, regardless of the airplane's size or strength of performance. Seldom can you go wrong by initially setting up your control surface deflections/travels according to the manufacturers' recommendations.

However, don't make the mistake of thinking that those recommendations are what the manufacturer intends you to stay with. To fly your best, you must adjust the control surface travels to suit your immediate skill level.

Perfectly good airplanes are often faulted or retired because the pilot did not like how it handled, tried unsuccessfully to become accustomed to it, and finally went looking for another airplane. By simply changing the travels to suit your comfort level, you'll immediately start flying with more confidence and begin building on that success, instead of continuing to try to get used to the airplane.

When setting travels using a computer radio, it is vital that you triple-check the physical deflections of all the control surfaces in all directions. For a variety of reasons, it is often necessary to program different percentages to achieve the same physical travel of a surface in both directions.

Thousands of airplanes are faulted because their owners make certain assumptions based on the "numbers" they read off of the transmitter, but leave out the step of confirming all of the physical deflections. They either end up unhappy with the way their airplanes handle, or assume that having to make numerous and/or large adjustments later is an indication of a poor design when, other than more left aileron than right for example, the airplane is fine.

Transmitter settings should be based on actual deflections and your comfort level, not the numbers read off the radio. To minimize the need for adjustments and the potential for error, strive to set the neutral position and travel of each surface mechanically and use the radio only as a last resort to fine-tune things.

## "Balanced" Controls

Another vital component of good flying is achieving balanced control responses. "Balanced controls" describes the ideal condition in which all of the controls are equally sensitive. Other than a lack of control-stick tension, possibly nothing inhibits progress more than when one of the controls is noticeably more or less sensitive than the others, forcing the pilot to remember to use two different control pressures depending on the input.

Even a novice pilot can tell when the ailerons are more sensitive than the elevator, for example, so why would you accept one control that is more or less sensitive than the others when a simple control surface travel adjustment is all that's needed to start feeling more comfortable?

## Aileron Rudder Mixing Adverse Yaw

Adverse yaw is an inherent opposite yaw or skid that occurs with aileron deflections.

A positive angle of attack is generally required to produce the wing lift needed to keep an airplane in the air. When the ailerons are deflected at a positive angle of attack, the down aileron presents a wider frontal cross-section, thus creating more drag and causing the airplane to yaw in the opposite direction in which the ailerons are applied (Figure 4).

Figure 4. In flight, the down aileron presents a wider cross-section, increasing drag and causing adverse yaw (a yaw in the opposite direction that the ailerons are applied).

When two aileron servos and the flaperon function are used, adverse yaw can be lessened by programming a small amount of differential aileron travel (for example, approximately 5° less down aileron than up), consequently improving control and producing cleaner axial rolls.

The exception is when the airplane has a flat-bottom wing. Drag on the side of the down aileron and adverse yaw is so much more pronounced with a flat-bottom wing that differential aileron travel has little effect.

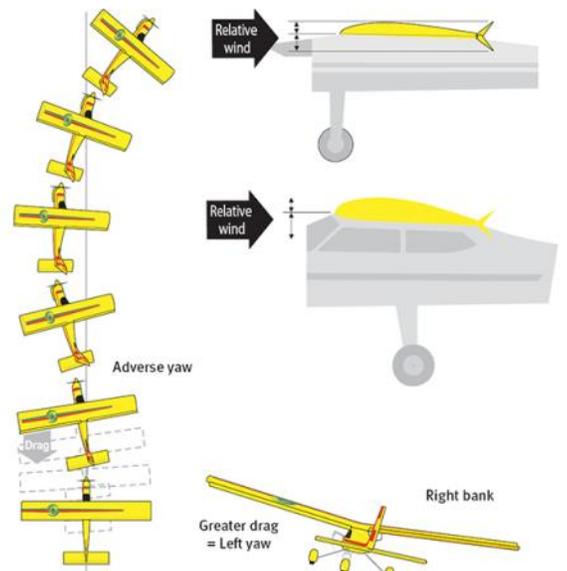
To eliminate adverse yaw, rudder must be coordinated or mixed in the same direction as the aileron. As a rule, a symmetrical-wing airplane may require only a 3% to 5% rudder mix with the aileron to eliminate adverse yaw, whereas a flat-bottom-wing airplane requires nearly as much rudder deflection (in degrees) as aileron (Figure 5).

Figure 5. You must coordinate or mix rudder with the aileron in the same direction to eliminate adverse yaw when flying a flat-bottom-wing airplane.



Not only does eliminating adverse yaw improve control, pilots who initially learn to fly with aileron/rudder mixing are also able to more easily transition into higher-performance, symmetrical-wing airplanes because they are already accustomed to flying with minimal adverse yaw.

Contrast that to those who learn to fly with adverse yaw then have to retrain their flying habits when they switch to a symmetrical-wing airplane with little adverse yaw.



## Advanced Dual Rate and Exponential Rules of Thumb

Expert pilots are often asked about their favorite aerobatic airplane. After a person graduates to flying Edges, Extras, Sukhois, and similar models, he or she will find that these aircraft are equally capable. Any differences that are not setup related are barely noticeable to all but the most expert of fliers. The real question is whether your airplane will be set up to promote maximum success.

Although not necessary for Precision Aerobatic flying, a computer radio with dual rates and exponential is required for 3-D flying. That's because the large control-surface deflections required for 3-D maneuvers would cause an airplane to be too responsive during normal flight.

Dual rates allow a pilot to achieve optimal control response for different modes of flight. For example, "high" rates allow maximum travels for 3-D flying, whereas "low" (normal) rates provide optimal control for Precision Aerobatic flying, takeoff, and landing (Figure 6).

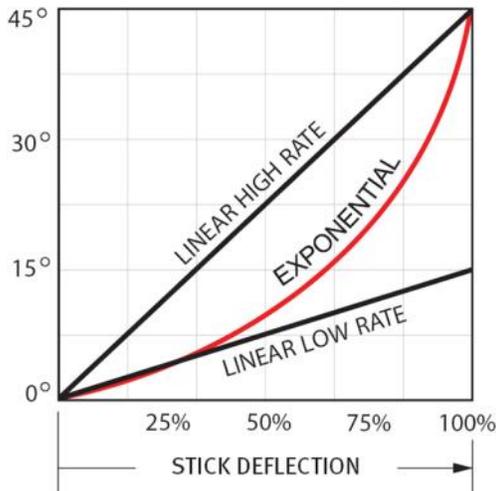


Figure 6.

To help you stay focused on flying and not on flipping switches, it's recommended that you put all of your dual rate and exponential settings on one switch.

On high 3-D rates, an airplane will be too sensitive and hard to control between maneuvers, so 30% to 50% exponential is used to reduce control sensitivity through the first third or half of stick deflection. Exponential will allow you to fly with the "feel" of normal rates when the stick inputs are less than half, but then rapidly ramp up beyond that.

Because of the current dominance of extreme 3-D flying, airplane manufacturers more frequently recommend low rates that are low relative to high 3-D rates, but are still too much for Precision Aerobatics flying, takeoff, and landing. That is why manufacturers recommend exponential even on low rates.

To develop the precise timing required to fly aerobatics well, it's important to maintain a close correlation between your inputs and the response of the airplane. The ideal low/normal rate settings should provide a comfortable control response with minimal use of exponential (Figure 7). If the airplane is touchy on low rates, before you start adding exponential, first try reducing the low-rate percentages.

Figure 7.

## Mixing Rules of Thumb

For many reasons, every airplane exhibits some unwanted tendencies while maneuvering. When a large amount of rudder is applied to sustain knife-edge flight, most airplanes tend to gently roll in the direction that the rudder is being held. Many fliers will mix a small amount of opposite aileron with the rudder to cancel out the rolling tendency during knife-edge.

If you're thinking about using computerized mixing to minimize certain unwanted tendencies, you need to first understand that everything in aviation is a tradeoff. A mix that a pilot puts in may help the maneuver for which it is

intended, but it may also turn out to be contrary to what's needed during another maneuver or cause a deviation somewhere else that otherwise would not have existed. You must mix prudently.

Sample Travel & Expo Rules-of-Thumb			
Aerobatic ( Low / Normal ) Rates		3-D ( High ) Rates	
<b>Deflection:</b>	<b>Expo:</b>	<b>Deflection:</b>	<b>Expo:</b>
Aileron 10-15 °	Aileron 0-5%	Aileron 30 °	Aileron 50%
Elevator 10-15 °	Elevator 0-10%	Elevator 45 °	Elevator 50%
Rudder 20-30 °	Rudder 0-10%	Rudder 45 °	Rudder 50%
Linear = Predictable		Exponential	

The process of mixing typically unfolds when a pilot detects some negative tendencies during certain maneuvers. He or she then attempts to eliminate them with different mixes. As more maneuvers are introduced, the pilot starts running into situations where the deviation that he or she wants to remove is actually caused by an earlier mix.

What follows are hours of experimenting to determine which mixes stay, which need to be reduced, which need to be removed or reversed, and when it is time to take the initiative to correct yourself (Figure 8).

Figure 8. Exhibit A: Holding in left rudder during knife-edge flight results in the airplane also gently rolling left. Mixing a small amount of right aileron with left rudder cancels the roll tendency during knife-edge.

Unless you intend to only fly a few maneuvers, the most efficient and effective use of programmable mixes is to mix no more than 5% to 10% (15% maximum).

Limiting your mixes to these percentages will hopefully make your flying easier without having too much impact on other maneuvers or causing you to backtrack as your repertoire increases.

## Mixing Summary

Many unwanted tendencies are held in check at higher speeds, and only show up when the airplane is flying slower. Some tendencies show up at higher throttle settings, but not when the throttle is low. Many mixes are only appropriate at certain airspeeds and throttle settings. This partly explains why pilots who look to mixing to take the place of developing better flying skills experience little or no long-term improvement.

Figure 9.

A person could spend a lifetime flipping switches and trying to program complex mixing curves in an attempt to eliminate unwanted tendencies, but at a certain point the returns for all of that effort are negligible. At some point you will have to settle for being close on your setup and focus on improving your flying skills.

## Setup Conclusion

A person can travel across the country and observe fliers involved in an endless cycle of dialing the corrections into their radios that they could easily be making—only to have to keep repeating the process each time conditions change, a new maneuver grabs their interest, or a different airplane is flown. Radio programming has become their hobby!

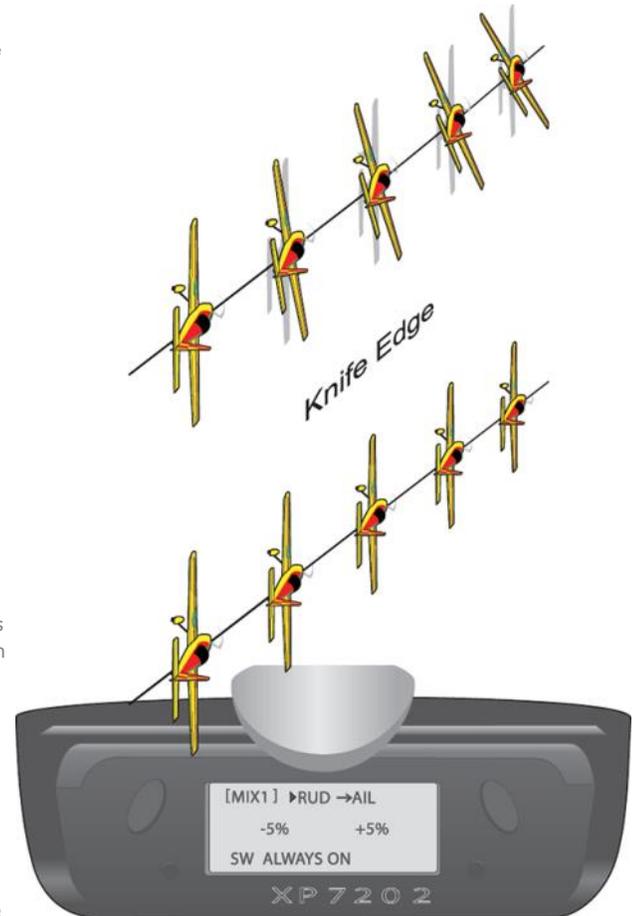
Often, it no longer even occurs to people that sometimes the simplest and most effective thing that they could do to improve their flying is learn how to make corrections. Mixes can prove helpful, but nothing will have more impact on your flying than your flying skills.

Happy flying.

—Dave Scott

[1usrdfs@gmail.com](mailto:1usrdfs@gmail.com)

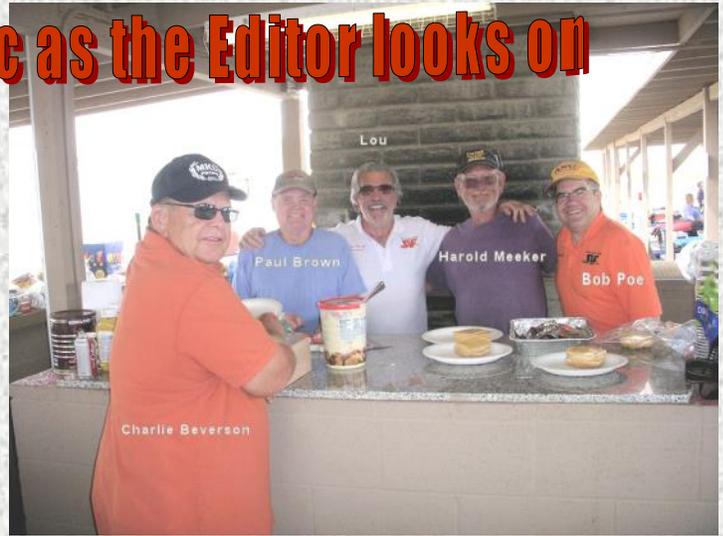
Dave Scott is a top full-scale aerobatics competitor, professional RC air show pilot, founder of the 1st U.S. R/C Flight School, and author of several RC flight training manuals. His books and articles feature accelerated training techniques that he developed while instructing more than 1,200 RC pilots during his school's four- and five-day courses. More information about Dave's books and flight school can be found at [www.rcflightsschool.com](http://www.rcflightsschool.com).



# The Catus Classic seen by Dan Bott



# The Cactus Classic as the Editor looks on



**SVF**  
Sun Valley Fliers



# Cactus Classic Banquet





# NAVY BLUE FIGHTER PILOT

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<http://www.vintagewings.ca/VintageNews/Stories/tabid/116/articleType/ArticleView/articleId/471/Navy-Blue-Fighter-Pilot-Episode-Two.aspx>



**VIDEOS and Websites Links**  
**Click on to view video, website**



**Jack Link's Jet Waco "Screamin' Sasquatch"**

[https://www.youtube.com/watch?time\\_continue=14&v=U91rAWbD2Wc](https://www.youtube.com/watch?time_continue=14&v=U91rAWbD2Wc)

**Two Police Helicopters Destroyed**

<https://www.youtube.com/watch?v=qHMhsD8OFCs&feature=youtu.be>

**Blue Angels**

<https://www.youtube.com/watch?v=ZUakHZt3xbU>

**Blue Angels**

<http://digg.com/video/blue-angel-takeoff>

**Radioman Flyer (2017)**

[https://www.youtube.com/watch?time\\_continue=18&v=vJX\\_Qz\\_4M9I](https://www.youtube.com/watch?time_continue=18&v=vJX_Qz_4M9I)



*My thanks to those who passed this info on.*



**APRIL 2018 SVF Birth Day Boys**

Rachel Rodriguez  
Gerhard Gallifant  
William Stiving  
John Olejniczak  
Robert Bayless  
David Zhang  
Tony Holden  
Caleb Lattin  
Bill Heuermann  
Mark Overhage  
Nate D'anna  
Richard Hanson  
Wayne Layne  
Spencer Key  
Steven Shepler  
David Allee



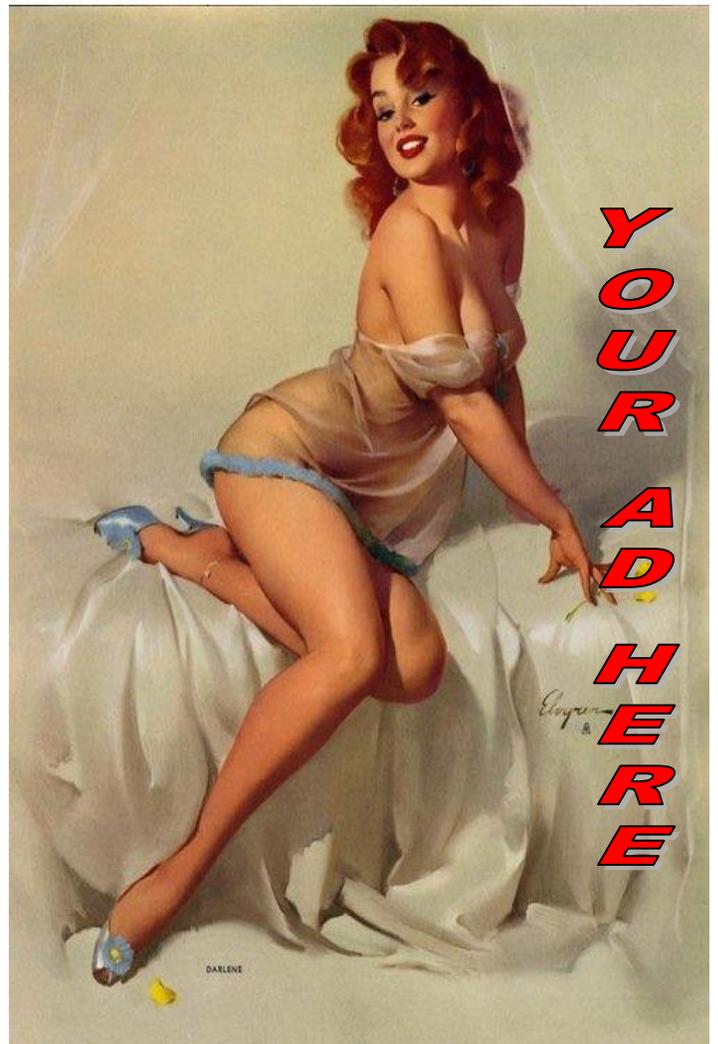
**Duncan's R/C**  (602)347-5518  
7146 N. 35th Ave.  
Phoenix, AZ 85051

**Mon-Fri 9:00 AM — 8:00 PM**  
**SAT 10:00 AM — 8:00 PM**  
**SUN 11:00 AM — 6:00 PM**



8058 N. 19th Ave. 602-995-1755 Phoenix  
M-F 9:30-8PM, SAT 9:30-6PM 11-5PM  
4240 West Bell Rd. 602-547-1828 Glendale  
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# THE SLOW ROLL



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Andrew Schear, Vice President  
Nate D'Anna, Treasurer  
**Robert Poe**, Secretary  
Safety Officer Ernie Mack

**Bobby Santoro**

Website Supervisor

Please check your  
Membership list for  
Phone numbers.



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