



HI-SKY R/C FLYER

February 2011
President: Chris Rutter
Vice President: Henry Smith
AMA Charter Club #851

Volume 40 Issue 2
Treasurer: Ed Anderson
Secretary: Ralph Gillette
www.hiskyrc.com

Dues are due for the year 2011. Please plan to be present and have your 2011 AMA card.

Meeting Notice:

The February meeting will be February 1, 2011 at 7:00 PM in the First Baptist Church Activity Building located at the corner of Garfield and Louisiana streets.

HI SKY R/C Club Minutes: January 4, 2011

Meeting was held at the First Baptist Church.

Meeting called to order at 7:15 PM by President Chris Rutter. 21 members were present with 2 guests.

Minutes: Minutes were approved as published in the newsletter.

Field Report: Jim Tarrt reported that the field looks pretty good, particularly since all the grass and weeds are pretty much dead due to the cold weather. Going to replace the barrier fence before the flying season gets underway. Will have a workday later in the year when it starts to warm up. Will spread the caliche later this year.

Safety Report: Everything has been safe since there

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Give Me Exponential Rates

By Matthew George

From the Northern Utah Radio Control Aircraft Club

I wanted to take a few minutes and talk about the use of exponential rates as supported by most of our RC transmitters. After getting back into the hobby over the last several years, I'm surprised at the slow adoption rate (no pun intended) of using exponential rates.

I have even heard recommendations that you shouldn't use exponential rate features on your radio. I can tell you by experience, that any pilot serious about becoming accomplished in aerobatics will make his life much harder if he tries to fly precision maneuvers without incorporating exponential rates into his control surface throws. I am of the opinion that almost any aircraft should be set up with exponential rates on the control surfaces. You will immediately see an improvement in your flying once you understand and start dialing in exponential rates for all your aircraft. Trainers to unlimited IMAC birds, gliders, sport planes, flying lawn mowers, etc ...

What is the definition of using an exponential rate on a control surface? Exponential rate is where the servo movement is not directly proportional to the amount of control stick movement on your transmitter. Over the first half on the stick travel, the servo moves less than the stick. This makes control response milder and smoothes out level flight and normal flight maneuvers. Over the extreme half of the stick travel, the servo gradually catches up with the stick throw, achieving 100% servo travel at full stick throw for aerobatics or trouble situations.

All the newer radios support this feature and the best part is the fact that no physical change is required on the aircraft. It's a simple matter of programming your radio to use exponential rates on some or all of your control surfaces including your throttle.

Have I convinced you to give expo rates a try? It's not scary; I promise. Pull out your transmitter manual and start reading. It's usually a simple matter of scrolling through your on-screen setup menu and finding the option to set expo for each control surface.

There is only one caveat I know of, if you have a Futaba radio, make sure to dial in your exponential

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hasn't been much flying over the holidays.

Treasurers Report: We have money in the checking, savings and CD accounts. Next major expenditure will be for the caliche.

2011 DUES ARE DUE

Activities: Established some dates for activities in 2011.

Fun Fly	April 16 th
IMAC	May 28/29
Fajita Fly-in	June 18/19
Pylon Race	July 2 (Fly

what you bring)

(Cook

what you bring)

Calling all Hogs	August 20/21
Fun Fly/Pylon Race	Sept/Oct
Electric Fly	Looking at a

one day, Sunday, in October.

Old Business: Sending Tom Kuhn a check and membership to cover his mowing the field.

New Business:

Ric Baucus has been appointed Membership Chair by President Chris. Approved

Matt Allen has volunteered to talk to AMA about help in looking for a new field. Nothing happening at the old field, but Matt is doing some forward thinking. Bruce is going to talk to Gilbert about cost of getting some HiSky Tee shirts printed up.

Comment was made that it would be a good idea to have some signs installed showing where the field is located. One on Rankin Highway and one at the turn-in. AJ will talk to Jim Hall about getting permission.

Show and Tell:

Dennis had his EPP Foam almost indestructible electric. Built with the idea it might be kitted eventually. Dennis says it does fly well and would be a good 3D trainer.

Matt Allen showed his blue core foam P47 Razorback. Built from internet plans. Matt says there are a lot of plans available through the internet, just takes some time looking the up.

Ralph Gillette brought his Northeast Sailplanes VirusPoly. Very old plane, updated with a new brushless outrunner motor. Hasn't been flown in this

version yet.

Club Raffle:

Max 30 engine	Pancho
K&B 40	Luis
Cub Plans 108" WS	Bruce
Snap Off Knife	Mike
Snap Off Knife	Ralph
Snap Off Knife	Jerry
Snap Off Knife	Tony
Snap Off Knife	Zack

Next meeting: At the Baptist Church, 7:00PM February 1st.

Meeting adjourned at 8:45PM.

Battery Shorts, How They Occur

By Red Scholefield
From the Anoka County Radio Control Club, Coon Rapids, Minnesota

A short develops in a NiCad when conductive particulates bridge the separator or the separator itself deteriorates to the point where it allows the negative and positive plates to touch. Rarely does the short occur all at once but rather building up a very small conductance path termed "soft shorts."

In a charged cell the energy in the cell will blow away any short as it tries to develop. You've heard about "zapping" cells. The cell actually zaps itself before the short can develop. Only in cases of severe overcharge at high rates when the cells heat up significantly, can the separator melt down to the point where the plates contact each other (hard short). In this case the energy in the cell then dumps and we have what is referred to as a hot steamer, the electrolyte boils, nylon in the separator melts down and is forced by the steam through the vent.

On some occasions the vent is clogged by the molten nylon separator and becomes inoperative causing the cell to rapidly disassemble. So under normal circumstances a cell maintained at some state of charge is much less likely to short than a cell that is completely discharged.

It should be noted however, that the self-discharge increases rapidly in cells where there is a short building (high resistance-soft short) because of separator deterioration and/or cadmium migration. One other shorting mechanism is a manufacturing defect where the positive or negative collector tab bridges the opposite plate. These usually fall out before the cells are shipped or assembled into batteries.

CALENDAR OF EVENTS

See the minutes for this years planned events.

Don't forget the swapmeet/ flyin in Odessa on February 26, 2011. It starts at 9:00AM. They will serve free coffee.

The Importance of Setting Headings

By Mike Lynch

From the official newsletter of the Circle City Flyers of Corona, California

One of the first goals of flying RC is to be able to make smooth, level turns. As early as your first practice flight, your instructor will tell you to bank with ailerons, maintain the turn with the elevator, and straighten with the opposite aileron. The goal is to maintain a smooth turn with no gain or loss of altitude. The time it takes to master this first step varies from one beginner to another. And the good feeling you get from mastering this step is but one of many you will enjoy as your flying improves.

With this step mastered, you will be able to "keep the airplane in the air." However, you may not be able to enter and exit the turns you make as predictably as you would like. You may find that the airplane is flying you, wandering all over the flying field. The second step to flying is to master entering and exiting turns precisely—and the importance of this step cannot be over assessed. As you begin learning how to land, it is mandatory that you are able to exit your last turn (during final approach) in a manner that has you perfectly aligned with the runway. You can master this very important talent only by knowing how to set headings.

Practice with figure eights. Once you are relatively comfortable making smooth, level turns it is time to begin practicing more precise turns. Figure eights are excellent for this purpose because they force you to make left and right turns equally to avoid the "I can only turn left" syndrome. To begin, we recommend making left turns on your right side and right turns on your left side. This way the airplane will always be turned away from you. (Many beginners feel uncomfortable when the model is coming directly at them, even in a turn.)

At first, you may find this quite difficult. The goal is to exit each turn with the airplane heading directly toward a corner of the field (with the center of the figure eight directly in the middle of the field). You will find that you must begin exiting the turn slightly before your desired heading is reached, which can be tricky. Your first few attempts will probably not be perfect and will force you to make minor corrections; you must be quite gentle with the controls to avoid over correcting. Once you have mastered, reverse the direction of the figure eight and start again (right turns on your right side, left turns on your left side).

Always remember the importance of setting headings. As you practice landings (and even after you have performed your first solo), whenever you are having problems setting up your headings, go back and practice figure eights.

rates as a negative number. All other radios use positive numbers when setting up expo rates. I would start by static checking your control throws after you dial in some expo. Start with your ailerons and dial in about 30% expo for channel one. Now watch your aileron control throws as you move your stick on the radio. You will notice a soft, easy movement while you are at the center of the stick and as you move the stick to full left or right, the controls will begin to move faster to their current end-point setup. This will make your aileron response much more soft at the center of the stick and you will be doing full, slow rolls all across the field. When you need some quick aileron for a quick correction or faster aileron roll, you will still have the throw you need when the stick gets to its extreme position. It will make your flying much smoother. If you are using the newer faster servos, you will see much more effect by using expo rates.

So how does Matt have his radio set up? There is no exact formula, but this may give you a place to start:

My expo setting on my Composite ARF 330S for precision non-3-D flying are below. Keep in mind I have a lot of throw in my control surfaces even on low rates, so you will want to experiment and find the best settings for your aircraft. (Note: I'm using a Futaba radio, so these numbers are listed as negative. For other radios—JR, Airtronics, etc.—you would dial in positive numbers.)

Aileron: -50% (left and right)
 Elevator: -40% (up) -20% (down)
 Throttle: -38% (this smoothes out the throttle response across the whole stick movement)
 Rudder: -80% (left and right)

If you are skeptical, start with lower numbers, 0% would equal no exponential at all. Try a different setting after each flight and get to a point where you see your flying get smoother.

You have heard all the top aerobatic pilots' names: Frazer Biggs, Quique Somenzini, Mark Leseberg, Christophe Paysant-LeRoux, Chip Hyde, Mike McConville, Bill Hempel, Kenny Lauter, Jason Noll, Jason Schulman, etc. I'm not even in the same league as these pilots, but guess what all these pilots have in common? Yep, they all make heavy use of exponential rates when setting up their radios.

So pull out that radio manual and start dialing up that expo! You will be glad you did and your friends will be asking you what you did to improve your flying.

***** MUSTANG MANIA *****

An unbelievable deal if you are a hardcore fan of the legendary P-51 Mustang. I'm selling everything Mustang from a Pilot's Operating Handbook and 1/48 scale plastic model to the ultimate RC scale Mustang by Aerotech. Check out the bundle below.

In addition to the POH and the Monogram plastic model, I'm including an old Fliteglas Mustang (.60 sized, for Rhom retracts, flyable with a bit of fixin'), two House of Balsa .40 sized Mustangs, (one the highly desirable fiberglass fuse, about 80% finished and one finished, with a minor repair needed to install the retracts), one House of Balsa Mustang kit, one Dyna-Flite Mustang (about 60% finished, .60 sized), and, the queens of the fleet, a Top Flite 1/5th scale Mustang complete with Hi-Tec Eclipse radio, Moki 2.1 engine, ready to fly, and an 100% dead nuts 1/5th scale Aerotech Mustang, about 80% finished, with ALL the bells and whistles, including highly detailed cockpit, pilot, sliding canopy, four-bladed display prop with extra spinner, highly detailed Mustang wheels and tires, retracts with scale gear legs, functioning inner gear doors, drop tank sway braces, ALL rivets and panel lines in the exact right locations...the ultimate Mustang. I intended to use the Top Flite Mustang as the "trainer" to break in the radio and engine and so will only sell them as a pair. **ALL OF THIS FOR \$2750.**

Also for sale:

- 1) Spitfires galore...A Spitfire package including a Dave Platt Spit Mk. 12 kit (88 inches, ultimate Spitfire model, no longer available), a Top Flite .60 sized Spitfire IX kit no longer available, and the ultimate ARF, a Spitfire Mk. 24 by Kondor Model Products, 80 inch wing span, beautifully built and painted, \$450 retail, Literally a steal at **\$600** for all three.
- 2) Top Flite P-39 Airacobra kit, no longer in production, .60 sized with interior kit included. **\$75**
- 3) A true classic collectable kit, a Jetco/Sig PT-19 for .45 to .60 engines, very scale; a builder's kit. **\$100**
- 4) For you EDF fans, an F-4N Phantom, complete and ready to fly and an A-7 Corsair II, also complete and ready to fly. Both for **\$200**
- 5) A Sig "Kadet Senior," 80 inch wing span, with K&B .40, radio (needs Rx and Tx battery packs replaced), a great three channel trainer, almost ready to fly... **\$120 OBO**
- 6) A real unusual pairing, a Dyna-Jet pulse jet engine and a Dooling .29 speed engine, **\$80 OBO**
- 7) Two Guillows stick and tissue classic display models, built, a B-24 Liberator and a B-17 Flying Fortress, **\$5 each**
- 8) NIB OS.26 four stroke and NIB Cox .020....rare to find NIB...**\$75 for one \$40 for the other**

So, why am I selling? After 55 years in the hobby, the flame just doesn't burn as brightly. Alfa Models and flying at the park is about all I can do these days, so here is your chance to get some really good scale stuff at a great price.

I'll part out everything but the two big Mustangs: they need to go together. Best to reach me via email at SNJ24@att.net. Bill Coombes

From the Robbins Nest: Indoor Electric Event Update

The TINY, March 4 -6 San Angelo, TX. This indoor venue has become one of the largest and enjoyable events in Texas, and maybe even the Western US! Usually about 50 – 70 pilots show up to show off their new creations. I'll bet even more folks will make the trip to San Angelo. This year 3D Hobby Shop, (Fredericksburg, TX, Ben Fisher, owner) is sponsoring the event, and many surprises are guaranteed. The San Angelo club always does an excellent job running an event. Mark Greer and Company have a great raffle, excellent contests, and wonderful food, just to name a few. The San Angelo club members are a great bunch of folks, and put their flying guests first. Even if you have never flown indoors, and don't plan to fly, you still should consider going down for a day to see what it's all about. Folks from numerous states will be bringing their best, and newest designs and competition planes to this one, and you don't want to miss out on all the fun.

SPEF Annual Indoor Fly-In, April 22 – 24th, Plainview, TX. This is an event that just keeps on giving.....(flying time, that is.....) If you have never flown indoors before, or maybe just getting started, then this is a great event to attend. Hosted by the May family, Royce, Reagan, and Britton really know how to extend southern hospitality to the guest pilots. You won't meet a nicer bunch of pilots, full of aircraft knowledge, and always willing to help anyone with anything. This venue measures about 300' long x 145' wide, x 27' high, which provides tons of open flying space for the beginner and seasoned indoor pilot. Usually attended by 30 – 50 pilots, there is always room to put a plane in the air. Stick time is what it's all about, and at this venue, you can fly till your thumbs start to hurt. Some of the best and creative designers around attend this fly-in, so you are sure to see some "never before seen" planes taking to the air for the first time. You might even consider this the "AREA 51" of indoor flight, because I can assure that a lot of new and very creative designs have taken to the air for the first time here in Plainview. When I say everything, I'm talking about 6' – 8' giant B-17's, B-36's, C-47's, A-10 tank busters, just to name a few. Make plans now to attend. This is one of the most "user friendly" flying events around. Very relaxed atmosphere, calm air, and friendly folks make this a must attend venue.

Tentative Event The Horseshoe, Sunday, October 23, Midland TX. We are currently working on a one day indoor fly-in at the Horseshoe. Our past events were hugely popular, so by popular demand, the Horseshoe event is back! The flying area is about 350' long, 125' wide, and 65' tall! With this much flying area available, it's hard not to have fun! We should be able to fly from 8 AM to 11 PM, and with this much airtime, it will definitely be worth the trip to attend.

The only time the Horseshoe was available was for one day, so the club decided to work with this date, and bring the Horseshoe fly-in back. A survey of local and surrounding area pilots has already indicated that 30 folks would attend, so I feel certain that this will be a well attended event. We'll have a raffle, and lots of flying time.

We'll keep everyone informed about our progress, so stay tuned, as this event comes together.

As with all events, check ahead to confirm dates and times, before driving 5 hours.....!

Keep it low and inverted, Dennis Robbins

3Depp yak 55 \$85

Ready to Fly (less receiver)



Includes the following: Turnigy 2730-1500 motor, Turnigy 10A plush ESC, 1-Futaba S3114 servo (ailerons), 2-Hitec SH-55 servos (rudder, elevator)

New in the box Manta kit



\$45

This kit is made of 3mm depron, and is a great indoor flyer. Color scheme will be the same as photo above. Retail price was \$79

Call Dennis Robbins for details 687-5663