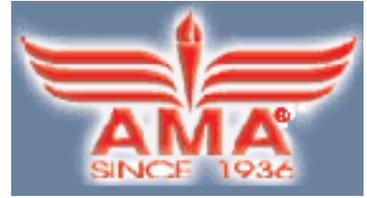


Springfield Radio Control Flying Club



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AMA CHARTER CLUB 394

JULY 2006

VOLUME 18 NUMBER 7

NEXT MEETING

**Thursday
July 6th
The Library Center
4653 S. Campbell
room B**

DUAL RATES - the Good, Bad, and Ugly

by Clay Ramskill

Usually found on radios with 6 or more channels, dual rates allow you, with a flip of a handy switch, to change how much

servo response you get from a movement of your control stick. There is a switch for each channel involved, and an adjustment for each which allows you to "dial in" how much less response you'll get with the dual rate "on".

Dual rate use is fairly simple - with the dual rate "off" you get normal response; that is, full servo rotation with full stick deflection. Turning dual rate "on", you get only a certain percentage of the servo rotation you would normally have had at any stick deflection. That percentage is what you control with the adjustment on the transmitter. This is a nice capability - your plane can be set to be wildly responsive for aerobatics, yet with dual rates on, you can still fly very smoothly, for landing, for instance. Pattern fliers use this a lot.



King George Enjoying A Day At The Field.

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2006 Events Calendar

July 29	Float Fly Practice, Lake Springfield
Aug 12-13	Annual Float Fly, Lake Springfield
Sep 9-10	Annual Pattern Contest
Oct 6-8	Annual Heli Fly
Dec 7	Christmas Party

Springfield RC Club Minutes for June 2006. Don Bordwell, Secretary

The June meeting of the Springfield R.C. Club was held on June 1, 2006 at the Library Center on South Campbell.

The meeting was opened at 7:00 PM by President Doug Bennett.

Minutes of the May Meeting –
As Secretary Don Bordwell was absent, Doug Bennett indicated the minutes were printed in the newsletter, and asked if anyone would like to have them read. Motion was made and seconded to accept the May meeting minutes as printed in the newsletter. Motion passed.

Treasurer’s Report – David Campbell

David reported that we currently have 71 paid members, 16 of which are new this year. Doug noted that payment for the field-mowing is up-to-date and we have no major expenses pending, so our budget looks good at this point.

OLD BUSINESS

Trash Removal –

We still have no one to pick up the trash at the field. Ralph Todd volunteered to take care of it this summer on a trial basis at no charge to the club. However, members at the meeting agreed that all club members should take out all trash brought in, especially fuel containers.

Fun Scale Contest –

Doug reminded everyone of the Fun Scale Contest scheduled for June 3. There was a discussion of the rules, judging, etc.

NEW BUSINESS

Field Concerns –

There was a discussion of trainers/trainees utilizing large amounts of flying time at the field, by making several consecutive flights. Since other pilots prefer not to fly when someone is in training, the amount of time available for others to fly is limited in a situation like this. Also, it was noted that anyone, including trainees, must present evidence (e-mail confirmation, fax, or card) of the AMA membership before flying.

Another area of concern was dogs running loose at the field. Members agreed that, due to safety concerns for dogs and humans, no dogs should be on the flight line or in the pit area, and all should be kept on leash.

Barry Harper, with input from other Club members, will prepare an article on courtesy and safety for the next newsletter.

Float Fly

Doug indicated that the Park Board has given us a green light for the Float Fly, which is scheduled for July 29. It will be mid-July or later before trail building at the Lake Springfield area will begin, so it should not impact the Float Fly event.

City-Wide Flying Field

Doug reported that he has not heard back from most of the members of the group regarding the city-wide RC air park. Club members felt, however, that our club can still bring forward a proposal, and should do so. Doug asked for Club members who might be interested in working

on this to let him know.

Heli Fly

Because of the confusion and questions following last year’s heli fly, members suggested that Jon White, as organizer of this event, be asked to submit a detailed plan and budget proposal for the heli fly, with all expenditures to be approved by the Club in advance.

The meeting adjourned at 8:05 PM.

Respectfully Submitted,

Nancy Schanda

WE’VE SEEN several bloody fingers at the field in the past several weeks.

Keep in mind the tips of our props are traveling at very high speeds.

The chart below shows the various prop tip speeds based on prop diameter and rpm. Fingers beware!

Diam	RPM	
MPH		
9	13,000	348
10	12,000	357
11	12,000	393
12	12,000	428
14	10,000	416
16	10,000	428
18	9,000	428
20	8,000	476
22	8,000	524
24	8,000	571

Barry Harper

COURTESY

C – Consideration for other flyers is the minimum expected. Demonstrate more than the minimum.

O – Overlook personalities. It's not about persons, it's about flying model airplanes. Flying requires quick reflexes. The reflexes of a person upset do not function as quickly. This creates a potential safety hazard! Stay cool.

U – Use common sense (if you don't have any, get some or find another hobby!) The other guy's safety depends on it.

R – Respect toward our fast moving projectiles is necessary. Apply this to the one who is in control of it as well. Your safety is in his hands too.

T – Time – Don't hog the air, allow others the opportunity to have a turn at the air before flying another round.

E – Enjoy your time at the field – it's only a hobby you know. Mix. Get to know and appreciate all the other club members. You might learn something!

S – Safety is always first. Obey all the AMA and field rules and regulations

Y – You are a member of an organization. With that come privileges and responsibilities.

Exercise your privilege and responsibility to see that others obey all AMA and club safety rules and exercise courtesy.

Things observed recently that are of safety concern:

Models should not be taxied toward and from behind or along side other pilots on the flight line. A wrong slight nudge of the throttle lever and a model could stab a pilot in the leg, or worse, in the back. It is best models be carried to and from the runway.

Flying models requires intense concentration. Sudden loud noises from the pit area or shed are terribly distracting to those on the flight line and create a potential safety hazard.

Flight line courtesy – DO NOT walk directly in front of another pilot.

This momentary loss of eye contact with the model can be very dangerous!

Trainers: please limit training flights during peak/busy flying days.

Flights lasting much more than 10 minutes are really too much for trainees to handle anyway.

There is a new club regulation all dogs must be on a leash and remain behind the short safety fence.

Be sure to have the frequency pin before turning on your trans-

mitter. Or, have sufficient money in your pocket ready to pay for the damage it can cause.

Other courtesy issues:

Changes in the sound of an engine in flight is very important to the pilot. Use the grassy area on the opposite side of the parking area from the shed for extended engine ground testing, break in runs, or tuning.

Smokers: please smoke down wind of those of us who don't. You may not care about your lungs, but we care about ours.

For their own safety, children must be supervised at all times and remain safely (and quietly) behind the short safety fence or in the shed if not involved in a flight activity.

Since other members generally don't like to fly when trainees do, share the air. If the trainee is not a club member, minimize flights. They don't pay for air time, we do.

We don't currently have anyone officially designated to remove trash.

Please take your empty fuel bottles home for disposal. The cigarette butt receptacles are exactly for that: cigarette butts, not trash. Do we have a volunteer to clean them????

Barry Harper



My brother-in-law (Garry) and his Citation I. Garry is a former Navy F-4 jet jockey. The approach view from the right seat. As we readied for takeoff he told me to take her up then climb to 5000 feet. So I did. It was great to fly again... and a jet at that! Barry

From page 1

THE GOOD. You could set your plane up such that with dual rate on, the elevator travel isn't enough to stall the plane, allowing smooth, stall-free flight. Turning the rate back up then would allow such maneuvers as snaps and spins. Some folks use dual rates for landing only, to stop overcontrolling at slow speeds. Dual rate capability is super for test flying a new plane, when you're unsure of just how responsive the plane will be. The possibilities are near endless.

THE BAD. The radios with dual rates cost extra bucks. You have more switches to twiddle with, and to check before flight. And in dual rate, you're not using all your servo travel - they will not be as accurate as they are using full travel, nor as powerful.

THE UGLY. The problem is, that you get used to having a certain response from your plane, and expect that response all the time. With dual rates in use, you must remember whether you're "in" or "out" at all times so you know what responses your plane is capable of. A BUNCH of planes have been crashed that way; the pilot wondering why his plane wouldn't pull out of a loop like it normally did! Or on dual rates, the plane couldn't respond quick enough to overcome some turbulence on landing.

The Bottom Line. If you have dual rates and use them, you've

got to know at all times where those little switches are set. If you don't use them, set them such that if the switch is turned on, you still have 100% travel; that way, it doesn't matter where the switch is. NEVER set the rate such that the plane is unflyable or only marginally controllable with dual rate "on". You all know how Murphy's Law works, right?



**Fuel-Cooled Engines?
-by Clay Ramskill**

Our model engines have been called this- and with some reason!

We all know the consequences of taking to the air with our needle valves set too 'lean'; we get airborne, the engine puts out great power but eventually sags, then dies. Actually, the little motor didn't just die because it didn't have enough fuel to run on. What REALLY happens is that the engine runs too hot at the lean mixture setting, and SIEZES due to excessive internal friction.

Generally this seizure occurs at the flash point of the oil we are using in the fuel. The flash point is the temperature at which the oil burns, at about 400 degrees

Continued on page 5



Barry's new Lanceair, it is electric - from the fuselage to the wing tip only 20.

From page 4

for most synthetic oil. When the oil burns, it doesn't lubricate, and the friction in the engine goes up dramatically, causing even more heat, causing even more of the oil to burn, causing... well, you see the point. So what we have to do is run the engine with a rich fuel-air mixture, ensuring that all of the fuel that goes through the engine does NOT get burned! That extra fuel will keep our engine cool. How?

Most all of us did a little experiment in High School, converting water to steam. We heat up a pan of water to the boiling point- and then must supply a LOT more heat to get the water to turn to steam. The same principle applies to the alcohol we're burning in our engines. If there's

too much of it, it won't all burn; but the rest is turned into a gas (alcohol steam?), absorbing and carrying away considerable heat energy from the engine. Alcohol, by the way, is very 'good' at this process. Pour a bit of fuel on your arm on a hot day - you can instantly feel the cooling effect as the alcohol evaporates into the air, carrying away some of your body heat.

Oil in your fuel also carries away heat, assuming that it doesn't burn. Although the oil doesn't convert to gas, it will still carry away some of the engines heat as it passes through. So, the more oil in your fuel, the cooler your engine will run, not only from the extra lubrication, but also from heat transfer into the exhaust. Humid air also gives a cooling boost- the water vapor doesn't burn, and carries some

heat out of the engine.

OK, we've all had the 'run your engine a bit rich' bit drilled into our heads at every opportunity. Aside from embarrassing dead stick landings, what's the big deal? After all, the engine will start right back up, and runs fine. True. But go back up to the 'seizure' part of this article. Note that the seizure comes from lack of lubrication. Every time we let our engines get too lean, we are shortening its life span, from extra wear.

Getting that little bit of extra power, by going a click or two leaner, may well be costing you. Think about it - run rich, 'waste' some fuel = bucks. Run lean, seize engine often = BIG bucks!

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