



SMRCC

P. O. BOX 9512 SHAWNEE MISSION, KS 66201
Visit our Web site at <http://smrcc.tripod.com/>

NEXT MEETING:
Thursday, June 12th, 2003
MEETING PLACE:
SMRCC Flying Field
TIME:
Beginner's Corner 7:00 p.m. - 7:20 p.m.
General Meeting 7:30 p.m. - 9:00 p.m.

SHAWNEE MISSION RADIO CONTROL CLUB

JUNE 2003

AMA CHARTER No. 312

President

Jim Overesch
438-5866

1st VP of Field Maintenance

Rich Waeltermann

2nd VP of Trainer Night

Sarah Thorup

Treasurer

Sarah Thorup

Secretary

Mac Strader

Video Librarian

Mark Smith

Historian

Frank Haas

Newsletter Editor

Shane Sternecker



From your club President

It sure has been a great spring! The rain has been just right and even the wind has not been too bad. As Confucius said "To learn to fly in wind, one must fly in wind" or something like that. Speaking of flying, I have noticed some people have been very economical with the safety rules by taking way too many chances, and also, not being very courteous toward other flyers. Safety has always been a top priority at SMRCC, we have an excellent safety record and as President, it is my responsibility to keep it that way. Everyone by now should know the safety rules, If you don't, they are posted on the web page and on the shelter wall. Everyone should review them from time to time. Remember, A serious injury caused by carelessness or stupidity could not only cost someone there life, but could jeopardize the very existence of the field. After all the time, money and hard work a lot of people but in to build that field, I will not have some clown get it shut down. I would hate to think that I would have to ask someone to leave, but if that is what it takes, so be it.

I would like to thank our VP of dirt, Rich, for the great job he is doing keeping up the field, and thanks to all of you who pitch in and help keep it up. As Rich said in is column, this is everyone's field, and if everyone helps out a little then we can get the work done sooner and do what we really want, FLY!

As Rich also mentioned, our club tractor is taking a beating, This is to be expected as we have more grass to mow, so it has to work harder. We still have a \$2000.00 payment due to Shawnee Mission Parks, So replacement may not come this year, unless we have to.

We are looking at machines better suited to the job but they are not cheap, and we are discussing finance options.

Thanks again to everyone who helps keep this club going, and as always, your suggestions and help are always welcome'

Jim Overesch
President.

2003 Dues are now payable

Please contact Sarah Thorup, Treasurer to arrange payment of you 2003 dues to SMRCC. Make sure to give a copy of your 2003 AMA Card and any updates for your e-mail or mailing address or phone number changes.

Mailed Newsletters

Starting with March's newsletter, no newsletters will be mailed unless the dues of been paid. Mailing newsletters is a big expense to the club. All e-mailed newsletters will remain unaffected.

Beginners Night

at the Shawnee Mission Radio Control Club Field. Every Tuesday - 5PM until Dark.

Club Officer Pictures

will be taken and added to the next newsletter.

Soloed Students for May



Jeff Whitacre

From The Flight Line

By Rich Waeltermann VP of Dirt

It's been a great month for flying and for growing grass. I've moved the old concrete roller up closer to the field and have been dragging it with me as I cut grass. As a result there has been some slight improvement in the grass runway especially along the edge of the covered runway out to about 15 feet onto the grass. It is almost taxi worthy. Beyond that point there are still places where even the tractor wheels aren't able to smooth out the ride.

I'm looking for a nice gentle rain to come through to moisten the ground enough so that the roller will have some authority over the more stubborn humps and bumps.

Speaking of humps and bumps our tractor is really starting to show the wear and tear from the years of having been run over the not so carpet like terrain we subjected it to. We have had to replace the drive belts twice, repair the carriage assembly that keeps the mower deck in place, replace the hardened pin that keeps the front axle in its pivot hole and the last time I was cutting the electric clutch assembly went out along with the belt that drives the blades. It seems that I break it and Jim fixes it. Thanks Jim again for being so steadfast in your support of the field.

The short story is that pending a quote on the clutch replacement the mower is maybe costing us more in repairs than it's worth. Again the underlying cause aside from normal use for all these repairs has been predominantly the conditions that this machine has been subjected to and the fact that it really wasn't built as a rough terrain vehicle.

Jim and I are looking at some options that include possibly replacing this mower with a small tractor that is better built to accept the conditions and frequency of use that our equipment gets subjected to. During the next meeting I will make a report on our findings.

I'm not going to be able to perform my weekly chores on the field for the next few weeks since I'll be recovering from some minor surgery.

We need some "VOLUNTEERS (definition: individuals that raise their hand and offer their time and assistance)" to help us keep the grass under control. I'm not a very diplomatic person so here is my best attempt. This is your field, I see many able bodied folks flying and enjoying it every time I visit. I even have folks flying over me as I work on the field. When there is work that needs to be done and you see it i.e. picking up miscellaneous stuff that blows in, trimming around the fences or grass cutting and general maintenance. Please take the initiative grab a mower, the weed whacker or the stuff and pitch in.

To the select few (very few) that have been helping thanks to each of you.

If all of us that are able pitch in the total commitment would turnout to be on the order of having to be available maybe three or four times during the season (during the dry months the workload drops significantly).

There is more to this hobby than Building and Flying airplanes. Field maintenance comes as part and parcel with the fun stuff.

One last safety point. When there is ground maintenance being conducted anywhere north of the safety fence "THE FIELD IS CLOSED FOR FLYING" until the work is completed.

See you at the field
Rich

Let's Talk Basic and Beyond

By Rich Waeltermann VP of Dirt

I've been working on controlling my plane over the last couple of months and I've come to the conclusion that I will be working on it quite a bit. Even flying that consistent line proves to be a challenge in the varying wind conditions at the different fields where I fly. It's not easy especially when I compare my flying to others that have been flying for quite a while.

As I go from field to field here in the area and observe others I've been learning a lot by watching and in many cases asking questions or being with the more experienced flyers as they fly their planes. One thing I took note of while watching a few guys working on their advanced patterns for competition was that they always have a caller/spotter along side of them. The caller plays a really important part in the overall quality of the flyers pattern attempts.

I stood behind a flyer and his caller a couple of times and just listened to what was going on. In many cases the caller was flying the plane as much as the flyer was. The folks I observed were practicing a square loop (one of the harder maneuvers they tell me). This maneuver involves coming into the center of the box (this is the area in which a flyer must conduct his designated pattern/patterns usually a sequence of three maneuvers it's a rectangle that extends both horizontally and vertically in front of the judges) on the line and just beyond center pulling up into a "perfect" vertical line flying vertical to make the first side of a square box, pulling over the top inverted starting the top line of the box and at center performing a full roll then pulling down into a "perfect" vertical down line and at the base of the entry line (the bottom of the square) pulling back onto the original line and completing the square. It really looked impressive to see this one being done.

But the more impressive part of the experience for me was listening to what was going on between the caller and the flyer. It went something like this. The flyer entered the pattern box. Once the flyer was in the box I heard this "good line.....centered (indicating that the flyer was in the center of the box).....pull (the plane gently pulls into a vertical line....a little right rudder your not quite vertical in flight.....pullgood line as the plane goes inverted at the top of the loop.....roll now (the plane does a perfect full roll).....pull (the plane starts its down side of the loop gracefully) good line.....then pullllll.....good one that was a 6 or a 7 easy! and the flyer says whew!! Yeah but can I do it again" as he flies back to the entry point of the box to try again.

I guess what I got out of this experience is that while we are flying and working on that control thing it is always good to have a second set of eyes (preferably experienced eyes) looking with us and making corrections as we fly. My son and I worked this way for the remainder of the day while we practiced the line and takeoffs and landings. It really helped. We were able to pick out some trim issues since our planes weren't really tracking well in the air and needed some rudder to correct for this. And our approaches for takeoffs and landings became very consistent.

So, since we have still yet to have our first field meeting. I thought I would leave you with the LINE and the ROLL to work on. Then I suggest that while you are practicing them you recruit a caller/spotter to work with you and see if it doesn't make things more fun and give you better results.

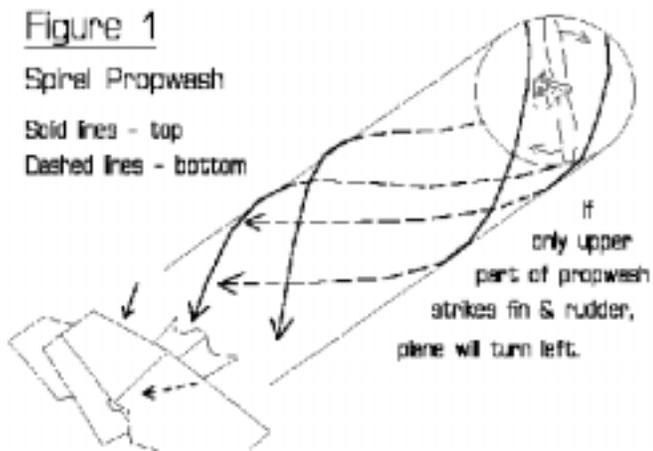
Prop Effects
by Clay Ramskill

Often as not, when our plane does something really weird, like a groundloop on takeoff, we say, "the torque got hold of it; there just wasn't anything I could do!". Even in magazine columns we see something like: "the engines torque was pulling me to the left, so I had to jab in some right rudder".

These folks are right in that the actions of the prop were the cause of the problem - and wrong about the culprit being torque.

There are basically four "effects" from the action of the propeller; well, five if you count the thrust! They are: spiral propwash, asymmetric loading (p-factor), torque, and gyroscopic effects. We'll look at each of these in turn.

Spiral Propwash. The prop does not throw the propwash straight back - there's some drag on the prop, and that tends to make the wash behind it come off in a spiral fashion. And the problem comes when that spiral flow meets the rudder. If the rudder/fin is mounted high, the plane will turn (yaw) left because only the top part of the spiral hits it. See fig. 1. On a taildragger at rest, tail down, this may not be the case, and even the reverse may be true because the propwash must be mostly parallel to the ground. See fig. 2.

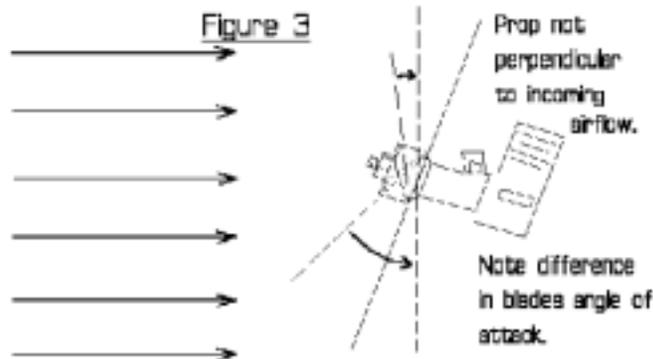


Tail Down -
fin/rudder more centered in propwash.



Figure 2
Tail Up - note that fin and rudder are above center of propwash.

P-Factor. Asymmetrical thrust is most apparent with taildraggers because it's mostly a function of the prop not being perpendicular to the oncoming airflow - but that can also happen with any plane when at a high angle of attack, like right AFTER takeoff. When the air is coming into the prop at an angle instead of square to it, one side of the prop operates at a higher angle of attack than the other, and the resultant thrust is no longer acting on the planes' centerline, but off to one side. And that makes the plane want to turn. See fig. 3. The usual case, nose high, gives us a left turn.



In this nose-high situation, prop blade on the right side (dashed lines) operates at a higher angle of attack, generates more thrust, and turns plane to left.

Prop Effects (cont)

by Clay Ramskill

Torque. Our props have a certain amount of drag - and the torque (twisting force) the engine exerts on the air is, in opposite fashion, also exerted through the engine mount to the airplane. Since all our props turn to the right, that means there is a force trying to twist (roll) the airplane to the left. Note that this force is about the ROLL axis - the torque forces do not by themselves TURN or yaw the plane as do the previous two effects. We automatically take care of this with ailerons in keeping the wings level, and it really doesn't take much force from the ailerons to do it. On the ground, all torque forces are countered by the wheels.

Gyroscopic effect. The weight of the fast-turning prop creates a gyroscope, which will resist any change in the direction of its rotating axis. This is easily overcome by the planes controls - but the more detectable gyroscopic effect comes AS THE DIRECTION IS CHANGING. As the planes direction is changing, as in a sudden pull-up, gyroscopic forces try to rotate the plane about an axis 90 degrees to the axis you're forcing it. In the example of a sudden pitch up, the gyro action from the prop will try to force the plane to turn (YAW) to the right. Don't believe it? Try it - the next time you're holding your plane nose up at full power to check your mixture, rotate the plane sharply nose up and down. You'll feel the sideways pressure from this force. In flight, it's almost negligible, except perhaps at near zero airspeed if you do a VERY quick stall turn or flopover.

So what is one to do? Answer- know what your planes characteristics are, and compensate - with THE RUDDER! Let's take an example; the Piper Cub, well known for its tendency to ground loop on take off. Here's what happens: you gas the engine, and immediately have to put in some right rudder to keep it from turning to the left, from the p-factor on the prop. With the tail down, the tailwheel gets more effective as you begin to roll, and you have to let up on the rudder. But then the tail comes up - and the fin and rudder, which were low and were getting equal right and left yaw from the spiral effect, now pop up into only the top portion of the spiral propwash. The Cub will now sharply turn left unless you are quick to shove on the right rudder. As the Cub accelerates, the fin/rudder get more straight airflow and again you must let up on the right rudder to keep it straight! Whoo! And we're not even airborne yet!

One method to tame the initial gyrations is to hold the tail down for part or all of the take off run - this keeps the tailwheel firmly in contact with the runway, stabilizing directional control considerably. A touch of up elevator does wonders here; just remember to slack off the elevator at lift off to keep from climbing too steeply.

Suppose you pull the plane off early, while very slow. You are at a high angle of attack, and the p-factor (and maybe some spiral effect, too) will try to turn you to the left again. Assuming that you keep the wings level with aileron, RUDDER is the proper way to correct the left drift. If you only correct with right aileron, the plane will be in a skid, in unbalanced flight, and you're setting yourself up for a stall/snap/crash, bigtime!

Just how much prop effects affect your planes behavior depends on the plane. A pattern-type plane is affected very little. A front engined delta, which can operate at very high angles of attack (lots of p-factor) and has a very high tail (spiral propwash), is affected considerably - you get a sore thumb from standing on the right rudder. And your planes probably fall somewhere in between those two extremes.

Understand what is happening with your plane - and learn to make the PROPER corrections (quite often with right rudder). You'll be a better, smoother pilot, and you may just save a plane or two!

Video Library

The following videos are available from the video library. If you are interesting in viewing any of these, please let Mark Smith (marksmith@everestkc.net) know and he will bring them to the next meeting. All that is required is a \$5 deposit which is refunded upon return of the tape.

Product Reviews:

- Profile Hots
- Gee Bee
- Clancy Aviation, Lazy/Super Bee

New Flyer Videos:

- Ticket to Fly
- Basics of Flight
- Panache-engines, flight training

AMA Videos:

- Pioneers
- Marvelous Minatures
- 1996 NATS
- AMA Today
- Celebration of Eagles

Hansen Scale Aviation Videos:

- Intro various Scale meets
- Vol 15
- Vol 24
- Vol 27
- Vol 30
- Vol 35
- On the Edge

How To Tapes:

- Dave Platt Black Art-Fiberglass
- Dave Platt Black Art-Weathering
- Scratch this
- ACE video on Common Sense FAQ
- Vacum Bagging
- Fiberglassing
- ModelSport about engines Vol 1
- ModelSport about engines Vol 3
- ACE video on Electric flight
- Astro Flight on Electrics
- Battery Basics-Tom Runge
- Building with foam
- Basics of fiberglassing
- Endless lift-Ultimate Soaring

SMRCC/Local Videos:

- 2/95 ACE R/C meeting
- 10/31/99 Grand Opening field
- Construction of field
- 1995 Mall show
- 1996 Freeze Fly
- 1998 Barnstormer fly-in
- Memorial Day fly-in
- 6/95 Forrest Brown Heli demo
- 5/98 build it/fly it contest

Misc Movies:

- Blue Max
- Reaching for Skies 1-2
- Reaching for Skies 3-4
- Lindbergh Great Race
- R/C Plane Crashes
- Pulsejets in Action
- Madera 1994

Pattern Videos:

- Wring it out-Vol 1
- Wring it out-Vol 2
- TOC 16th Annual
- 1997 Top Gun
- Reno Air races
- EAA 2000 airshow
- EAA 1997 airshow

RC Video Magazine:

- RC Video Magazine Vol 1-16

SMRCC May Members Meeting

Meeting **cancelled** because of tornados May 8th

Mac Strader Secretary of SMRCC

CLASSIFIEDS

FOR SALE: Traxxas T-Max Nitro R/C Truck complete with controller, extra parts and body and field accessories. Only needs new fuel and a glow igniter. \$300 obo. Shane Sternecker (ssternecker@kc.rr.com)

Have something to sell? All Ads will be run only for the newsletter they are submitted for. Place your ad here for free by submitting them via e-mail to Shane Sternecker, ssternecker@kc.rr.com. All Ads need to be submitted 1 week prior to the club meeting or they will not make it in until the next newsletter. The deadline for entries in the next newsletter is **July 3rd., 2003**

LOCAL CALENDAR OF EVENTS

Tues, June 3rd, 2003 - Beginner's Night - 5pm to dark at the field

Tues, June 10th, 2003 - Beginner's Night - 5pm to dark at the field

Thurs, June 12th, 2003 - SMRCC Club Meeting - SMRCC Flying Field - 7pm

Sat, June 14th, 2003 - SMRCC Club Fun Fly - SMRCC Flying Field

Sat, June 14th through Sun, June 15th, 2003 - KC/RC Pattern Contest - Flemming Field

Sat, June 14th, 2003 - Spring Fly-in - I-435 and Woodland Ave Exit 42 1/8 mile south.

Tues, June 17th, 2003 - Beginner's Night - 5pm to dark at the field

Sat, June 21st through Sun, June 22nd, 2003 - Hillsdale, KS (AA) Mid State Scale Classic for 511, 512, 520, 522(SO). Site: Hillsdale Lake. John Ostmeyer CD, 2916 W 113rd Ter Overland Park KS 66210 PH:913-451-1602. US Scale Masters regional qualifier. Sponsor: RC BARNSTORMERS

Tues, June 24th, 2003 - Beginner's Night - 5pm to dark at the field

Sat, June 26th through Sun, June 27th, 2003 - El Dorado, KS (C-Restricted) Planes Over El Dorado. Site: El Dorado Municipal Airport, Loren Tregellas, 3003 S Everett Wichita KS 67217 PH: 316-943-3463. Tech inspection & test flying Thursday. Races Friday, Saturday and Sunday, 9am to 5PM. RV parking on site, no hook ups. Concession stand on site. Full scale aircraft on display. RC miniature aircraft demonstration Saturday & Sunday, noon hour. Sponsor WICHITA RC CLUB

SHAWNEE MISSION R/C CLUB
P.O. BOX 9512
SHAWNEE MISSION, KS 66201



FIRST CLASS MAIL

—

—

June 2003:

Next Meeting at the ***SMRCC Flying Field***

Thursday, June 12th 7:00 - Adjournment.

Beginner's Corner will be held from 7:00-7:20 p.m. Thursday, June 12th at the SMRCC Flying Field. Join us for some great tips and learning!!

Visit the Club's website, sponsored by Mac Strader.

Photos, Event Info, Links and Club Newsletters are available online.

Make it a point to visit this site, it looks great!! <http://smrcc.tripod.com/>