Carrier Wave

Newsletter of the Phantom Flyers R/C Club

http://phantomflyersrc.com

CLUB OFFICERS	Work	Home
President – Herb Johnson	233-8178	(636) 207-9895
Vice Pres – Ed White	232-8178	(636) 207-9895
Secretary – Jim Arnac		(636) 940-0421
Treasurer – Gary Leubbert	233-0672	(636) 447-3417
Safety Officer – Jan Jansen	234-2459	(314) 921-9420
Mactivities Rep – Larry Leuschke	234-5116	(314) 537-1472

Field Manager: By Committee

Chief Flight Instructor: Al Bone (636) 723-4062

Activities Committee Chairperson - Dan Abel (314) 830-0138

Board of Directors -	Work	Home
Phil Moore	234-4663	(636) 928-5342
Ed White	232-1479	(636) 441-6431
Jim Wortkoetter	233-0735	(636) 947-1034

Send Membership Renewals to:
James Arnac
3103 Elm Street
St. Charles, MO 63301

Send Newsletter Items to:
EDITOR – Brian Kretchmar
12 Pin Oak Court
St. Peters, MO 63376

Phone (home): (636) 928-6501
Work Mailcode: S106-6405
Phone (work): 232-3195
email: briankretchmar@charter.net

April 2004

Club Meeting Dates & Location

28 Apr 04 - St. Peters City Hall, Room A
26 May 04 - Field
23 Jun 04 - Field
28 Jul 04 - Field
25 Aug 04 - Field
22 Sep 04 - St. Peters Senior Center
25 Oct 04 - St. Peters Senior Center (Note: Not typical meeting date)
30 Nov 04 - St. Peters Senior Center (Note: Not typical meeting date)
XX Dec 04 - TBD

In this issue

Notes From The Editor: *(Brian Kretchmar)*

I would like to say thanks to Ed White for his help and humor! He and Mitch Galatioto somehow tricked me into accepting this job (highly paid too!). Mitch is really a used-car salesman, and a good one at that!

Here is a little humor from the AMA National Newsletter:

Comments on life:

A day without sunshine is like ... night.
On the other hand, you have different fingers.
I just got lost in thought. It was unfamiliar territory.
42.7% of all statistics are made up on the spot.
I feel like I'm diagonally parked in a parallel universe.
Honk if you love peace and quiet.
Remember, half the people you know are below average.
He who laughs last thinks slowest.
Depression is merely anger without enthusiasm.
The early bird may get the worm, but the second mouse gets the cheese.
I drive way too fast to worry about cholesterol.
Support bacteria. They're the only culture some people have.
Monday is an awful way to spend 1/7 of your life.

from the newsletter of the
Mississinewa Skyhawks Inc.
Dave Hecker, editor
Somerset IN

This is from Neil Morse's posting on ezone: (Submitted by Jeff Brundt)

We had an interesting mid-air today at our local field. It seems that a Waco (piloted by Barbie) was going vertical at the same time that a Stearman (piloted by Donald Duck) was coming down in a spin. Unfortunately Barbie and Donald weren't paying sufficient attention to the situation, and the top wing of the Stearman smacked the Waco right under Barbie's seat. The amazing part: both pilots kept their heads and successfully landed their planes!

Check it out. Pretty amazing both pilots were able to land safely.

Safety Officer's Report: *(Jan Jansen)*

Safety tips for the new flying season:

This is a good time for a thorough safety check for the model that has been stored all winter!

1. Airframe; Broken ribs? Tail still securely glued to the fusela ge? (I have tried to fly *without* a securely glued tail, not recommended) Firewall damaged by fuel? Covering intact?
2. Control surfaces; Hinges intact? Control horns worn? All links secure? Control rods structurally sound?
3. Radio; Cycle and check batteries. Servos secure? Servo arms worn? Antenna healthy?
4. Engine; securely fastened to mount? Mount securely fastened to fuselage? *Remove prop* and inspect, if in doubt replace! Spinner can hide damage. (I have a scar to prove that this is a good idea!)
5. Wing mounts sturdy? Wing warped?

I have had problems with most of the things above with airplanes which had flown before.

Be careful out there!

The following precaution about breaking in your engine is from Model Aviation, May 2004, "Turning, Turning, Turning." by Frank Granelli.

"Before running any engine, use common sense and take every precaution. The airplane must be immobile, the propeller must be tight, all obstacles must be cleared, do not smoke, and do it outside. Wear eye and ear protection, and *never* stand to the side in the propeller arc or make adjustments from the front of the engine. *Do not reach around the spinning propeller to make needle-valve adjustments, remove the glow driver, or for any other purpose!* Make all adjustments while standing in the rear of the engine. *Please.*"

Emergency Safety Alert - Lithium Battery Fires *(From the AMA's web site)*

Lithium batteries are becoming very popular for powering the control and power systems in our models. This is true because of their very high energy density (amp-hrs/wt. ratio) compared to Nickel Cadmium (NiCds) or other batteries. With high energy comes increased risk in their use.

The principal risk is fire which can result from improper charging, crash damage, or shorting the batteries. All vendors of these batteries warn their customers of this danger and recommend extreme caution in their use.

In spite of this many fires have occurred as a result of the use of Lithium Polymer (Li-Poly) batteries, resulting in loss of models, automobiles, and other property. Homes and garages and workshops have also burned.

A lithium battery fire is very hot (several thousand degrees) and is an excellent initiator for ancillary (resulting) fires. Fire occurs due to contact between lithium and oxygen in the air. It does not need any other source of ignition or fuel to start, and burns almost explosively.

These batteries must be used in a manner that precludes ancillary fire. The following is recommended:

1. **Store and charge in a fireproof container**, never in your model.

2. Charge in a protected area devoid of combustibles. Always stand watch over the

charging process. **Never leave the charging process unattended**.

3.In the event of damage from crashes, etc., carefully remove to a safe place for at least a half hour to observe. Physically damaged cells could erupt into flame. After sufficient time to ensure safety, damaged cells should be discarded in accordance with the instructions which came with the batteries. **Never attempt to charge a cell with physical damage** regardless of how slight.

4.Always use chargers designed for the specific purpose, preferably having a fixed setting for your particular pack. Many fires occur in using selectable/adjustable chargers improperly set. Never attempt to charge lithium cells with a charger that is not specifically designed for charging lithium cells. **Never use chargers designed for NiCd batteries.**

5.Use charging systems that monitor and control the charge state of each cell in the pack. Unbalanced cells can lead to disaster if it permits overcharge of a single cell in the pack. If the batteries show **any sign of swelling**, discontinue charging and **remove them to a safe place—outside**—as they could erupt into flames.

6.Most important: **NEVER PLUG IN A BATTERY AND LEAVE IT TO CHARGE UNATTENDED OVERNIGHT**. Serious fires have resulted from this practice.

7.Do not attempt to make your own battery packs from individual cells.

These batteries *cannot* be handled and charged casually such as has been the practice for years with other types of batteries. The consequence of this practice can be very serious and result in major property damage and/ or personal harm.

—AMA Safety Committee

Modeling quote of the month

You know you're a real modeler when you arrange your shirts in the closet in two groups—the ones with CyA glue spots and those without.

from Space City Crash
Space City R/C
Mike Crotts, editor
Houston TX

Meeting Minutes, March 24, **2004** ***(Jim Arnac)***

President Herb Johnson opened the meeting at 7:00 PM with 21 members and 1 guest in attendance.

Treasurer's Report – Gary Luebbert's report was accepted as presented.

Secretary's Report – Minutes of the February 2004 meeting were accepted as written.

Recreation Report – No report.

GSLMA Report – No report

Field Manager's Report – Mitch Galatioto reported for the committee that it is time to do spring tune up and minor repairs on the red and green tractors. A group of volunteers will move them Saturday the 27th to repair shop. Tim Wortkoetter reported the ruts in the field driveway are the results of freezing and thawing not vandalism.

Safety Officer's Report – No report

Activities Report – President Herb Johnson officially thanked Phil Moore for his outstanding Swap Meet/Expo production. Phil announced that the Event was a financial success and he thanked all the volunteers that are to numerous to name. He also stated there are things that can be improved and a committee of officers and members are working to resolve those things.

Don Vetrone announced our club's "Float Fly" practice scheduled for May 15th has been changed to May 28th the day before the scheduled May 29th event. Don announced the "Wright Flyers are having their 10th Annual Float Fly Saturday May 29th from 9:30 AM to Noon at Innsbrook Estates. Don also announced the 2nd Annual Model Airplane Air Show is April 17th starting at Noon. This event is at the Wright Flyers Field. Directions: West on I-70 to exit 200, turn north, turn east on North Service road 0.2 mile, turn north on Hwy. J 1 mile, turn west on Godt Road 0.7 mile, and bear to the right.

Gary Luebbert reminded the members the "Pack 30 Rocket Launch" is scheduled for April 17th.

Old Business – There was a small decrease in the fuel price quoted to Bill Aherns and it was approved to use this surplus money to pay for the cost of constructing a fuel pump that was needed to pump fuel from the 55 gallon barrel to the members containers.

New Business – The future (off field) meetings will be at the "St. Peters Senior Center". However, the day of the week may change for some meetings. Each meeting will be posted on the web.

Dick White has 10 Phantom Flyers adjustable baseball hats at his cost of $8.00 each. If you want to buy one, call him at (314) 739-5279 or e-mail: rawpainter@netscape.net

Brian Kretchmar has been appointed as "Carrier Wave" editor.

The meeting was adjourned at approximately 8:00 PM.

Respectfully submitted, Jim Arnac

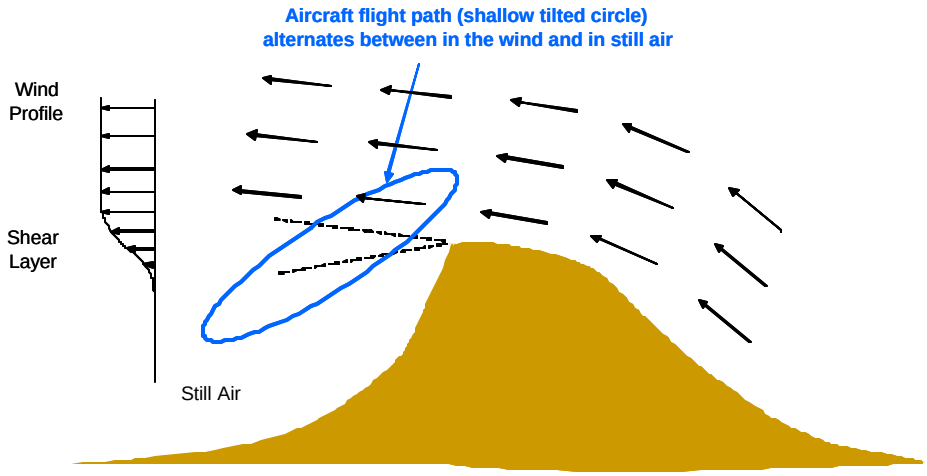
Dynamic Soaring *(Ed White)*

Here's something "new" in aviation related to RC that struck my fancy recently. Really it's just new to me. Actually of course, just about nothing aviation is new. Although he didn't call it dynamic soaring, Lord Rayleigh identified the related concepts in the middle of the 19th century. The real understanding of dynamic soaring was laid out in a paper published in the 1940's. So why is it cool? Imagine a hand launched RC **glider** (a Zagi flying wing) reaching a peak speed of over 200 mph flying at low altitude (never above about 50 feet) ***and it can do this all day long***, or at least as long as the pilot, the radio battery and the wind holds out.

For centuries sailors have observed the Albatross out over the open sea, flying at low altitudes for hours, perhaps even days, and never once flapping its wings. Dynamic soaring allows an airplane or bird to extract energy from the wind. In most cases the energy is enough to overcome energy lost to drag and keep a glider or bird flying indefinitely without propulsion or wing flapping. It's even possible make headway against the wind. The key is not just wind, it is wind shear. Wind shear occurs where the wind goes from a high value to a low value in a short distance. Dynamic soaring is made possible only by an abrupt **CHANGE** in wind speed.

Fortunately nature provides lots of opportunities for abrupt changes in wind velocity. Turbulence is a great example. Another is the wind/ocean boundary layer which is what the Albatross uses. At a little bit of altitude, say a hundred feet or so, the wind speed is whatever the prevailing wind condition is. Right at the exact surface of the ocean, the air sticks to the surface of the water and the wind speed is zero (relative to the water). In between those altitudes there is a variation of wind speed from zero to the full level. This is typically called the boundary layer but is also sometimes called a shear layer because the air above is moving faster than the air below and so the upper air layers shear off from the lower layers. By intelligently maneuvering from the slow air to fast air and back, it is possible to extract energy from the wind. This is actually akin to sailing.

Another example of wind shear occurs at a hill, preferably with a sharp drop off on the leeward (downwind) side of the hill. The transition zone between still air behind the hill and the wind blowing from the top of the hill is the shear layer. If you can get to a high speed internet connection (go to a public library if you don't have it at home), go to the website shown below and play the movie. It shows a Zagi glider doing dynamic soaring by flying into the wind above a hill and out of the wind behind the hill. They clock it on radar at up to 206.6 mph flying a shallow tilted circle as shown below.



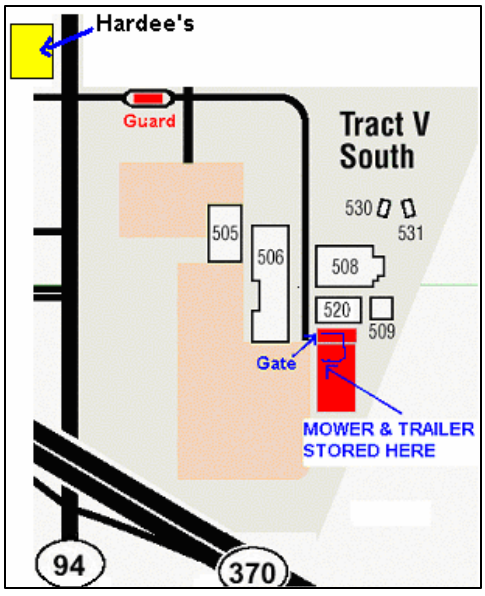
http://www.reeseproductions.com/mpegs/DSwebclips/DSrecord206mph2.html

2004 Phantom Flyers RC Club Flying Site Mowing Schedule

Dates shown are Friday date, get with your partners to schedule specific day/time.
Mowers are located in a fenced lot south of building 520 (St. Charles complex on HWY 94N).
Call Security Services Communication Center - 314-232-2821 to open gate if after 3:30 on weekdays, and anytime on the weekend.

IF YOU ARE UNABLE TO MOW, IT IS YOUR RESPONSIBILITY TO FIND A REPLACEMENT.

Apr-04					
	2	**9**	**16**	**23**	**30**
Person Towing	Jones, Steve	Douglas, Jack	Dick, Randy	Douglas, Jack	Jansen, Jan
	Galatioto, Mitch	Bone, Al	Moore, Phil	Corzine, Steve	Ahrens, Bill
	Basile, Greg	Alexander, Gary	Teeple, Steve	Peters, Matt	Pierangeli, G.
May-04					
	7	**14**	**21**	**28**	
Person Towing	Atkinson, Tom	Kattleman, Emory	Leuschke, Larry	Luebbert, Gary	
	Jurenka, Steve	Garrett, Art	Pickup, Alan	Young, Brad	
	Abel, Dan	Vetrone, Don	Johnson, Herb	Wortkoetter, Tim	
Jun-04					
	4	**11**	**18**	**25**	
Person Towing	Evans, Dave	Ramsey, Tom	Snawder, Dave	Plonka, Jim	
	Niemann, Al	Galatioto, Mitch	O'Mara, Rick	Behrens, Bob	
	Holland, Jeff	Jost, Richard	Derigne, David	Behrens, Geoffrey	
Jul-04					
	2	**9**	**16**	**23**	**30**
Person Towing	Wortman, Dave	Atkinson, Tom	Statzer, Matt	Albert, Donn	Jansen, Jan
	Bilodeau, Joe	Sundman, Dan	White, Ed	Hensen, Derek	Ahrens, Bill
	Bagby, Brian	Goedert, Larry	Keen, Ben	Cox, Kevin	Pierangeli, G.
Aug-04					
	6	**13**	**20**	**27**	
Person Towing	Leuschke, Larry	Dick, Randy	Kattleman, Emory	Evans, Dave	
	Guntorius, Mike	Wortkoetter, Tim	Garrett, Art	Corzine, Steve	
	Young, Brad	Checkett, David	Combs, Jim	Kramer, Don	
				Pattern Contest	
Sep-04					
	3	**10**	**17**	**24**	
Person Towing	Snawder, Dave	Ramsey, Tom	Statzer, Matt	Bernard, Davis	
	Niemann, Al	Basile, Greg	Jensen, Peter	Johnson,Herb	
	Derigne, David	Sundman, Dan	Greenwood	Holland, Jeff	
Oct-04					
	1	**8**	**15**	**22**	**29**
Person Towing	Wortman, Dave	Albert, Donn	Wortkoetter, Jim	Douglas, Jack	Dauble, George
	Brown, Rick	Behrens, Bob	O'Mara, Rick	Kachman, Ed	Bone, Al
	Checkett, David	Behrens, Geoffrey	Buhse, Paul	Peters, Matt	Goedert, Larry



Club Member Bio – John W. Rawlings

Age: 83
Place of Birth: St. Louis, MO.
Place of Employment: Primarily McDonnell Aircraft and McDonnell Douglas
AMA Membership: A long time, my number is 286
Club Membership: Since its beginning

History: Many years ago, I was standing at a rope attached to a series of uprights supported by a whole mess of sawhorses. On the other side of the rope directly opposite me was a really tall guy dressed in a tan shirt with buttoned flaps on both sides and wearing Jodhpurs. I don't remember his footwear but I started looking at him from the ground up and boy was he tall! In the background was a single engine, high wing monoplane, all silver and with some writing on the front side. I was only six and going on seven, so I couldn't read too well so my parents had to tell me about the writing and the man's name. It was CHARLES A. LINDBERGH, and I knew right then aviation was my life.
I knew that my neighbor across the street from where I lived was interested in building model airplanes, so I started watching him when I could. He had to get plans and wood from Lambert field because there were no kits of models. He gave me some balsa wood sticks, which he had cut to the desired sizes and some Ambroid glue in an old mason jar alone with an old set of blue prints. I started but never finished that model because he went off to school and I didn't know what to do next. But it was my first model and I was seven years old.

Along came the depression and there wasn't much money to buy rubber band powered plane kits but they were cheap (Comet for example, were priced in the vicinity of 15 to 30 cents) and they included tissue covering material, wood wheels, wire, and some with rough sawed prop and a small vial of glue. You had to liberate some of your mothers or sisters finger nail polish to attach the tissue to the structure. I would collect tin cans and bottles to turn in for money, and that is primarily how I maintained the hobby.

During the thirties, I found work (that a teenager could get) and graduated to gas engine powered free flights. Mostly scratch built because it was cheaper even though kits were less than ten dollars. My first engine, and the name escapes me, was $9.95 postpaid and included sparkplug, high tension lead, coil, condenser, battery holder, wire for the ignition system and a switch. You were on your own for a tank and neoprene tubing for fuel line.

Then came December 7th, 1941. I volunteered for the U.S. Army Air Corps, was graduated, and commissioned on November 11, 1942 a Second Lieutenant in the USAF but as a Regular Army Reserve Officer. I am still in, wheather I want to be or not, because in 1953, Harry Truman edicted that all World War II Officers Commissions were extended indefinitely., because of the Southeastern conflicts I presume. I tried to transfer to the Missouri Air National Guard so that I could maintain my military flight status but the Table Of Operations was filled. So back to model flying in which I have never equaled my full-sized flying capabilities.

So back to model building and flying but now in U Control for several years.

I had been working at McDonnell Aircraft for about ten years when I heard that an R/C club was being formed, but I didn't get into it until several weeks after it was in operation. Don't ask me what year it was because I don't remember. What I do remember is that the equipment was so big and heavy that it almost required a pick-up just carry the transmitter from place to place. There was only one frequency (Citizen's Band) and it required an FCC license to use it. Since it was CB, every 'Tom-dick-

and-Harry' was on it also. It made for interesting model flying when you could get everything in your radio to operate properly. The most fun we had was out-lying one another or trying to get the engine in the plane started. I went through single channel-rubber banded servos (store bought) to TTPW (Two tone pulse width home built) on CB, to four channel analog proportional (home made on CB) to six channel/eight channel which we are using today. With all the changes in equipment, I was still having to build something to fly, which I managed to do. I have only built, correction, assembled one ARF, all the rest were scratch or kit built. Most scratch!

Other interests and hobbies: Flying full size (I've owned five), oil painting, wood working with furniture and machine shop. I have a mini tool room and own the worlds smallest operating "V" eight two cycle engine and am working on my design of a multi-cylinder radial four cycle.

Hints and Tips

Weight lifter

from Bruce Burns

An excellent way to add ballast to the front of your model is to straighten the tab of your old tire weights, then bolt them to the underside of your engine mount. This puts the weight well forward, where it's needed and where it can be clipped away with shears to adjust the balance point of the model. Do not bolt ballast to the cowls. More often than not, the little cowl mounting screws will be torn out by the vibration. Your friendly tire man will probably give you some old weights.

from Prop Spinner Chatter
Eugene Prop Spinners
Mel Marcum, editor
Eugene OR

Nylon wing bolts

from Jeffrey Mays

Usually nylon wing bolts come with round, slotted heads. They work, but your screwdriver can slip during installation and damage your wing. Take a 7/16-inch hex nut and run it all the way up under the round head on the screw. Now sand the nylon bolt to match the hex pattern on the nut. When the nut is removed, the nylon wing bolt will be transformed into a hex bolt that can be easily tightened with your four-way glow plug wrench.

Tail weight

During the process of building your next masterpiece, it may become apparent that tail weight is required. Lead weight for fishing lines is available at most sporting goods stores in the form of round (about 1/8-inch diameter) strips, several inches long. This strip lead is easy to cut up and embed in the model during construction. For example, strips of lead inserted under the triangle stock can be used to reinforce the fin or stabilizer on most model designs. It also can be inserted into wing tips to provide lateral balance.

From The Hawk Talks
Concord Skyhawks
Rob Lawrence, editor
Bow NH

Protecting hinges

from Gene Davis

Petroleum jelly often has been used on pinned hinges to prevent epoxy glue from sticking to the hinge joint; however, it is difficult to get just the right amount on the hinge and to make sure the hinge is completely coated. A very cool way is to melt the petroleum jelly in a small dish such as a dessert dish (an oven safe type, of course). Use only enough to melt to a depth of about 1/6 of an inch. Fold the hinge and dip the pinned end into the melted jelly. Remove and touch the hinge to a paper towel to remove excess. In a couple seconds, the petroleum jelly cools and has penetrated the hinge. You now have a completely coated hinge joint that epoxy will not stick to.

Two great tips

I use the clear backing on the MonoKote film to recycle my masking tape if it is still in fairly good condition. It keeps the adhesive from going bad. When I need the tape, I just peel it off.

I cut one inch (or whatever is needed) of the appropriate size fuel tubing and seal one end with clear silicone. I now have a way to seal my CyA glue bottles, etc. I also use them to seal the nipples on my engines when I clean them as well as when I store them.

Cool windows

Need windows for your airplane? Here is an easy way. Try cutting your windows out from a green, blue, or clear water or soda bottle with a pair of scissors. It will dress up your airplane and give it a streamlined look.

Fishing for servo wire

When you're trying to fish aileron extensions through a wing, tie a wheel collar to a piece of string and put it in the servo bay. Holding the wing upright, jiggle the wing to get the wheel collar to fall through the holes until it gets to the other end, tie or tape your servo wire to the string, and finish pulling it through. Now you don't have to worry when your Almost-Ready-to-Fly airplanes come with the strings already pulled out.

from the newsletter of the
Odessa Propbusters R/C Club
Keith Conrad, editor
Odessa TX

GSLMA MINUTES *(April 7, 2004)*

MEETING OPENED: 7:00 PM

ATTENDANCE: Aeropilots, Balsa Busters, Lone Eagles, Boeing Phantom Flyers, St. Louis R/C, Signal Chasers, Thermaleers, Laf. Esq., MVSA

MINUTES: March Minutes approved as written

TREASURER'S REPORT: Old Balance $5045.10 New Balance $5306.86
2004 Buder Permits Issued in March – 51

OLD BUSINESS:

- The 2004 AMA Charter Renewal for GSLMA has been submitted to AMA.
- Steve Mizerany passed out the current list of Buder Park Reserved dates. Some requested dates in the fall are still to be confirmed.
- The 2004 World's Fair Celebration will be held at Buder Park on May 29. GSLMA has been invited to stage a static display of model aircraft and to put on a flying demonstration with electric Park Flyers. Call Steve Mizerany at 636-225-1076 if your club would like to participate in either event.
- Several asphalting companies have been asked to bid on flying surface reconditioning at Buder.
- Planning activity for Cricket Field and Grand Basin in Forest Park is on hold.

NEW BUSINESS:

- Steve Mizerany handed out a statement of policy regarding safety issues and rule violations at the Buder R/C Field and a plan of action to deal with these issues.
- Frank Gruswitz presented information on the history of the flying rules at Buder and stated the need for revisions/updates to address Park Flyers and Helicopters.
- Steve Mizerany will prepare a revised set of rules based on inputs already received from several sources.
- A draft of a Grievance Procedure was passed out and discussed. This procedure would be used by GSLMA Safety Officers to document instances of rule violations that warrant such action.
- The institution of Saturday Morning Training Sessions for new flyers at Buder was discussed as a means of instructing new flyers and acquainting them with flying rules.
- Rules 8 and 9 of the 2004 AMA National Model Aircraft Safety Code for Radio Control Aircraft were discussed. Further clarification of these rules is being requested from AMA.

MEETING ADJOURNED: 8:15 PM
NEXT MEETING: Wednesday, May 5, 2004 at 7:00 PM in the East Room of St. Louis County Library on Lindbergh Blvd.

HOW DID THIS HAPPEN *(Bill Ahrens)*