THE MEETING WILL BE WEDNESDAY, SEPTEMBER 8, AT THE EAA!!!

Official Newsletter of St. Paul Model Radio Controllers, Inc.

PULSE

AMA Charter 382 - An AMA Gold Leader Club

FROM THE PRESIDENT

Greetings:

The field meetings have ended and we will be meeting in the EAA building this month. It's time to nominate some replacements for the club board as several members have completed their 2-year terms.

Chuck Nelson will be running the Chili Fly and has chosen several nice raffle prizes for that event, separate from our monthly club meeting raffles.

The new club sign is partially visible down the road from the area of the landowner's machine shed and apparently a number of visitors have been found their way to our field. Perhaps some of them will join our club.

There has been a lot of flying space available this season. The chances of a mid-air have been virtually non-existent! The field has been kept looking really nice all summer. Thanks to Gary Hauble and others for keeping it up!

I've been flying my corsair quite a bit and have just realized that my firewall has loosened because of poor glue joints. Of all people, I should be able to make a good glue joint! Actually, I think that my problem was that I squeezed the epoxy out of the joints initially but didn't maintain the pressure adequately during the curing of the glue. This allowed voids to form in the joint where it is now evident that there is epoxy coating both surfaces but just not making contact. I'm going to scarf up the edges of the firewall so that there will be epoxy remaining in contact with the side-walls of the frame, no matter how much pressure I apply. For the triangle reinforcements, I will just slide them into position without squeezing all of the epoxy out of the joint. Hope that works!

I needed to fill a few hanger-rash dents on my plane and I found that I could use the phenolic microballoons and clear Bullseye SHELLAC. I just mixed up a paste of the two and put on excess, allowing for some shrinkage during drying. This filled nicely, sanded well, and wasn't affected by the solvents of the airplane dope when I repainted the repaired area.

See you at the meeting!

Bob LaBrash

EVENTS CALENDAR

Sept 4	ACRC E-fly
Sept 10-12	North Country Model Controllers Fall Fun Fly (NCMCRC.com) - Landing Fee $20
Sept 11	SPRC Septemberfest -10am-?
Sept 11	Sodbusters Super Fly 16 Fun-Fly
Sept 12	Hobby Warehouse Swap Meet
Sept 18	TCRC Fall Float Fly-Bush Lake
Sept 18	ACRC Funfly-10am start
Sept 18	Grassfield Big Bird Fly In
Sept 19	Big Sky Swap Meet 8-12am
Oct 2	ACRC Fall Fly Out-10am
Oct 16	SPRC Chili-fly-10am-?
Oct 16	TCRC Season Finale
Oct 23	ACRC Funfly-10am start
Nov 26	SPRC Turkey Fly-10am-?
Jan 1	SPRC Freeze Fly-10am-?
Jan 1	ACRC Freeze Fly-10am-?

VEEP REPORT

If you already have one or have been thinking of buying a 2.4GHz spread spectrum RC transmitter and receiver then hopefully this article will help you understand more about spread-spectrum.

The introduction of spread spectrum technology happened during WWII and was used for encrypting signals that controlled torpedoes so the enemy could not detect or jam the signal. Today this technology is used in almost every aspect of military communications not to mention Wi-Fi, blue tooth, cordless phones and GPS.

A Globally Unique Identification Code (GUIC) is assigned to every radio transmitter during manufacturing; it is a unique code out of millions of possible codes. The spread spectrum technology binds a transmitter to a specific receiver so that the receiver only "listens" to that particular transmitter using the GUIC and blocking all other codes in the process. There are two ways to achieve this bond. The first and most common type is Direct Sequence Spread Spectrum (DSSS). This involves the transmitter and receiver staying within a fixed part of the 2.4GHz band. The transmitted signal is spread out over a wide band before being accepted and then re-assembled in narrow band by the receiver, further increasing security. The 2.4 GH transmissions will appear to be random "white noise" for any non-bound receiver. The second type is called Frequency Hopping Spread Spectrum (FHSS) and involves having the transmitter and receiver constantly changing their operating frequency within the 2.4GHz band. It continuously changes its frequency several times a second. From the binding process the receiver knows the GUIC that the transmitter is using. It then focuses on the appropriate frequency as the transmitter changes from one frequency to the next.

Since both DSSS and FHSS radio systems transmit in the 2.4 GHz frequency band the FCC requires that any device that transmits in this frequency range must first scan the frequency band and use only the narrow band frequencies within the 2.4 GHz frequency band which are not in use by another device. This process only takes a few seconds every time the transmitter and receiver are powered up. Once your transmitter and receiver sync up, your flying frequency is chosen for you and it becomes unique to that model – virtually no other radio signals or interferences can penetrate the signal. This makes it possible for many devices to utilize the 2.4 GHz frequency band at the same.

The wavelength of the 2.4 GHz frequencies is so small that it can't go around objects very well and can be easily blocked by metal objects on an aircraft such as the engine or landing gear. To aid with this a second receiver is added to the system so that at least one of the receivers will have a clear unblocked signal from the transmitter. The main receiver resembles a standard receiver and is installed the same way. The second receiver is a satellite receiver connected to the main receiver via an umbilical cord. The two receivers need to be mounted at least 2" (best 3-4 inches) apart. It is important to mount the antennas pointing 90 degrees from one another so that one of them is always receiving a signal at any given time. The satellite receivers are typically mounted in the fuselage where it is easily accessible.

There are many advantages of spread spectrum related to R/C flight. One is the response time - everything happens within a few milliseconds, so servo movement and model response is instantaneous. A safety aspect is the shorter antenna; it is no longer extended several feet in front of you. Crystals are no longer required so you don't need to carry a spare set of those. The transmitter uses less current to operate so the result is longer life to your transmitter and receiver batteries.

Here is a great link for more details on the subject:

http://en.wikipedia.org/wiki/Spread_spectrum

Ellie Pflager

MEETING MINUTES

The meeting was held at the SPMRC field and called to order at 7:03 PM.

Members Present: 16
New Members: 0, Visitors: 1

Board Reports:

President: The temporary sign we have at the street entrance on Lexington has been helping to bring some traffic our way. Bob said that the landowner has directed a few people to the field and it might help if we had another sign pointing the way to the field. We should have extra wood in the shed for a sandwich-board type sign. Bob also ordered some items to finish off the new sign. We are meeting in the EAA building in September.

Vice President: Ellie Pflager was not able to make it tonight.

Secretary: Dan McArdell purchased some more items for the raffle.

Safety: No safety officer tonight.

Treasurer: Our CD is up for renewal. Expenses are looking good for the year.

Field Maintenance: Kim Slogar mounted a new first aid box on the shelter wall. The field is looking great this summer.

Events: Events are posted on the website, in the Pulse, and at the field.

Membership: Stan Zdon was not able to make it tonight.

Old Business:

No old business

New Business:

We purchased a Spektrum DX6i transmitter to use as a buddy box for newer radios. Dave Kreiner has the transmitter.

Show and Tell:

Dan McArdell: Dan showed some LED lighting strips that he purchased from Black Dog RC. The LED strips run on 2 or 3 cell lipo batteries and hardly draw any current. The backside of the strip is adhesive and can be taped where you want on the model.

Raffle Prize Winners:

Ted Sander	Thunderbolt ARF kit
Lonny Heiden	Wildcat Fuel
John Kletzin	Hellraiser airplane kit
Lonny Heiden	Hemostat
Eric Wahl	Monokote
Eric Wahl	Monokote
Alan Brantingham	Hemostat
Dave Kreiner	Hemostat
Dave Kreiner	Pin Driver

Dan McArdell

SPMRC EVENTS

It is September and that means of course, Septemberfest! On September 11th of the year 2010, Saint Paul Model Radio Controllers will be feasting and flying at the club field! There will be hot dogs, chips, cookies, water, and maybe some special brats available to those who wish to try them. The 2010 events season is dwindling quickly and if you haven't had a chance to get out and fly, try to do so NOW! I've had a lot of models in the shop for repairs lately, namely 4 helicopters (one not mine), the "Twist" which is now permanently "Twisted", and a quarter scale Hanger 9 Cap 232 that I'm converting to electric (10-12S Lipoly). Needless to say, not a whole lot is getting done quickly as sometimes does happen. I'm hoping that over Labor Day weekend I will get caught up on some R/C work . ACRC's Scale Fly on Saturday, August 28th went very well with a full parking lot and lots of flying on a day with 25-30 mph winds right down the runway. Don't be shy about visiting another club/field's event; after all they do the same thing we do!

Paul Rono

ON THE SAFE SIDE

From the AMA Insider
The Lighter Side of Safety: Revisited
by Don Nix, Insider Safety Column Editor

A few months ago I wrote about some things I had seen at various flying fields that could have been safety disasters, but happily turned out funny instead. I decided to continue the subject because (1) I've remembered a few more, (2) many seemed to enjoy them, and (3) I drew a blank for a subject this month ... Seemed like good reasons to me.

As I've mentioned before, I've been a modeler since I was six years old, and a full-scale pilot for nearly 51 years. I got into RC a little late in life—back in the mid-1980s—after full-scale began to be almost prohibitively expensive for the average guy. I'm sure readers who also fly full-scale can understand what a humbling experience the transition to RC can be. Suffice to say it took a very long time to get my head out of the cockpit and fly the airplane viewing from the outside.

My late wife was also a licensed pilot, and after I became fairly comfortable with a couple of RC trainers, it was her turn. Things went well for the first few sessions using the buddy box system, but she was a long way from soloing. After a takeoff one day, she said, "My transmitter is out of trim, and I don't feel comfortable enough yet to try to trim it myself." I replied, "Nooo problem. Here, swap transmitters with me, and I'll get yours trimmed up."

(Rim shock….cymbals….think about it for a minute.)

An incident some years earlier occurred while I was flying a full-scale airplane, but the lesson learned remains the same as for models. I lived in northern Illinois at the time and did a lot of business flying in my Piper Comanche.

One winter we had a several-week stretch of weather that I didn't care to attempt to fly in even though I was instrument rated. When the weather finally improved a bit, I departed one day on a long-delayed business trip. I had several thousand hours experience and hundreds in that airplane, but I was quite aware that inactivity for an extended period—models or full-scale—can be dangerous. I went through my checklists very carefully before and after starting the engine, during taxi, and pre-takeoff.

Takeoff and climb to altitude proceeded without a hitch, so I trimmed for level flight, set the autopilot and began to relax, but not for long. My Comanche normally trued out about 180 mph, but after tweaking everything I could think of, I couldn't nurse more than about 155 out of the beast. I stewed and wracked my brain for at least 10 minutes. Remember the cartoons where the little light bulb suddenly lights up over the character's head?

In my special efforts to be very, very careful during takeoff and climb out, concentrating and perhaps too focused, I had neglected to retract the landing gear. I was alone with no witnesses, but shame and embarrassment washed over me.

Lesson: No matter how high one's level of experience, after a period of inactivity use a checklist—all of it.

Back to models. The first good-weather weekend after Christmas was always interesting at my favorite RC field in Southern California. All the people with new Christmas airplanes would show up, many of them beginners. I was hangar flying with a friend one January while we watched a young fellow about 14 getting his new ready-to-fly toy assembled. It was some sort of long-winged motor glider powered by a ½ A engine. His mother was standing close by watching sonny boy.

It quickly became obvious the lad had never flown before so my friend, one of our club's instructors, walked over and offered to help. Instead of gratitude, this whiz kid erupted with profanity, suggesting my friend perform an anatomically impossible act on himself.

The instructor said, "Oookay" and walked away. As we watched from the sidelines, the kid

hand-launched the model and immediately pulled full up elevator, which was hooked up in reverse. Amazing how thoroughly and quickly a paved runway can convert a foam ready-built into a pile of packing peanuts.

The ironic part? My friend said to the mother, "Ma'am, that wouldn't have happened if your son had accepted my help." Her response was only slightly less vile than the son's.

Clearly, the needless incident could have hurt someone, so to head off myriad e-mails asking why we allowed the boy to fly: it was a public county park, and we had no authority whatever to control operations; we just suffered the criticism if someone did something stupid or careless.

After note: While on a nine-month RV tour of the western states this past year, I visited the flying field at Wenatchee, Washington. This was perhaps the most beautiful RC field I've seen in years, and it was clear safety was high on their list of priorities. Unfortunately, I didn't make a note of the club name, but you folks know who you are. Congratulations!

Th-th-th-that's all, folks. I could use some suggestions for safety topics, so ring me up at

flyerdon1@yahoo.com

Contributed by Chuck Nelson

MEMBERSHIP NEWS

September is here and the summer is almost over. An important event that takes place at this month's meeting is the nominating of members to run for the board of directors of SPMRC. Three members are finishing their two-year term in December: Bob LaBrash, Ellie Pflager and Chuck Nelson. It is time start thinking about who you would like to nominate for the board. The election is in October and the new board transitions in November and December.

There are still a few activities going on during the rest of the year, most of which are listed below.

September 4	ACRC Electric Fly
September 11	SPMRC Septemberfest
September 12	Hobby Warehouse Swap Meet
September 18	ACRC Fun Fly
September 19	Big Sky Hobby Swap Meet
October 2	ACRC Fly-Out
October 16	SPMRC Chili Fly
October 23	ACRC Fun Fly
November 26	SPMRC Turkey Fly

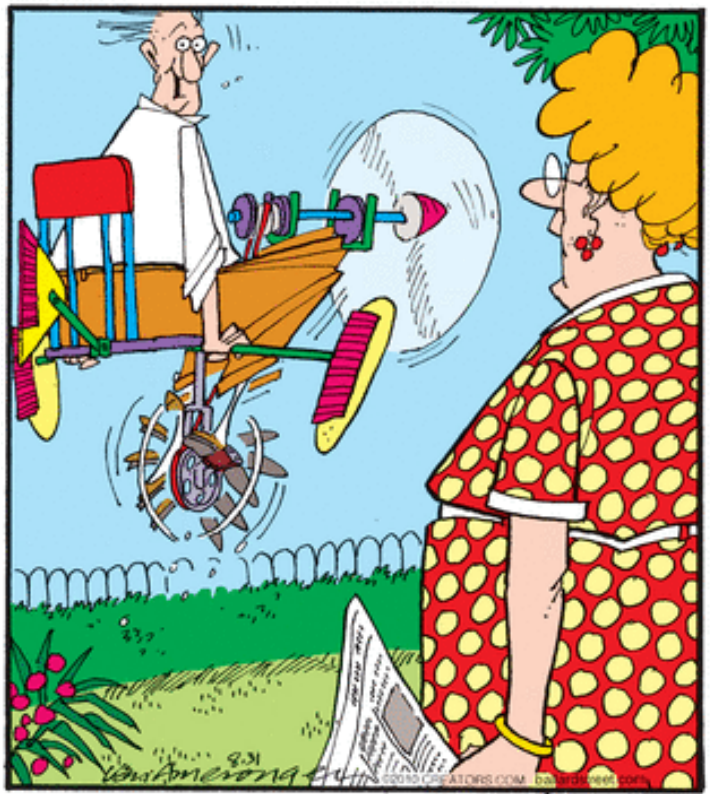
The next meeting will be at the **EAA BUILDING** on September 8 at 7:00 PM.

Stan Zdon

TOOL TIP - from Bob LaBrash

Just gleaned from the website www.modelenginenews.org for August is a tip of how to remove rust from metal, specifically, rust cause by cat pee on a wrench! Soak it for a few days in white vinegar and scrub it down with a wire brush. That takes care of the cat anyway. It might work on the wrench too!

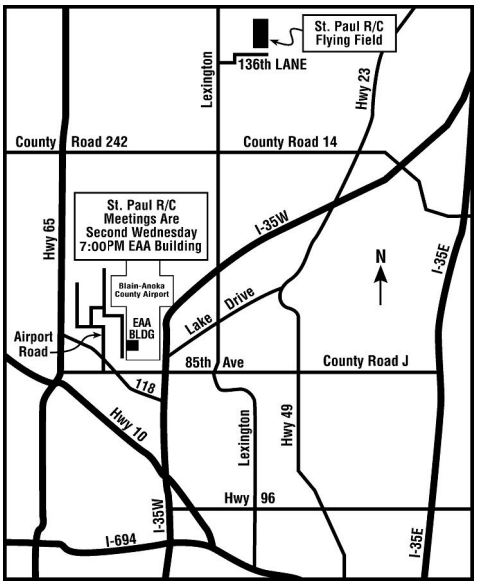
BALLARD STREET - Jerry Von Amerongen



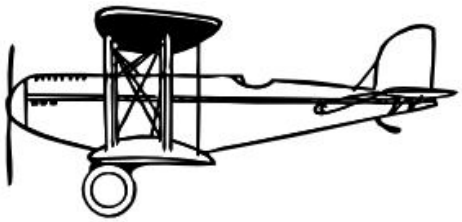
Just stay clear of the flower beds, Paul

SPMRC OFFICERS

President:	Bob LaBrash	**Web Master:**	Dan McArdell
rndlabrash@aol.com	(651) 484-6226	dan@mcardell.org	(612) 770-9265
Vice President:	Ellie Pflager	**Safety Officer:**	Chuck Nelson
horsepower440@comcast.net	(763) 767-4743	nelson5376@msn.com	(763) 755-5376
Treasurer:	Steve Roman	**Field Maintenance:**	Kim Slogar
SREsteve@aol.com	(651) 786-1774	kslogar@hotmail.com	(763) 286-6170
Secretary:	Dan McArdell	**Flight Instruction:**	Dave Kreiner
dan@mcardell.org	(612) 770-9265	kwazydave@hotmail.com	(612) 817-0018
Contests/Events:	Paul Rono	**Membership:**	Stan Zdon
pjrono@msn.com	(763) 434-3952	szdon@yahoo.com	(763) 784-3121



SPMRC Club field is located 15 miles north of the Mpls/St. Paul area. From I-694 head north on I-35W, exit at Lexington. Follow Lexington north to 136th. Turn right on 136th and follow it east to the flying field.



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SPMRC Editor
902 - 88th Lane NW
Coon Rapids, MN 55433