



# MARCS Sparks

**OCTOBER 2010**

VOLUME 49 ISSUE 10

Monthly newsletter of the  
**MADISON AREA RADIO CONTROL SOCIETY**  
Madison, Wisconsin AMA Charter #665



## COME FLY WITH US...

The MARCS' meetings are held on the first Thursday of each month at:  
**MADISON LABOR TEMPLE**  
1602 South Park St. Madison, WI.  
7:00pm room #201B

Visitors are always welcome. We think we have a great Hobby and we invite you to come and see, and consider joining us.

**Club Officers:**  
**President:** Brad Witt.....bwitt@chorus.net  
**Vice Pres:** Danny Sutter..... stodan@merr.com  
**Secretary:** Don Weigt..... d\_weigt@sbcglobal.net  
**Treasurer:** Dick Sutton..... jdsutt@mhtc.net

**Membership information** (more details on page-9)  
**Dick Sutton** phone: (608) 437-6795  
**Flight instruction coordinator:**  
**Ozzie Johnson** phone: (608) 274-0474  
**Web master:**  
**Jeff Alexander** webmaster@marcswi.org  
**Club photographer:**  
**Otto Oie** ooie3@charter.net  
**Club safety officer:**  
**Bill Kinney** hukilau@centurytel.net

**Club website:** ----- [www.marcswi.org](http://www.marcswi.org)  
Info."About us", our "Flying sites", "Newsletters" (present and archives), a calendar of events, "Pictures & Videos."  
**Contains links to:** "War Birds" "Electric Flyers" & other special interest groups. Membership application forms for the **MARCS** club and the **AMA**.



*Minutes of the:*  
**MARCS General Membership Meeting**  
September 2, 2010  
Submitted by: Don Weigt, Secretary

The meeting was called to order at 7:08 P.M. by President **Brad Witt**. There were 20 people present. There were no visitors or new members.

**Secretary's Report:** The minutes of the August meeting, done by **John Steen**, were approved as published in the **MARCS SPARKS**.

**Treasurer's Report:** A printout of Treasurer **Dick Sutton's** report in the new form was available. Paid up membership for 2010 is 92.

### OLD BUSINESS:

**Electric Meet wrap-up:** **Dave Rush** reported 29 pilots registered: 15 for both days, 13 for Saturday only, one helicopter pilot for Sunday only. It was windy enough to limit flying on Saturday, and rained on Sunday. Profits were about 1/3 what the event usually has, but still made money.

**Elections:** More candidates are still needed. There are only two so far for the three open Board positions. It would be great if there were additional candidates for the Board, and for the officer jobs. There were no volunteers from the floor.

**Boy Scouts:** The Boy Scout event for this year is cancelled. It was the Scouts' choice.

**Bill Disch's Rascal 110:** No word on its status. **Wayne Lanphear** was not at the meeting.

### NEW BUSINESS:

**Brad** announced stuff from Jerry Buss will be used

for tonight's raffle prizes. Some balsa wood, plans, and a car frequency receiver from Jerry were on the back table, free for the taking. It was taken. Thanks, Jerry!

Some stuff from **Rod Lippert** was also available for free, and was taken. **MARCS** appreciates these gifts.

**Brad** also has parts for a SuperTigre 3000 free to anyone who can use them.

There was a card for members to sign, for **Tom Tiedt**. His mother died recently.

The Board will be voting on a Bylaw change of wording tonight. If it passes, it will be published in the newsletter and voted on by the membership. It clarifies the number of times a visitor may use the field in one year.

**Brad** showed a Multiplex transmitter he'd gotten at Hobby Horse, which is closing them out at very low prices. Nine channel transmitters were \$100, 12 channel ones were \$125, receivers were six for \$15 or four for \$10. The transmitters are synthesized, and can be used on all 72 MHz RC frequencies.

**Dave Rush** mentioned the road through the landfill was unfit to drive on, nearly impassable. Luckily, no one slid off or got stuck, but it was a close thing. The rain made it slick and unsafe, just wet soil with no gravel. We need better access for future meets. The dirt road through the landfill is far worse to use than it was before the last pit was opened.

### NEARBY EVENTS:

**Big Bird Fly-In**, EAA grounds,  
Saturday, September 11.

**Water Fly**,  
Lodi, Sunday, September 12.

**Antique Airplane Show**,  
Brodhead, Saturday, September 11.

**Swap-Meet**, EAA grounds, early October.

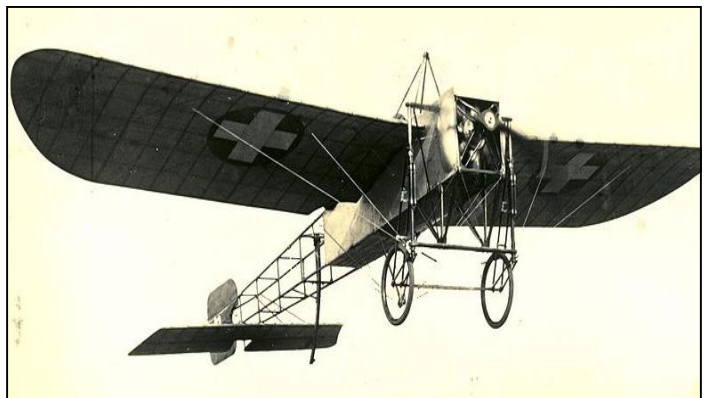
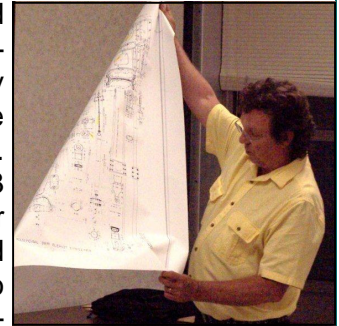
**Swap-Meet**, Wausau, Sunday, October 24.

### ▶RAFFLE WINNERS◀

**Roger Zimmerman** - Irvine .61 (British glow engine)  
**Hubi Schneider** - Airplane Balancer  
**Jay Otis** - roll of Monokote  
**Danny Sutter** - Foam Wings (arm full)

### SHOW AND TELL:

**Wendell Hottmann** showed a few of the full size drawings he is making of every part in a Bleriot XI, using the SolidWorks CAD program. He intends to build a 1/3 scale model of the plane, for electric power, using scaled down prints of these parts to make it as accurate as practical. Another use of the drawings might be an interactive virtual tour of the plane, perhaps on a terminal in a museum next to a replica or model of it.

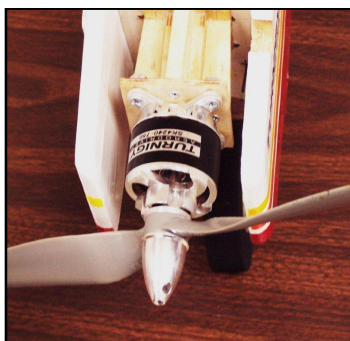


**Todd Giesfeldt** showed an AeroStar trainer converted to electric power. He used Turnigy equipment to power the model, and a HiTech 2.4 GHz radio. The SK4240-750 motor, 60A ESC, 3S 5000 mAh battery, and APC 13x6.5 prop combine to deliver 325 Watts at 35 Amps to fly the 6.5 pound model nicely for about 7 minutes. Todd really likes



the convenience of not fussing with fuel, starting, and carburetors: he just plugs it in and flies. He also likes being able to stop the prop before landing to protect the motor,

but being able to power back up if needed. The model's flying weight is half a pound less than his OS .40 powered one was. **Todd** said the only hard part about the conversion was changing the motor's connectors to the 'Deans' that he prefers.



**PROGRAM:**

The first half of a video **Danny Sutter** made of our recent Electric Meet was shown. Fine job! Thanks, **Danny!**

**Next meeting:** Will be on Thursday, October 7, at 7 P.M. The candidates for the 2011 Board will be announced, and the second half of **Danny's** video will be shown.

*THE MEETING ADJOURNED AT 8:40 P.M.*

# Field Workday

TUESDAY, SEPTEMBER 14, 2010

## PAINTING THE TWO SHEDS

A little before 10:00 am we swept the cobwebs, hornet's nests, and trimmed the weeds away so the painting could commence. The day that Brad had chosen for this project was perfect painting weather. Other a brief bout with the resident hornets, the painting got taken care of in short order. By 11:30am we were done with the job and everything picked up, packed up, and we were on our way. Thanks to the following members who gave their time to get this job done.

The painting **CREW**



Danny Sutter

Brad Witt

John Steen

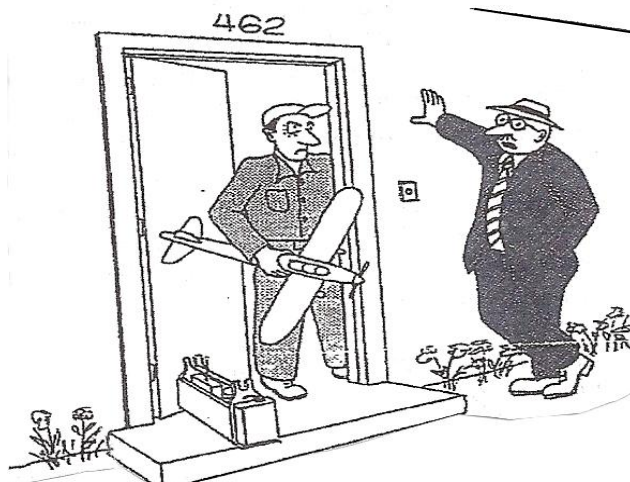
Dick Sutton

**NOTICE:**

CHANGE of BY-LAW  
 M.A.R.C.S. Member handbook  
 Reference: Part 2.  
 Marcs Field Regulations: Item-13, page-10

Guests of MARCS members must be AMA members and use their own equipment at the field. Guests are **GENERALLY** limited to three visits per year, excluding club sponsored event. **ADDITIONAL VISITS REQUIRE PERMISSION FROM A MEMBER OF THE EXECUTIVE COMMITTEE.**

The Board of Directors have voted unanimously to delete the words **PRINTED IN RED.**



I know you're in bed with the flu, Jenkins, but I need the key to the copy machine

## BUILDER'S Work Bench

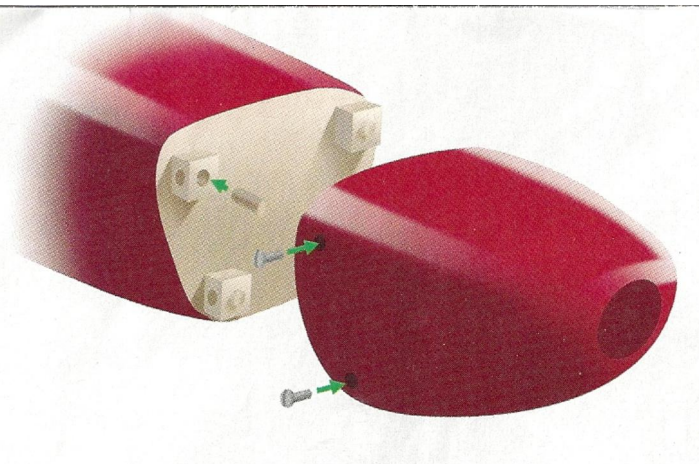
### COWL BLOCK SECURITY

Epoxy alone is just not enough for holding cowl-mount-blocks many times, I have found. They are subject to heat, vibration, and fuel...all of which contribute to breaking down that bond.

This is the method I now use. First of all you don't need to use mini-blocks for this purpose. Make these guys a little bigger than usual. Position and epoxy the four blocks to the firewall as you normally would. Now drill a 3/16 inch hole through the center of each block and on through the firewall.

Cut four pieces of 3/16 inch hardwood dowel long enough to go through the block and firewall and bevel one end slightly. Epoxy the hole and dowel and press and/or tap the dowel with the beveled end going into the wood first, until it's flush with the mounting block. Set aside for 24-hours.

Next, position the cowl to its desirable position and mark the blocks where the holding screw will enter. Remove the cowl and drill a tiny pilot hole through the mounting block and dowel so it won't split when you install the attaching screws... and now you are ready to install your cowl to your permanent blocks.



HOW MANY AND WHERE DO WE FIND THE WORDS THAT CAN THANK **OZZIE JOHNSON** ENOUGH FOR THE YEARS HE HAS GIVEN US AS OUR **FLIGHT INSTRUCTOR COORDINATOR**? HE WILL BE STEPPING DOWN FROM THAT JOB, JANUARY FIRST.

Thank you Ozzie!

# Flutter

## and HOW to PREVENT it

If you're doing some hard aerobatics or high-speed dives and hear a loud pop or a buzzing sound, you probably encountered flutter. Flutter is the severe and **DESTRUCTIVE VIBRATION** caused by the aerodynamic bending loads. It can quickly destroy an aircraft, if it is not slowed down, or cause the control surfaces to separate. Flutter has many causes, but by using the proper precautions during the build and proper flying technique, it can be avoided.

Large planes and the lightweight 3D designs with oversize controls are more prone to flutter. To prevent flutter, slop-free control surfaces are a must. Any play in the control surfaces can initiate flutter. Check the surfaces frequently, as play can develop over time, especially when using Z-bend wire in plastic servo arms. Servo gears also develop slop over time. Sealing the control surface hinge gaps will also help eliminate flutter and increase their effectiveness. You can use heat-shrink covering or packaging tape to seal these gaps. Large scale models can use mass-balancing of control surfaces similar to what's used on full-scale planes. Mass-balancing uses counterweights to offset the control surface weight and prevent instability. Keep all linkages as short as possible and/or use wire with adequate diameter. Also, take advantage of leverage; use the outer holes on the control horns and make sure the clevis pins are a good fit in the horns.

Proper throttle management is a key factor in preventing flutter. The throttle should be reduced during dives to reduce the aerodynamic loads on the planes structure. Most 3D planes are designed for slower-speed flight so full throttle should only be used for takeoffs and vertical climbs. Just using common sense during the building, setting up, and flying of your model will go a long way in preventing this destructive phenomenon.

MODEL AIRPLANE NEWS CREW

# Looking Ahead

## VACANCY NEEDING TO BE FILLED IN 2011

As your "FLIGHT INSTRUCTOR COORDINATOR", I would like to thank and express my deepest gratitude to our present flight trainers; **Ed Buechner**, **Mike VeDepo**, **Roger Zimmerman**, and **Conrad Tufte**. Over this past year these club members have unselfishly given their time to help me and in turn helped our new pilots with their training programs.

Over the many years in my "COORDINATOR" position, many of you have been asked to instruct and have done so willingly. A lot of you have also gone beyond that to help these new flyers when they were having; motor problems, radio-control set-up problems, and many other equipment problems that were often solved on the spot, right at the field. This type of training and dedication to our sport has brought more than its share of compliments about your cheerful attitude and willingness to help in their time of need.

Our flight instruction program has produced many excellent pilots and they will be our future instructors as they hone their flying skills. Some of our present students are ranking amateurs while others can fly some, but need help to feel comfortable. This program supports our members throughout their training and the many steps it sometimes takes.

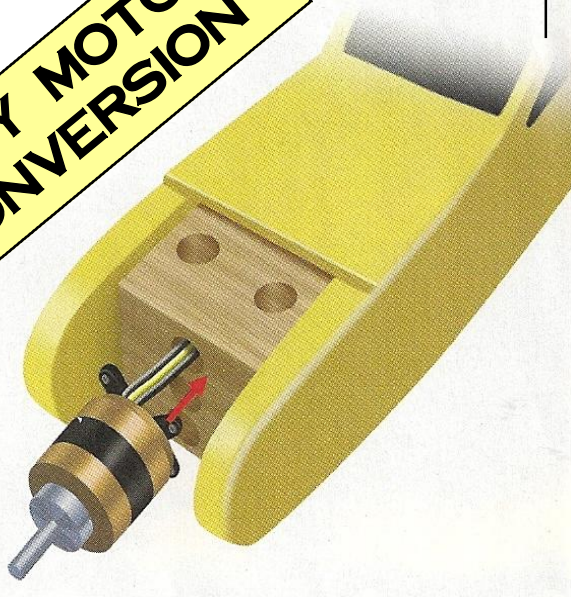
I have held this position for many years and feel that it is now time for me to step back and turn it over to one of our seasoned members. Our hobby has gone through many changes over these past few years, with new-wave equipment for this next generation.

These are the best times for one of you to step-up and continue this important role for the **MARCS** Club. I have enjoyed my tenure in this position immensely. Watching many of you develop your incredible flying skills has been most rewarding and I am confident that one of you will now find it an interesting and satisfying opportunity to meet the many nice people that will be joining our club in the future.

I will be stepping down at the end of this year, so please consider taking over this position for the club by speaking with myself or Brad about the filling of this vacancy.

Thank you all, for all these years, *Ozzie Johnson*

**EASY MOTOR CONVERSION**



Many hobbyists are converting over from glow-fuel to electric power these days. Here's a simple way to fabricate an engine extender that will do several jobs at once. The wooden block can be cut out of any type wood you wish to use. The hard woods are the heaviest if you feel you need a lot of weight up front to off-set your old engine, but pine will work as well. When cutting it to fit, leave the side clearance a bit on the plus-side as you will epoxy the block to the firewall and the side panels as well.

The block will do three things: first, it provides the forward CG offset for the lighter electric motor.

Second, It also provides air ventilation for the ESC & battery pack that will be located right behind the firewall. Note that the holes drilled through the block are used for routing the wires as well as the airflow.

Finally, and best of all, it provides an easy way to add weight to the nose of the aircraft. The two vertical holes are 9/16-inch diameter, (or any diameter you so choose) which will be an ideal place to pour in lead buckshot... followed with some epoxy to lock it all down.

An added note: *Make sure you have made an outlet slot or hole rearward of the ESC and battery pack for that incoming air to exit out of the fuselage area after it has cooled these items down.*

## GETTING INTO:

**ELECTRIC JET POWER**

One of the HOTTEST ADVANCEMENTS in the world of R/C has to go to the new generation of 'ducted-fan' units. With the proliferation of high-quality and high-power brushless motors in the marketplace right now, it's very easy to produce outstanding thrust from ducted-fan units. Just a few years back, they were reserved for the smaller park-flying foamies. Today, they've made the leap to larger-size aircraft that came close to true ducted-fan units. Many pilots are opting for electric ducted-fans over true turbine jets mainly because of the lower cost, ease of maintenance, and in some cases, noise restrictions.



But what are some of the things a neophyte should consider when getting into the world of larger electric ducted fans? Let's take a look at what to consider when making the move to electric jets.

**FIRST THINGS FIRST, THE AIRCRAFT**

The marketplace has many different jet aircrafts available, and they're constructed from a wide array of materials.

**FOAM:** These generally have the lowest price and offer quick assembly and fast repairs. Many of them come with the ducted-fan unit and are the smaller size. While these planes will give you a speed thrill, if you latch onto a powerful motor and fan unit, they'll most likely require some reinforcements. The thing to watch out for on these planes is that they have enough airflow through the body to keep everything cool, not just ducting for the fan unit alone. Remember, you have to keep the Battery, the ESC unit, and the motor cool.

**BALSA/PLYWOOD:** These planes can measure from small to a much larger size than foam and prices range from inexpensive to somewhat pricey. The lightweight construction is a plus, but many times will also need some modifications to handle the stronger motor/fan units out there today. Repairs will take a little longer than foam, but once done, they can be made to look like new. You'll most likely have to make some type of hatch for easy battery access.

**FIBERGLASS/BALSA/PLYWOOD:** These planes will also be available in the small to larger sizes and price points can range from inexpensive to somewhat pricy. Most will have

a fiberglass body with wooden wings and tail feathers. Damage to the body will require a little more skill to repair, but can be done by any modeler with an average shop. Most have some type of hatch access that makes battery changing easy.

**FIBERGLASS/COMPOSITE/WOOD:** This is the top shelf of electric ducted-fan aircraft. Generally, these planes will require a good outlay of cash or an open credit card. But you do get what you pay for because these jets are designed for high-performance ducted-fan units and need little in the way of modifications. Everything has a place... battery, ESC, motor, and cooling for all. If you want to go fast and large, these are the planes you'll be looking at.

**THE MOTOR AND FAN UNIT:**

This is the driving force for your jet and you want it to be as efficient as possible. Purchasing a higher-end motor is a very good idea. The main concern here is the right kV to turn the fan unit at the recommended rpm and pull the correct amount from your battery pack. The unit material is another area that could have the potential of lowering the motor output.

Plastic ducted fan units are the lightest and will be less expensive, but plastic units will tend to flex a little as the rpm rises and this will cause the ducted-fan unit to become less effective at higher speeds. Composite units will have a lot less flexing, but are a little higher priced. Metal units have little flexing, and offer the best transfer of power. They'll be a tiny bit heavier and cost more.

**STORED POWER:**

When selecting your battery pack, make sure they a little extra reserve for the largest amp draw. If you have a motor that could possibly pull 100 amps at one time, even though it ran at a constant 70 amps, your battery pack should be rated at 110-125 amps.



That extra bit of cushion will prevent the batteries from puffing just in case the motor pulls that extra little bit. If you have to use two battery packs in place of one because of room or balance issues, for example, two 2500mAh packs in place of one 5000mAh pack, make sure they are the same brand and have the same "C" rating.

**ESC:**

Again, it would be wise to have the same buffer zone on your ESC as you do on the battery packs. An ESC servicing a motor pulling 70 amps with the

CONTINUED ON PAGE-7

**ELECTRIC JET POWER**

possibility of maybe hitting 100 amps will run cooler if that ESC is a 125 amp controller than an 85 amp controller. If the motor happens to hit the 100 amp mark for any period of time, it will burn up that 85 amp ESC, but do nothing to the 125 amp one. You really don't need the HV (high voltage) ESCs unless your cell count is above the standard ESCs.

Thinking about getting into electric ducted fans? Just follow these steps and you'll have no problems. Remember though, we make no guarantees for your thumb control. Enjoy!

*BY JOHN REID*

# OCTOBER

## Raffle Prizes

“FLIGHTECH MODELS”

→ LONG-EZ 40 SIZE (BUILT) ←

“MULTIPLEX”

→ HUMMEL 400~SIZE ARF (NIB) ←

→ CHOICE OF “ULTRACOTE”  
COVERING ROLLS ←

→ 2-OZ “BALSA USA” CA ←

**OCTOBER-MEETING FREE-BEES**

*(Brad is cleaning his basement again)*

13-ENGINES, MOST W/MUFFLERS

BAG OF COX ENGINES

FLITE-BOX W/ACCESSORIES

BALSA & PLYWOOD

PARTIAL ROLLS OF COVERING

MISC. HARDWARE

RADIOS

LANDING GEARS & WHEELS

SKI'S

*(Bring your own bag)*

**GOOD GOLLY, WHEN DOES ALL THIS FUN END?**

### ATTENTION: SPEKTRUM AR6250 OWNERS AR6250 PRODUCT RECALL

Horizon has received reports of customers losing contact to the radio control when using the AR6250 receiver within certain environments. After close monitoring and testing, Horizon has detected isolated issues with AR6250's used in carbon fiber applications or in products containing highly reflective material.

All consumers who have AR6250's are strongly encouraged to discontinue use and contact Horizon Hobby at 1-877-504-0233 for additional information.



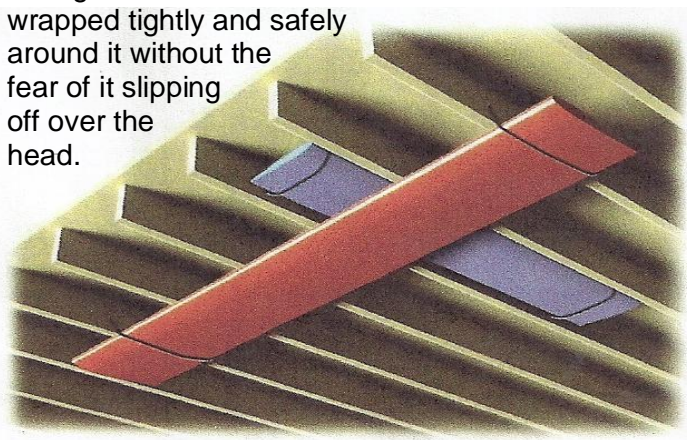
**WE ARE BORN NAKED, WET, AND HUNGRY, THEN THINGS GET WORSE.**

## TIP of the MONTH

### JUST HANGING AROUND

Using some 11-gauge wire inside some cheap fish-tank air-line as shown in the photo below is a safe, out-of-the-way storage method that could be used in a basement workshop area or any other work area that has rafters above it.

It would be best to use drywall nails or screws with a larger head in the rafters so the wire can be wrapped tightly and safely around it without the fear of it slipping off over the head.



# 2010 Club Events

Event:

Date:

Location:

**Boy Scout Aviation Day**----- **CANCELED** ----- Kettle Field

**TOM LAZAR MEMORIAL,**

**HOT CHILI & COLD FUN-FLY**----- January 1, 2011 ----- Kettle Field  
(Get those little skis ready now!)

## Election Committee Report

I am heading the Nominating Committee this year so I will most likely be e-mailing or calling some of our members asking them to get involved. By being a candidate for example; the Board of Directors, isn't a time consuming commitment and a great way to get involved in the basic inner workings of a club like ours.

Each year we elect three of the nine Board members to three year terms. That way, all nine Board members are elected in a three year cycle, with six remaining each year for continuity.

I think we have an excellent Board, but we need some new faces and viewpoints from time to time. The people who make up your Board can't exactly represent the membership's views, so having different people taking turns in these positions should over time give a more accurate representation.

Please consider running for the Board, or even to replace one of the four officers. Having more candidates will strengthen the club. And, if elected, your work won't be all that hard. Mainly, the Board meets ten minutes after the General Membership meetings, usually for about a half hour, and shows up for most of the work days and other activities at the field.

**MARCS** needs you! Please consider running for the Board, or for President, Vice President, Treasurer, or Secretary.

THANK YOU

Don Weigt, Secretary

## GLOW or ELECTRIC?

YOU GET TO CHOOSE

Manufacturers typically include (in their kits), all the necessary components you need to build the plane with your *preferred* power system. Here are a few things to consider when determining whether electric or glow power is the best way to go on any given kit or your ARF model.

- **Access to the engine/motor compartment:** After the plane is built, is it easy to get under the cowl? If you go with a glow engine, you will need to adjust the engine from time to time. If it's easy to get under the cowl, glow will work well; otherwise, consider e-power.
- **Cowl cutting:** For a glow engine, you many times have to cut into the cowl for engine head clearance and/or to provide access to the glow plug, needle valve, and fuel lines. Electric motors typically require fewer cuts, making one a good choice if you don't want to cut into the cowling too much.
- **Airflow through the fuselage:** Does air flow easily over the ESC and battery, which are typically located in the fuselage? If you have to do a lot of hacking at the firewall to get airflow into the fuselage, you may want to consider using glow power.
- **Ease of entry into the fuselage:** If you can easily get into the fuselage without having to unscrew the wing, you have a plane that's ideal for e-power. You'll have to change out the battery for every flight. If accessing the fuselage interior is going to be difficult, you may want to go with glow power.

None of these considerations are really definite deal-breakers, but keeping them in mind will make it easier for you to determine which type of power would be the best choice for your newly built kit or ARF model.

## BOARD of DIRECTORS Meetings

These meetings are held on the same evening as the monthly General Membership meeting, shortly after its adjournment.

**General Membership meeting: 7:00~9:00pm**

**Board of Directors meeting: 9:00~10:00pm**

Both meetings are held in room: 201-B. Club members are welcome to stay and observe the meeting. A Club member may have the floor by being recognized by the Chairperson. Input and/or opinions must be brief and to the point, as the overall meeting time is limited.

### Agenda: October 7, 2010

MOVING THE DIRT

SNOW FENCE AND SHELTER PANELS

ELECTION OF OFFICERS & BOD MEMBERS

INSTRUCTOR COORDINATOR REPLACEMENT

RASCAL - 110

NEXT YEARS EVENTS

NEW ITEMS FROM THE GENERAL MEMBERSHIP

# M.A.R.C.S.

Madison Area Radio Control Society

## Annual Membership Dues

<b>Regular membership</b> .....	\$60.00
<b>Junior membership</b> .....	\$25.00
<b>Park Pilot membership</b> .....	\$25.00
<b>Family membership</b> .....	\$20.00
<b>Associate membership</b> .....	\$20.00

All applicants for a **MARCS** membership must show proof of their **AMA** membership at that time.

To receive the club's monthly "**NEWSLETTER**" by regular first-class mail, rather than off the Internet, please add \$10.00 to your annual fee.

Treasurer: *Dick Sutton*

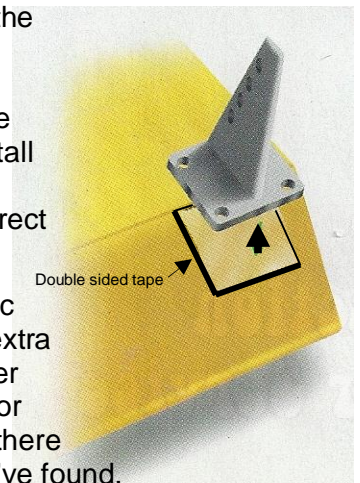
## I'm Stuck on You...

When installing the control horns on a new model, do you find you're a little klutzy when trying to get them in the right place on the slippery covering material, marking the holes, and then drilling them?

Try a piece of double-sided tape on the bottom surface of the horn. Trim off any exposed after it's on and now you can locate and relocate the horn until you have it in the correct position and it will stay put for the marking and even the drilling if you wish.

There's no reason the tape has to be removed, so install the bolts and finish the job knowing that it's in the correct position.

Those stick-on clear plastic sheeting kits used for an extra storm-window for the winter months is a good source for this double-sided tape as there is always some left over, I've found.



Help Support our  
Madison Area  
**HOBBY SHOPS**  
by Buying locally

FLYING IS THE 2ND GREATEST  
THRILL KNOWN TO MAN...  
LANDING IS THE FIRST.

