

**EXPANDED ISSUE**



JUNE

2009

MONTHLY NEWSLETTER of the  
**MADISON AREA RADIO CONTROL SOCIETY**  
MADISON, WISCONSIN      AMA CHARTER # 665

# MARCS SPARKS

VOLUME 48

ISSUE 6

## COME FLY WITH US...

MARCS meetings are held on the first Thursday of each month at:  
**MADISON LABOR TEMPLE**  
602-South Park St., Madison  
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.**

### Officers...2009:

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: (page-5)

**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 Brown**      wbrown2282@charter.net

Club Website:      www.marcswi.org

(Contains links to:) About us, Flying sites, Newsletters, Calendar of events, Pictures and Videos, War Birds, Electric Flyers, other Special Interest groups, and Membership information for: **MARCS** club and **AMA**.

### Newsletter Editor :

**John Steen**      steensr@yahoo.com

Minutes of the:

## MARCS General Membership meeting May 7th, 2009

Submitted by **Don Weigt**, Secretary

The meeting was called to order at 7:06 P.M. by President **Brad Witt**. There were 27 people present, none of them new members or visitors.

**Secretary's Report:** The minutes of the April meeting were approved as published in **SPARKS**.

**Treasurer's Report:** A printed copy of Treasurer **Dick Sutton's** report was available for viewing. Membership for the year was 78, seven more than at the April meeting. There were no new members or guests to introduce.

### OLD BUSINESS:

**Bill Disch:** **Bill** passed away on April 28. There was a sympathy card for members to sign. It will be sent to **Bill's** family.

**Fred Bast:** No news this month about how **Fred** is doing.

**Hal Humphrey:** **Dick Buescher** will be running a silent auction, beginning next month, disposing of **Hal's** hobby equipment for **Hal's** family.

**Field/Trees:** **Brad** thanked everyone for their help on the field work day, and with the first Adopt-A-Highway road pickup of the year. Special appreciation was expressed **Gil Hoffman** for the use of the roller. The muffler fell off and melted some of the ignition wiring before the job was finished, but **Gil** was able to get the roller running again, and the rest of the rolling was completed with the engine roaring loudly. That's dedication! **Calvin Slota** will check next week about when we can use the chipper. We have someone who will take any big stuff we don't get

chipped up.

**Gate proposal, sign:** Wayne Lanphear was not at the meeting, so no updates were given.

**Scout event:** Roger Zimmerman reported Troop 333 from Sun Prairie will be our guests for this event. There will be about 20 people coming. He needs more pilots with trainers to give all the Scouts a good flying experience. So, get your trainers ready, come out, and help! It's a good time.

**Banquet:** Dave Rush was thanked for organizing the banquet again this year, held on April 15. It was an enjoyable event, with plenty of good food and conversation. Dave half jokingly asked if anyone wanted to organize next year's banquet, but the only response was laughter.

**Edge 540T Raffle:** Dave Rush had tickets for sale after Show and Tell. The drawing will be Sunday, July 12 at the end of the Electric Meet. You don't need to be there to win. Tickets are \$10 each, or 3 for \$25. Dave looked up the components, and the airplane as equipped would cost nearly \$500 to assemble.

### NEW BUSINESS:

**Bill Brown Resignation:** Bill resigned from MARCS and as Safety Coordinator, saying he was having too much back trouble to continue. He broke it, and has had several operations on it since. We will miss you, Bill! Thanks for everything you did for the club!

**New Safety Officer:** Bill Kinney volunteered to be the new Safety Officer. There were no objections. Thank you, Bill!

**Board position open:** Brad asked for volunteers to fill the rest of Bill Disch's term on the Board, which ends this year. There were none.

**Certificate of Appreciation:** Brad presented a certificate to Otto Oie for his services as club photographer. Thanks, Otto! Otto would have received the award at the Banquet, but didn't attend.

### Nearby Aviation Events:

\* May 9: A farm auction on Saturday, at Antigo

includes some airplanes.

\* May 9: Hobbico is having an auction in Champaign-Urbana, also Saturday. The flyer lists six pages of items.

\* May 17: Lodi Fun Fly is a week from Sunday. Sheets with directions were available at the front table.

\* May 30 and 31: The Navy's Blue Angels will perform at the Janesville Airport on Saturday and Sunday. Admission is thought to be \$4 per person with free parking.

\* July 28: An Airbus 380 is due in at Airventure this summer, on Tuesday.

**Ray Walsh trip report:** Ray visited a club in Phoenix, Arizona. Said they had a great flying site, with lots of improvements. But, he has decided he likes grass: none of the pilots could make their nice quarter scale models track straight on the hard surface... Ray also visited the Pima Airbase near Tucson, where he saw lots of planes, including A-10 Warthogs being worked on. Ray also saw the Davis Montham AFB aircraft boneyard south of Phoenix. He enjoyed the sunny weather and warm temperatures, and had a very enjoyable trip.

**Dave Rush** had a 4 DVD set about the history of flight available for anyone who wanted to borrow it.

It was reported Carl Bachhuber's new giant scale B-36 made its first flight recently, powered by six Zenoah G-45s. There are pictures on Carl's website. It must have been a little tailheavy: he is adding six pounds of weight to the nose!

**RAFFLE WINNERS:** This month's winners were:

**Hubi Schneider** - glue

**Tony Kremm** - .46 Magnum 2 stroke engine.

### SHOW AND TELL:

**Hubi Schneider** showed a 71 inch span Sig Astro Hog started by Bob Miracle. He finished it in Swiss markings, red on white. Gray stripes under the transparent red Monokote made the flags on the wings look more 3D, as though they were waving in the wind. Windex(c) was used to "float" the covering layers into position. The model weighs



about 6 pounds, is powered by a ThunderTiger .91 four stroke, and uses a Hitec radio. The engine is heavier than the plane was designed for, so Hubi put the servos back near the tail to help balance the plane.

He also shared a tip for protecting models from dings while sanding and working on them.

**Robert Hinrichs** showed a 32 inch span mini free flight version of a Goldberg Sailplane, a '40s gas ignition free flight. This one is covered with light weight transparent red film with white trim. It is powered by a Tee Dee .020, and uses a fuse timed pop-up stab dethermalizer.



**Roger Zimmerman** showed a 44 inch long BT-13 powered by an OS .40 two stroke. He used photo enlarged plans to get the size he wanted. A color print of a real BT-13 instrument panel adds detail. Finish is Rustoleum spray paint.



**Wendell Hottmann** showed the fuselage for a scratchbuilt 1/3 scale Jenny. He doubled a set of 1/6 scale plans, then used Solidworks CAD to design the structure. The wood is spruce from McCormick Lumber, which cost him \$6/foot for a 1x8. Ribs are laser cut 6mm Deproni with ply ribs which can be added to the foam ones for high stress areas. Wendell has 500 feet of 1/32 cable for bracing. Laser cut ply gussets reinforce all the wood joints.



Wendell cut the fuselage parts a week and a half ago, and has it all framed up! The model will use aluminum tubing spars and leading edges, and 1/16 ply trailing edges. Power is a 3300 Watt (4 hp) electric motor and 12S LiPo battery, turning a 32x10 prop through a 9 mm belt driven 1.75:1 propeller speed reducer. Covering will be from a roll of fabric reported to be "good for kites"! The 14

foot 10 inch span model is expected to weigh about 35 pounds. Wendell considers it a "fast build" design, and intends to fly it at the Electric Meet in July!

**PROGRAM:** There was no program tonight.

**Next meeting:** Will be on Thursday, June 4, at 7 P.M.

*The meeting adjourned at 8:20 P.M.*

## BATTERY SHORTS, HOW THEY OCCUR

*by Red Scholefield*

A short develops in a NiCad when conductive particulates bridge the separator or the separator itself deteriorates to the point where it allows the negative and positive plates to touch. Rarely does the short occur all at once but rather building up a very small conductance path termed "soft shorts."

In a charged cell the energy in the cell will blow away any short as it tries to develop. You've heard about "zapping" cells. The cell actually zaps itself before the short can develop. Only in cases of severe overcharge at high rates when the cell heats up significantly, can the separator melt down to the point where the points where the plates contact each other (hard short). In this case the energy in the cell then dumps and we have what is referred to as a hot streamer, the electrolyte boils, nylon in the separator melts down and is forced by the steam through the vent.

On some occasions the vent is clogged by the molten nylon separator and becomes inoperative causing the cell to rapidly disassemble. So under normal circumstances a cell maintained at some state of charge is much less likely to short than a cell that is completely discharged.

It should be noted however, that the self-discharge increases rapidly in cells where there is a short building (high resistance-soft short) because of a separator deterioration and/or cadmium migration. Once other shorting mechanism is a manufacturing defect where the positive or negative collector tab bridges the opposite plate. These usually fall out before the cells are shipped or assembled into batteries.

# THE BATTLE OF BRITAIN

Story by Len Deighton Summarized by Jerry Buss

## Chapter-16

By September 1, the pace of battle was about as fast as it could get. Both sides were committing their entire fortunes to it. Until late August, daily loss totals had almost always been in favor of the RAF but that was now changing. Only a few more days would be required for the Luftwaffe to gain superiority in the sky over England.

Dowding had been unable to set up a real rotation system that sent tired and battered units north and brought rested units with refurbished airplanes down into 11 Group to replace them. Rather, it was a matter of pulling a squadron out for a couple of days of rest while their planes underwent much needed repairs. Then it was back to the fighting while another squadron got a couple of days off. It was a testimony to Kesselring's tactics and the determined action of his aircrews that now, on a good day, losses were even and Dowding had no more liberty to rest his crews at all. Thus he was prompted to take what he later described as a desperate measure. He designated his squadrons as A, B and C. Those in 11 Group and those at Middle Wallop and Duxford in 12 Group were classed as A Squadrons. Those in 10 and 12 Groups were designated B squadrons and were to conserve their strength by refusing combat, insofar as possible, so they could be sent down to replace battered A squadrons. Squadrons in the quieter parts of the island were C Squadrons and were to be used like training squadrons to prepare men to go south as replacements for A squadron losses.

Moreover, losses had finally crept ahead of the supply of replacement aircraft. In the two week critical period, the RAF lost 200 more planes than they received. Worse still, going into the critical period the complement of RAF pilots stood at about 1,000 and now 231 of them were listed as killed, wounded or missing.

Luftwaffe morale was surprisingly high, however. A captured German flyer was on a train which stopped at Chatham. When a waitress from a local restaurant boarded the train and shook the col-

lection box for "The Mayor of Chatham's Spitfire Fund," under his nose, the prisoner asked his guard for his wallet. He withdrew a five mark note and dropped it in the box.

Erhardt Milch found "Onkle Theo" Osterkamp's critical report on the battle very interesting. He reduced the old man in rank and told him that if he ever expressed such defeatist views in the future he would be court martialled. Milch was on a roll. In the company of Hugo Sperle and Ernst Udet's Chief of Staff, he visited the gambling casinos in Deauville and enjoyed some winnings. At the moment he was consumed with putting together a personal train. When fully assembled, it contained Marshal Petain's personal dining car from the first war. It also contained the dining car of President Lebrun, with two of the president's chefs in attendance, as well as several ordinary coaches and two locomotives.

Meanwhile, Fighter Command was on the ropes. On this day, September 1, only the fields at Tangmere and Kenley were operational and, had the Luftwaffe continued concentrated attacks on them and other fields as they returned to operational status, they would have been home free. Instead, they began striking aircraft factories, giving Fighter Command a chance to take a deep breath and put its facilities back together.

Nonetheless, on September 3, the Luftwaffe continued a few attacks on Fighter Command air fields that had been returned to operational status or that seemed to be making progress at it. They achieved devastating effectiveness. Tactics were changed once again, with the fighters flying among the bombers and it seemed to work well. In spite of orders to the contrary, thirty Do 17s struck North Weal escorted only by Bf 110s. Great damage was done anyway, for Fighter Command had nothing with which to respond. Worst of all, the field's communications building was knocked out so that it was impossible to communicate with any fighters they may have managed to get in the air.

On this day, Göring called Sperle and Kesselring to a conference in The Hague. It was a beautiful, clear, sunny day, but undeniably, winter was not far off and winter weather would have a devastating effect on air operations. Despite RAF

night raids on Berlin, it was Hitler's order that no terror attacks were to be made against civilian populations. On the other hand, the London docks were legitimate targets and plans were made to attack these.

On the day, sixteen RAF fighters were lost against sixteen of the enemy's. Dowding's consolation was that half the pilots in his lost planes were safe, but on the one hand, that only meant that half were lost. He had lost a quarter of his men over the last two weeks, but that didn't mean he could still hold out for six more weeks. Fighter Command would cease to exist as an effective, disciplined force long before that. He had only to maintain enough strength to serve as a deterrent to invasion for a few more weeks until foul weather would set in, but with such a loss rate that was most unlikely.

On September 4, the Luftwaffe completely switched its emphasis to attacks against aircraft factories. On this day, the Vickers-Armstrong factory at Brooklands was struck and 700 casualties were the result. Over the next two days, these kinds of attacks continued and Fighter Command was very hard put to respond to them at all, but the breather from attacks against air fields was resulting in some recovery.

**CONTINUED NEXT ISSUE**

**NOTICE...**

Any of the tools or equipment... at **Kettle Field**, that doesn't work right or you notice is broken and is in need of repair,

**PLEASE...** Notify: **Ed Buechner** (608) 222-0774 or **buechner@charter.net**

So it can be taken care of **before** it is needed and wastes somebody's 'work' time. **(Thank you)**

Perfectionist  
**TIP**

**MIRROR IMAGE**

When applying decals, striping tape, or paint masking tape onto your airplane fuselage, place fuselage in front of a mirror. Now you can see both sides of the fuselage at the same time to help align decals and tape so both sides match.

**M.A.R.C.S.**

Madison Area Radio Control Society

**ANNUAL MEMBERSHIP DUES**

- Regular membership**.....\$50.00
- Junior membership**.....\$20.00
- Park Pilot membership**.....\$20.00
- Family membership**.....\$15.00
- Associate membership**.....\$15.00

*All applicants for **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 \$5.00 to your annual fee.*

**Treasurer: Dick Sutton**

Glue those old CA glue caps onto a piece of dowel to make scale looking missiles for war-birds. Use scrap balsa for the fins.

**TRASH PICK-UP**

As part of the "Spring Work Day" on Saturday May 2<sup>nd</sup>, we had another roadside pick-up secession consisting of the following members:

- Brad Witt ~ Ed McDonald ~ Bob Geimer**
- Loren Hoepker (new member)**
- Calvin Slota ~ Dick Sutton ~ Mark Finley**

With this many guys, the pick-up went quickly and was almost fun!

Once again I deeply appreciate the effort and exertion these men give to this job. It is an honor and a pleasure to associate with them and everyone who contributes to making our club what it is.

I first got started doing this highway gig when the late **Bill Disch** was in charge of it. His comment was something to the effect of;

**"Well, with some good help this job ain't so bad."**

I couldn't say it better myself; rest in peace **Bill**.

**by Mark Finley**

## LAST FLIGHT

At 3:00am on Tuesday April 28<sup>th</sup>, 2009

**William "Bill" Disch** left us on his final flight... destined for his home in a place closer to his God, who he knew very well. His battle with cancer is now over, ending as it does so often these days.

During the past 29 years that he spent here in the **MARCS Club**, those who knew him were aware of his gentle un-assuming nature and his sincere dedication to the betterment of our club. At the time of his departure, Bill held a seat on the **Board of Directors** and was also the **Club Safety Officer**.

Being an avid builder and R/C pilot of Giant-Scale models, Bill also was a long term member and an officer in the **SCREAMIN' EAGLES GIANT SCALE MODEL AIRPLANE Club**.

I made some inquiries about his modeling essence and one of our senior members had this to say.

"Bill was a very interesting person. He claimed to be, for the most part, a 'motor' man." More than likely because of his life's dedication as an auto mechanic and technician while in the work force.

"He built quite a variety of airplanes, large and small, scale and plain, and from kits or from scratch. He was not one of the best of pilots in our club, as he did crash a lot, but he was a very good one to repair his models back into their pristine shape."

"There were times that Bill would come to the field, spend an hour getting his plane together and all checked out, but if the motor didn't sound exactly right... he wouldn't fly it. The plane got taken apart and put back in his car, to fly safely on another day."

"He decided to buy a Harley Davidson in his early 70s and loved touring our beautiful state. It was a time for him to be alone with himself to reflect on his life and probably a chance to talk to his wife who left our world several years prior. A part of this

man went with her and it was hard for him to enjoy life without her by his side. I knew Bill during this hard time of his life, long before our paths crossed again in the Marcs club. He always played out the hand dealt to him in his life with his faith providing the needed strength to meet it straight forward.

Rather than let the 'Harley' compromise the love of his flying hobby, Bill fabricated a trailer that could hold his planes and the equipment to service them, then simply pulled it to the field with the Harley.

Bill's presence will be truly missed by his many friends, young and old, that he made while he was here with us.

**JOHN/EDITOR**



Bill had style. Who else would come to the field on a motorcycle with his airplane in a trailer? **(Brad Witt)**

## MONOKOTE SEALER

When you spend hours perfecting your Mono-Kote job on your airplane with all the details and trim pieces, and want it to last for years to come, try this simple trick. After finishing your covering job, or even on an existing covering job, use a small paint brush and apply clear aero-gloss dope to the seams of the Mono-Kote and trim pieces. Not only does it fuel proof the seams, but also keeps them intact for years of flying, so your covering will never need to be replaced.

## Aerobatic Trimming

**BY...SCOTT STOOPS**

*A two part article, that will be continued in the next issue of the MARCS Sparks*

One important but often overlooked aspect of flying precision aerobatics is setting up your aircraft... "trimming" it. This isn't trimming in the general sense of adjusting flight controls to hold level flight, but rather the small adjustments you make to your airframe and radio setup to help your model fly as precisely as possible. While this may seem to be a bit of overkill for a new aerobatic pilot, I find that a nicely balanced and precisely set up model makes learning precision aerobatics much easier, and it really isn't all that hard to accomplish. In this article, we'll discuss the "why" of aerobatic trimming. A companion online feature at [www.flyrc.com](http://www.flyrc.com) details the specific techniques and processes for programming two popular radio systems... the Futaba 9C and the JR 9303.

### THE TRIMMING PROCESS

For starters, let's assume that your model is straight and square. If not, correct those areas that you can... we'll live with the rest. Your model should have the appropriate dihedral, wing and tail incidences, and thrust line. It should also be set to the manufacturer's recommended CG. Let's give the manufacturer the benefit of the doubt in the design and adjust from that starting point.

Before we get too far along, I think it is important to point out that trimming your model for aerobatic flight is a process with a distinct sequence. I'd love to be able to lay claim to the process I'll outline, but in reality, the primary architect of what I'll cover is Peter Goldsmith's, of TOC and IMAC fame. Many pilots, while trimming their model for aerobatic flight, tend to either jump ahead or omit steps from the trimming process. Unfortunately, by jumping ahead, their trimming efforts can cause more problems than they solve. Each setup item has an effect on the next, so for their order, naturally, becomes important. We'll break the process into the following four unique steps.

**CENTER OF GRAVITY**  
**Aileron differential**

**THRUST LINE**  
**Sideslip coupling**

One item to note: this article is intended for setting up most sport aerobatic models. It isn't, however, intended as a competition setup guide. We won't cover setting wing and tail incidences, as those aren't adjustable on most small sport aerobatic models. Everything I discuss here is appropriate for setting up sport aerobatic airplanes from your common aerobatic park flyer all the way up through giant scale models.

### CENTER OF GRAVITY

When settling on a CG for precision flight, a good starting point is the manufacturer's recommended CG position. I have found, however, that many models' recommended CG positions are very, very conservative, as are their recommended control throws, so fine tuning is generally appropriate.

For discussion purposes, the position of your model's CG affects primarily the pitch axis of the model. A forward CG results in a more stable yet less responsive model. An aft CG will result in a more pitch-sensitive and less stable model, while extreme aft CG positions can make the airplane over-responsive and even uncontrollable. Our goal is to balance those characteristics, creating a stable yet responsive aerobatic machine.

Let's start from a level inverted line. Flying level inverted, neutralize the elevator control. Your model should descend ever so slightly, requiring only a very small down elevator input to maintain level flight. If the model descends abruptly, adjust the CG and repeat the test. If the model holds a perfectly level inverted flight or climbs inverted with neutral elevator, adjust the CG slightly forward. For precision aerobatics, I recommend a slightly forward CG, allowing the instantaneous snap and spin recovery required for precision aerobatics. This is different from an ideal 3D CG position. For 3D flight, I prefer a perfectly neutral model... one that maintains perfectly level flight both upright and inverted.

A good secondary CG test is a 45-degree up-lines with a half roll mid-line. During the upright portion of the 45-degree up-line, you'll likely be holding only a slight up elevator input. After the half roll to inverted, the down elevator input should only be slightly more down elevator than the amount of up

## 2009-MARCS EVENT SCHEDULE

EVENT NAME	DATE	LOCATION
Boy Scout Fun-Fly	June-13	Kettle Field
ELECTRIC Fun-Fly	July-11/12	Kettle Field
FLOAT Fly	August-15	Lake Waubesa
Ken Kindschi SCALE Rally	August-30	Kettle Field

Additions, dates, and further information will be posted as it becomes available.

### (AEROBATIC TRIMMING)

elevator required for the upright. Once you've got a CG you're comfortable with, the next step is adjusting your model's thrust line.

### THRUST LINE

Adjusting your models thrust line is one change that most models overlook when setting up their model for precision aerobatic flight. In fact, I find most modelers simply bolt the engine to the firewall, match the cowling to the spinner location, and settle for whatever thrust line that happens to be... never again considering that the thrust line may not be perfect for how they want the model to perform. As part of our trimming sequence, I advocate that you test the thrust line, adjust it if necessary, and then adjust the cowling to the appropriate thrust line. On some models, realigning the cowling isn't possible, in which case I simply accept the fact that the spinner is offset from the cowl slightly. I'd rather have a precise flying model than one that looks like it flies well!

I adjust the thrust line in two separate steps. We'll start with left/right thrust. Most models have clockwise rotating propellers when viewed from the cockpit and, as a result of spiral slipstream from the spinning propeller; the model tends to yaw to the left under power. The common remedy is to adjust the thrust line to the right slightly. Most modern model manufacturers build some right thrust into their motor mounts, so let's start with what the factory gave us. If your model doesn't have any right thrust, I'd recommend two to three degrees of right thrust as a starting point.

I test the left/right thrust line by flying a vertical up-line at 3/4 power, paying close attention to the nose of the model for any yaw divergence from the vertical line. Make sure that when setting the vertical line that you're actually vertical. Any residual yaw on the vertical line, caused by the pitch up from level, will disguise the required thrust line change. So pull to vertical, set the line, and then neutralize any rudder inputs. If the model yaws to the right, reduce your right thrust. If the model yaws to the left, increase the right thrust. I find that most models need around two to three degrees of right thrust to adequately compensate for spiral slipstream.

Adjusting up or down thrust may also be necessary. It isn't uncommon for models with low wings and a high thrust line to require up thrust, while models with a high wing and lower thrust line often require down thrust. A good test for the vertical thrust line is, again, to fly vertical lines at a steady thrust setting of around 3/4 throttle. If the model pitches toward the canopy, add some down thrust angle. If the model pitches toward the landing gear, add some up thrust. In most cases, the up/down thrust changes are less than a degree in all. The actual thrust line setting can be confirmed by flying other lines, including level lines, 45-degree lines, and inverted lines. With thrust changes, the model should maintain a constant flight path. No thrust line is perfect at every airspeed and attitude, but a reasonable compromise is achievable.

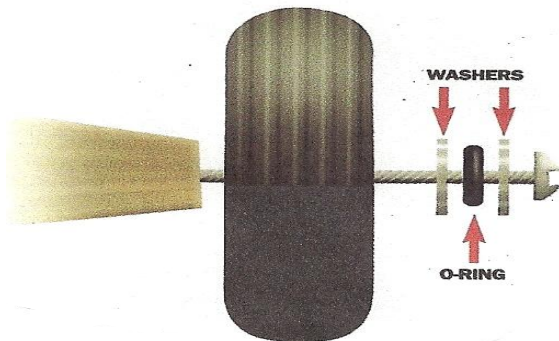
*In the next issue we'll cover the two remaining steps; Aileron differential and sideslip coupling.*

*(Sideslip coupling is more commonly known as "Knife-edge coupling")*

## TIP OF THE MONTH

### FRICTION BRAKES

Are you one of those pilots that want to use our field runway, but the instant your wheels touch down your plane seems to pick up speed and it free rolls off the surface and noses into the grass? Here's a way to add a tension brake to help slow it down. On the outside of the main gear wheels, install two washers and sandwich an o-ring between them. You can then adjust the tension with the axle nut or wheel collars to your liking. Start with just a small amount of tension first and then increase it if needed.



## BOARD of DIRECTORS meetings

These meetings are held on the same evening as the **MARCS** General Membership meeting, (first Thursday of the month) after its adjournment.

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

*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 Board meeting. A Club member may have the floor by being recognized by the Chairperson. Input or opinions must be brief and to the point as the overall meeting time is limited.

**AGENDA: June 4, 2009**

**OVER-ALL FIELD CONDITION ~ UPCOMING EVENTS  
'COME FLY WITH US' PROGRAM ?**

## SCHULTZ SPORT & HOBBY

**(608) 837-3498**

*R/C...Airplanes kits, ARF kits, and RTF kits  
Helicopters and accessories*

*Electric Gas Nitro-Fuel*

*Hours: 8:00~5:00*

*Monday ~ Friday*

*315-South Thompson Road, Sun Prairie, WI.*

## ELECTRIFLY E-PERFORMANCE XLC SERIES EDGE 540T Raffle

The Edge 540T has been test flown, a report has been given to Great Planes as per the donation, and will now be raffled off. The plane is ready to fly after you add your receiver, set-up the plane on your transmitter, and charge the included 4s Lipo battery.

Tickets are only available to club members and registered pilots at the Electric Fun Fly on July 11<sup>th</sup> and 12<sup>th</sup>. The plane will be raffled off on the 12<sup>th</sup> at approximately 1:00 p.m. You DO NOT need to be present to win. The plane and included/installed equipment are valued at over

**\$400.00 !!!!!** (and you don't have to build it!)  
Tickets are \$10.00 each or 3 for \$25.00 and will be sold at the June and July meetings and at both days of the Electric Fun Fly. Dave Rush will also have tickets available when he is flying at the field.  
*by Dave Rush*

*Click on the link below for specific information  
on this aircraft and view a flight video*

<http://www.electrifly.com/parkflyers/gpma1572.html>



# SEALED BID

# SALE

On March 18, 2009, the aviation community lost a long time modeler in **Hal Humphrey**. Besides being a professional pilot, Hal was a dedicated scale R/C modeler. We are faced with the challenge of finding new homes for Hal's R/C projects, equipment, and inventory. As you can see from the lengthy list, Hal's main focus was on scale type airplanes, especially jets. Hal was an excellent craftsman who was obsessed with detail. Most of the airplanes are either NIB (new in box) or if completed, have **never** been flown. Some aircraft, especially some jets, are in various stages of construction. Most of the completed airplanes have the servos installed, which we have left in place, but most receivers and batteries have been removed. Where some engines are specific for certain installations, we have left them in place and are listed accordingly.

Initially, we are going to accept "sealed bids" for specific items via email, using a dedicated email address. Also, specific questions about an item can be addressed through the email site [rcestate@merr.com](mailto:rcestate@merr.com). Any bids submitted need to be **reasonable** before they would be considered. We will accept bids up to June 30. Of course the viewing of models presents a challenge. We have attempted to familiarize ourselves with the specifics of each model and hopefully can answer any questions about them. We will set up future dates for the selective viewing of models that specific individuals would have serious interest in. We want to avoid the concept of an "open house" type of invasion of large masses of people to minimize the stress on the Humphrey family.

**Thank you and happy bidding... Dick Buescher**

## AIRPLANES...

- Item#1. B-29...'FRANK BAKER design', w/(4) OS.10 ENGINES
- Item#2. A-7 EDF 'J-POWER' w/2200MAH 4-CELL LiPo
- Item#3. F-86 EDF (SMALL) w/1800MAH 3-CELL LiPo  
AND HITECH MICRO 05S RECEIVER
- Item#4. LANCAIRE ARF, 'EXPERIMENTAL AIRCRAFT MODELS'
- Item#5. F-4 EDF 'Hobby Lobby' w/2200MAH 4-CELL  
AND HITECH MICRO 05S RECEIVER
- Item#6. A-4 EDF (SMALL) w/1200MAH 3-CELL LiPo  
AND HITECH MICRO 05S RECEIVER
- Item#7. T-45 HAWK EDF 'SAPAC' FOMIE, w/2200MAH 3-CELL  
LiPo AND CHARGER BALANCER
- Item#8. STEARMAN 'GREAT PLANES' ARF w/OS FX.91 2-CYCLE,  
TRICKED OUT AS NAVY TRAINER w/Multiplex SERVOS INSTALLED
- Item#9. BONANZA 'HOUSE-OF-BALSA' .049-SIZE w/RETRACTS (BUILT)
- Item#10. T-28 'PLATT' 1/7 SCALE, 69"WS, VERY DETAILED, BUILT  
BUT NOT FLOWN, SAITO 1.00 (NEW) INSTALLED
- Item#11. T-28 'PICA' 1/7 SCALE, 69" WS, BUILT, WHITE  
w/ORANGE TRIM, w/WEBRA .61 INSTALLED, POSSIBLY FLOWN
- Item#12. T-28 'PLATT kit', 1/6 SCALE, 82" WS, w/Moki 1.8  
(NEW) BUILT BUT NOT FINISHED, FIRST COAT OF PAINT (YELLOW)
- Item#13. F-7F TIGER CAT, 'R/C Kits' (old) **NIB**
- Item#14. HAWK ARF by 'AMD', .46DF (OR TURBINE?) **NIB**
- Item#15. SEA FURY **NIB**, 'Will Hobby', .60-.90-SIZE
- Item#16. SEA FURY 'Will Hobby', partiality built, FEATURES  
WING AND TAIL MODIFIED TO SCALE
- Item#17. F-6F HELLCAT ARF .90-SIZE, **NIB**
- Item#18. HAWK ARF by 'AMD', .46DF (OR TURBINE?), **NIB**
- Item#19. SEAWIND 'GREAT PLANES', ARF, (big SEAPLANE) **NIB**
- Item#20. A-4 'BVM' (EARLY kit) DF 7.5CC-SIZE, BUILT AND  
PAINTED GREY w/NAVY TRIM
- Item#21. F-9F COUGAR 'JET HANGER HOBBIES', PARTIALLY BUILT
- Item#22. T-34 'BYRON' kit, KIT BARELY STARTED
- Item#23. RCM TRAINER w/ VIDEO CAMERA INSTALLED,  
BUILDING IN PROCESS, NEEDS COVERING

Item#24. **BOEING 727** UNITED AIRLINES, PROP DRIVEN (old)

Item#25. 'PARKZONE' 'E-FLIGHT AIRLINER'

Item#26. **F-6F HELLCAT**, 'WING MFG'. .60-SIZE, BUILT AND FLOWN

Item#27. **T-34** 'TopFlite' w/RCV ENG. (1.20) INSTALLED, BUILT AND FINISHED IN PRIMER

Item#28. **Spiritfire** 'TopFlite' .60-SIZE w/built up wing, (older design) build in process

Item#29. **P-40** 'TopFlite' .60-SIZE w/RETRACTS, BUILT AND FINISHED IN PRIMER

Item#30. **SEAPLANE** ARF (old LANIER?) w/KRAFT .61 INSTALLED

Item#31. **KAOS** OR SIMILAR PATTERN PLANE, w/RETRACTS, BUILDING IN PROCESS (old)

Item#32. **MACH ONE** OR SIMILAR PATTERN PLANE, w/RETRACTS, BUILDING IN PROCESS (old)

Item#33. NONE...

Item#34. **F-6F HELLCAT** 'BRIAN TAYLOR KIT', FG FUSELAGE w/LASER CUT WOOD

Item#35. **SEA FURY** 'TopFlite' .60/.90-SIZE plus cockpit kit, *NIB*

Item#36. **A-1 Sky RAIDER** 'SKYSHARK KIT', w/HORNET DECAL, *NIB*

Item#37. **B-25** 'WING MFG'. INCLUDES RETRACTS

Item#38. **F-4** 'JET HANGER HOBBY', DUCTED FAN/TURBINE, *NIB*

Item#39. **A-4** 'BVM' (1ST GEN. DF) FG FUSE, BUILT UP WING BUT NO WOOD, w/PLANS, *NIB*

Item#40. **P-38** 'ROYAL??', (2) WEBRA .61'S w/DUBRO MUFFLERS, BUILT, PAINTED ORANGE, NOT FLOWN

Item#41. **P-51** STERLING?? .60-SIZE, BUILT AND FLOWN

Item#42. **MIDGET MUSTANG** .40-SIZE, FG FUSE w/FOAM WING

Item#43. **MIDGET MUSTANG** .15-SIZE, FG FUSE w/FOAM WING

Item#44. **1/2-A Pylon RACER**

Item#45. **1/2-A Pylon RACER**

Item#46. **P-51** 'HOUSE-OF-BALSA' .40-SIZE, *NIB*

Item#47. **MISS DARA** (MIDGET RACER) 'HOUSE-OF-BALSA' .40-SIZE??, *NIB*

Item#48. **P-47** *NIB*, 61" WS, BUILT UP COMPLETE-A-PAC, 'BOB HOLMAN'

Item#49. **DIRTY BIRDI** TYPE PATTERN PLANE, .40-SIZE, IN PAINT

Item#50. **EYEBALL** TYPE PATTERN PLANE, .60-SIZE RE, IN BONES (BUILT UP BALSA)

Item#51. **MYSTERY** PATTERN PLANE, .60-SIZE, (70'S ERA) FG FUSE w/SHEETED FOAM WING

Item#52. **F-6F HELLCAT** .60/.90-SIZE, w/FG FUSE, VERY SCALE DETAILS, DARK GRAY FINISH

Item#53. **P-39** 'TopFlite', .60-SIZE (old design) built & flown

Item#54. **F-8F BEARCAT** 'TopFlite' .90-SIZE w/built-up wing, PARTIAL PAINT

Item#55. **P-47** 'TopFlite', *NIB* (old kit)

Item#56. **ZERO** ARF, 1.20-SIZE, *NIB* (big AIRPLANE)

Item#57. **P-38** 'ROYAL', ALL BALSA, BUILT-UP WING AND FUSE (PARTIALLY BUILT... old)

Item#58. **BONANZA** 'TopFlite' w/ROBART RETRACTS AND MANY FG EXTRA CONVERSION PARTS AND INTERIOR KIT

Item#59. **F-4D Sky Ray** 'MARK FRANKEL' DESIGN, ORIGINALLY DF, POSSIBLE TURBINE CONVERSION, *NIB*

Item#60. **A-4** TAM JETS TURBINE P60, BUILDING IN PROCESS, EXTRA DETAILING

Item#61. **F-18C** 'JET LEGENDS' ARF TURBINE (FOR P120) STILL IN PACKING CRATE FROM FLORIDA, INCLUDES JET LEGENDS COCKPIT KIT & STRUTS, PLUS TAM JET RETRACTS, WHEELS & BRAKES. *NIB*

Item#62. **A-7** 'JET HANGER HOBBIES', KIT, COMPLETE w/WOOD KIT AND SCALE STRUTS, *NIB*

## HELICOPTERS...

ARTEC HELICOPTER w/GYRO

ARTEC 1300 MAH 3-CELL LiPo BATTERY PACKS (2)

ELECTRIFLY HELICOPTER w/E-FLITE HEADING HOLD GYRO

ELECTRIFLY 910 MAH 3-CELL LiPo BATTERY PACKS (2)

HELIMAX 650 MAH NiMH PACK PLUS CHARGER

Heavy Duty "Y" HARNESS (FOR 2-PACKS IN SERIES)

AND (3) HEAVY WIRE 10-GA.

**ENGINES...**

- OS .91FX... RINGED, plus muffler, *NIB*  
 OS .91FX... RINGED, plus PITTS style CANNED muffler *NIB*  
 OS .75AX... plus muffler *NIB*  
 OS .91VR-DF... ROUND HEAD, old box  
 OS .91VR-DF... ROUND HEAD, NEW BOX  
 OS H60F... Black HEAD, EXHAUST BLADE THROTTLE, Very old *NIB*  
 OS 60... Black HEAD, USED w/MUFFLER (old)
- BVM .91... w/BVM FAN UNIT, VERY USED, NO COMPRESSION
- Moki 1.8... w/B&D OR BISSON PITTS style MUFFLER (MOUNTED ON TEST STAND) *NEW?*
- Moki 1.8... INSTALLED IN big PLATT T-28 (ITEM# 12), HAS VERY SPECIAL CUSTOM MUFFLER FOR T-28 *NEW?*
- RCV .91... *NIB*  
 RCV 1.20... INSTALLED IN TopFLITE T-34 (ITEM#27) *NEW*
- K&B 6.5 DF RR *NIB*  
 K&B 6.5 FI RE w/PERRY-pump  
 K&B .40 RR SE old Torpedo, USED  
 K&B .40 RR SE old Torpedo, USED  
 K&B .15 RR RACE MOTOR w/PERRY CARB.  
 K&B 7.5 RR 9101 GEN.II w/TURBAX FAN UNIT, *NEW*  
 K&B 7.5 RE FI DF GEN.I DF w/PERRY PUMP  
 K&B .40 FI SE w/PERRY-pump & KO MUFFLER  
 COX TD .15 plus misc. PARTS
- SUPER TIGRE G-.71 RR SE w/PERRY-CARB, w/blade THROTTLE (VERY USED)  
 SUPER TIGER G-.71 FI w/PERRY-CARB. (VERY USED)
- ROSS .61 SE "BLACK DEMON" (NOT ROSSI) w/PERRY-CARB. (SCHNERLE PORTING & Dykes RING) *NIB*  
 ROSS .61 SE (NOT ROSSI) w/PERRY-CARB. (SCHNERLE PORTING & Dykes RING) *NIB*
- ROSSI .15 FI RR w/PERRY CARB, *NEW?*
- SAITO .90 TWIN-CYL. 4-cycle, w/McDANIELS ON-BOARD glow DRIVER, *NIB*
- DYNAMAX FAN UNIT FOR OS .91 DF ENGINE

**TURBINES...**

- JETCAT P-60 (NOT SE), older, *NIB*  
 JETCAT P-120 *NEW?* (OR like NEW)  
 WREN MW54 ASSEMBLED FROM KIT, *NEW*  
 JERSEY MODELER FUELING STATION 2-1/2 GAL. w/TRANSPORT TRAY, *NEW* (NEVER filled)

**RADIOS...**

- JR 10X TRANSMITTER ch05 (50.9) appears *NEW*  
 JR R950S RECEIVER 10ch PCM ON ch05 (50.9) *NEW*  
 JR 9303 w/SYNTHESIZED TRANSMITTER MODULE (72MHz), plus R2000 SCANSELECT RX (also 72MHz) includes (4) digital SERVOS, ETC. *NIB*  
 JR 9303 w/SPEKTRUM TRANSMITTER MODULE & AR7000 SPEKTRUM RECEIVER  
 JR 8103 TRANSMITTER w/SYNTHESIZED TRANSMITTER Module (72MHz)  
 JR R790 PCM SCANSELECT RECEIVER 7ch  
 JR R950S PCM RECEIVER ON CH 10, appears *NEW*  
 JR PCM/FM TRANSMITTER MODULE ON CH 15  
 JR DS821 digital SERVOS *NEW* (QUANTITY-8)  
 JR DS3421A digital SERVOS, ULTRA TORQUE Mini-type (QUANTITY-2) *NEW*  
 JR DS8231 digital SERVO IN TAM JET A-4  
 JR NES3321 MINI SERVO ON TAM JET A-4 RETRACT BOARD  
 JR ? (2) SERVOS IN TAIL OF TAM JET A-4 (built-in)  
 HEXTRONIC HXT-900 VERY SMALL SERVOS (QUANTITY-2) (CHINA)  
 Multiplex Royal EVO 12 TRANSMITTER  
 Multiplex PCM RECEIVER (FOR ABOVE TRANSMITTER)  
 Multiplex V2 SERVO PROGRAMMER  
 Multiplex 65383 LARGE SERVOS (QUANTITY-8) *NEW*  
 Multiplex McV2 SERVOS (QUANTITY-10) USED  
 MP Profi SERVOS (QUANTITY-2) *NEW*

**BATERIES, CHARGERS, ETC.**

- Turnigy 'ACCUCELL' 6-LiPo CHARGER AND BALANCER  
 'SAPAC' 2-3 LiPo CHARGER AND BALANCER  
 Electricfly 'EQUIMAX' BALANCER  
 'INTELLEGENT' CHARGER (INEXPENSIVE BASIC LiPo CHARGER)  
 Hobbico 'ACCUCYCLE' Elite CHARGER w/AC ADAPTER  
 Hobbico 'ACCUCYCLE' (older ORIGINAL MODEL)  
 MRC 'SuperBRAIN' 969 w/AC ADAPTER

1800MAH 4-CELL, NiCd RX pack, (QTY.-2)  
 2700MAH 4-CELL, NiMH RX pack, (QTY.-1)  
 JR 1100MAH 4-CELL, NiCd pack, (QTY.-1)  
 600MAH 4-CELL, NiCd RX pack, (QTY.-3)  
     (ONE IS; JR 4N600)  
 1400MAH 4-CELL, NiCd RX pack, (QTY.-1)  
 1100MAH 4-CELL, NiCd RX pack, (QTY.-1)  
 2100MAH 3-CELL, LiPO pack, (QTY.-1)  
 'RHINO' 2350MAH 2-CELL, LiPO pack, (QTY.-1)  
 'RHINO' 2620MAH 3-CELL, LiPO pack, (QTY.-3)  
     (JR/FUT TRANSMITTER REPLACEMENT)

KR1100AEL NiCd individual cells (QTY.-4)

## RETRACTS... AND MISC LANDING GEAR ITEMS...

'ROBART' style (3-GEAR SET FOR .60 SIZE  
     (belly MOUNT), (CHINESE)  
 'Spring Air' HD (3/16") 3-GEAR SET, (belly MOUNT)  
 'IMAX' 3-GEAR SET, (VERY SMALL)  
 'ROBART' MECHANICS, 1-PAIR (CUT off LEGS)  
 'JET Model PRODUCTS' MECHANICS, (FOR JETS)  
     w/ROBART cyls., 3-GEAR SET, (belly MOUNT)  
 'ROBART' "ROBO STRUTS", 1-PAIR, (FOR 3-1/2"~4" WHEELS)  
 'ROBART' #172, SMALL AIR TANK, (QUANTITY-2)  
 UNKNOWN BRAND MECHANICS, LOW-PROFILE  
     (like BVM) (3-MAINS + NOSE)  
 ROBART?? 100-degREE, P-40 TYPE MAINS, .40-SIZE

### MISC. BVM accessories

#5552 Strut door attachments, (2-packages)  
 #5492 air cylinder  
 #5510 hatch latch set, (2-packages)  
 #5515 hatch pin set  
 #6027 mixture valve  
**Cylinder lube kit**  
**Aluminum fuel tank stopper kit**  
**Also...**Miscellaneous pneumatic valves, sequencers, connectors, fittings and other Robart retracts.

## MISCELLANEOUS GOODIES...

### Video Camera:

Onboard R/C video camera and downlink transmitter, Super Circuits AUX900S7 900mHz color, did not find receiver.

### Eagle-Tree:

Data acquisition system, 'Sea Flight-900'

### Fluke:

Digital voltmeter, case taped up. Unit does work.

### Bulk:

Servo connectors, wire, & special crimping pliers

### Vacuum forming machine:

Was a commercially produced kit with a high quality industrial type vacuum pump. Very nice unit. Information can be found at:

[http://www.build-](http://www.build-stuff.com/1001plans_hobby_vac.htm#whatdoesitdo)

[stuff.com/1001plans\\_hobby\\_vac.htm#whatdoesitdo](http://www.build-stuff.com/1001plans_hobby_vac.htm#whatdoesitdo)

## The...**BUILDER'S WORK-BENCH**

### EPOXY BAGGING...

A nice clean way to mix up two part epoxy is to use a plastic sandwich bag. Dispense equal parts of epoxy and hardener into the corner of the bag. Knead the bag to mix the epoxy. Cut off a small piece of the corner to make a nozzle and squeeze the bag to dispense the glue. When you're done, you can set the bag aside. When the glue in the bag has cured, you will know that the joint is solid.

*(Model Airplane News)*

