



MARCS Sparks

JANUARY 2010

VOLUME 49 ISSUE 1

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
602 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-4)

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

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

December 3, 2009

Submitted by: **Don Weigt, Secretary**

Call To Order and welcome:

At 7:14 P.M. by President **Brad Witt**. There were eighteen people were present.

Visitor, Linda Jobe, introduced herself, as the designated driver for her son, **Joey**, on this snowy night. Thanks, Linda!

SECRETARY'S REPORT:

Minutes of the November meeting were approved as published in **MARCS SPARKS**.

TREASURER'S REPORT:

Report was available for viewing. Treasurer **Dick Sutton** reported final membership for 2009 at 92. Membership for 2010 at the beginning of the meeting was about twelve. **Dick** was accepting dues and handing out 2010 **MARCS** cards.

OLD BUSINESS:

Winterizing the field: **Brad** expressed the club's thanks to everyone who helped fence the runway and put the plywood panels on the shelter.

Tom Lazar New Year's Day Memorial Chili Feed and Fun Fly:

Tony Kremm is bringing dessert again, **John Steen** is bringing chili again, **Ray Walsh** said he's bringing something, **Brad** is bringing three coffee pots, an extension cord, and some smaller items. The shelter sides will be closed up with Visquine, probably a few days before or after Christmas.

Other 2010 events: **Brad** reviewed the others, as printed in the last **MARCS SPARKS**. The dates for the Banquet and the Scouts aren't set yet.

Newsletter Editor

John Steen steensr@yahoo.com

Minutes continued from page-1

- * Thursday, March 4: Meeting and Swap Meet.
- * April ??: Banquet. Date not set.
- * Sunday, June 13: WarBirds Over Kettle Field.
- * Saturday, July 10: Float Fly.
- * Sunday, July 18: Ken Kindschi Scale Rally.
- * Saturday and Sunday, Aug. 7 & 8: Electric meet.
- * ??: Scouts. Date not set.

Trees: Whoever wants wood, please go out and get it. Anyone is welcome to it, club member or not. **Ray Walsh** has a friend who was going to take a trailer load. He fell off his house and broke his arm. The wood may still be there when his arm heals, and he's welcome to it.

NEW BUSINESS:

Jeff Alexander has updated the club website for 2010, with new membership applications and club mailing address, so everything is current. Thanks, Jeff!

Nearby events:

- Sunday, December 6: Swap meet in Freeport, IL.
- Thursday, December 10, 11:30 A.M.: Screaming Eagles at JJ's Top of the Swamp on Hwy-113 near county trunk-M.
- Wednesday, December 30, 7 to 9 P.M.: War-Birds meeting at Verona Public Library, 500 Silent Street, Study Room 3, with a "debrief" afterward at Culvers. It's free: no dues to be in the group, AMA not required. They talk for an hour or two about WarBirds and modeling them.
- Sunday, January 3, 5:30 to 9:00 P.M.: Indoor Electrics, at Craig High School Field House in Janesville, 6 ounce maximum, 6.5 ounces if the prop is protected, such as an IFO. Larger slow flyers will be looked at on a case by case basis. **Dave Rush** will have a scale there to check models in question. Fee is \$10 to fly, which is donated to the Craig Band Scholarship fund. One basketball court will be reserved for Parkzone Vapors, Citabrias, and other micro models, the remaining three courts will provide a larger space for bigger ones. There will be times for flying the slower stick and tissue models without the faster planes, so less danger of mid-air. Standard or Park Flyer **AMA** membership required. Schedule and directions will be published in **MARCS SPARKS** Newsletter.

RAFFLE:

Wendell Hottmann... Magnum .25 2-stroke engine. (Only one prize, due to low ticket sales)

SHOW AND TELL:

Dave Rush showed a Parkzone P-51 indoor flyer. Uses a single cell (1S1P) 130 mAh LiPo, has 18 inch span and 1.22 oz weight. Can be flown outdoors if calm. Flies quite well, loops, rolls, will almost knife edge! **Dave** got the Bind and Fly version at Hobby Horse for \$99.



Wendell Hottmann showed a Bellanca Skyrocket from a 1973 era Skyline Models stick and tissue kit. The plans show rubber or Cox 0.020 power. Wendell's has a brushless motor, 2S LiPo batter, and three servos. He used Coverlite and Sig Stick-It for covering, Williams Bros. cylinders for the uncowed radial engine. Finished weight will be about 8 ounces.



Wendell also showed CAD drawings for a MiG-15 he developed from 3-views. He will use them to make a 1/10 scale, 40 inch light weight stick and tissue model of the plane, and try to power it with a brushless motor inside turning a small regular propeller instead of a fan unit. He'll convert it to an EDF unit if it needs more power. Eventually, he plans to make a 1/5 scale 80 inch version.



Don Weigt showed a Great Planes Viper wing, and explained the changes he is making to improve the aileron linkage, which had a lot of play as purchased.



Ray Walsh showed the lower framework, engine box, and radiator portion of the SE-5a fuselage from a Balsa USA 1/4 scale kit. This is for the wings that **Ray** showed at the last meeting. **Ray** will use a Zennoah G-38 to power the model. The wood for the fuselage was rather heavy and hard, just as it was for the wings. That may be because a larger model like this needs stronger wood.



Minutes continued from page-2

Program:

Another half hour of the video **Danny Sutter** shot at the Scale Rally. Thanks, **Danny!** The videos are available from Danny on DVD for \$10 each. Half goes to **MARCS**.

Next meeting: Thursday, Jan. 7, 2010, at 7 P.M.

Adjournment: 8:59 P.M.

January agenda: None announced.

ALWAYS TRY TO IRON OUT YOUR DIFFERENCES

I know none of you reading this would ever do this, but if you ever hear of someone who has, here's some advice to give him or her.

Using the household iron to apply the covering on your model will and does work in a pinch. However you can get into some big-time trouble with the Warden if you leave some unnoticed colored residue on the iron's face when you put it back.



You could also run into your own problems when you start to iron on the second trim-color covering on your model with ruminates of the 'first' still on the face of the iron.

Remedy: While the iron is hot, put some table salt on a piece of paper and run the iron across it a few times. The Iron's face will be like new again!

Note: This procedure will also work equally as well on your own modeling hot-iron to keep it clean.

TIP of the MONTH

GET A GRIP...

Converting scale aircraft to electric is becoming more commonplace. Here's a neat trick that solves a simple, but perplexing problem often encountered when using "nitro" spinners on electric-powered models. Many times, there is a problem keeping the prop and spinner aligned on the brushless motor when tightening the prop nut. Glue a disk of sandpaper to the front and back of the spinner back-plate and that problem is immediately solved. You can use a 1-inch hole-saw to cut the sandpaper discs and then CA them to both sides of the spinner back-plate.



NOTEWORTHY NEWS...

Brad Witt went out to the flying field on the 18th to see what the snow situation was in preparation for the New Years day Chili/fun-fly. Yup, it was full of snow, well beyond what a group could handle with shovels. Also our gate padlock was broke open and on the ground in a junk condition.

Wayne is going to take care of the lock and speak with the 'dump-people' about plowing out our lot. If that isn't a do-able option, **Brad** will speak with **Charlie** about perhaps doing it.

Brad stopped in to see how **Ed McDonald** is doing in his recovery. The report was good, but he will still miss the New-Years event and the January meeting. Ed had the 2010 Rosters done and they will be available at the January meeting. **THANKS ED!**

Putting on a little extra weight this season?

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

M.A.R.C.S.

Madison Area Radio Control Society

Annual Membership Dues

Regular membership	\$60.00
Junior membership	\$25.00
Park Pilot membership	\$25.00
Family membership	\$20.00
Associate membership	\$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* ←

It's time to get your 2010-**AMA** membership renewed so you're eligible for your **MARCS** membership. Your **MARCS** dues can be paid any time before January-1st to take advantage of the \$5.00 discount. Your **MARCS**-card will be issued when your **AMA**-card is displayed.

Please mail to: Richard Sutton ←
612 South First Street
Mount Horeb

HELP WANTED...

Event Assistance Needed

Former **MARCS** Club member, **Clayton Greaves**, is seeking assistance of six club members in the capacity of electric demo-flights and instructors to participate with him in an event that he has held over these past years. The purpose of this event is to introduce and hopefully create an interest in aeronautics and modeling... in the youth of our surrounding communities.

This will be an "**Aviation Demo**" for Cub Scout pack #162 which has 35 members, ages 6-10 years old. The agenda will consist of a mass glider launch, discussion on the basics of aeronautics, and some RC flight demos.

(Note: This is a smaller elementary sized gym, so 6oz fliers are recommended for the demo-flights)

We are also seeking old issues of RC magazines to be able to pass out to the boys.

It would also be appropriate to have some larger electric and/or glow planes there for display purposes. There's nothing that opens a young boy's eyes wider than a 40, 60, or 90 size RC airplane that they can see up-close and even perhaps touch.

This event is scheduled for;

Thursday, March-11th, 2010

6:30pm~7:30pm,

**St. Ann's Catholic School Gymnasium
324-North Harrison Street, Stoughton, WI.**

Key this address into mapquest.com or
googlemaps.com for easy location

RSVP if you would like to participate.

<rcgreaves@gmail.com>

LUKE ELBERT ALLEN

the complete story

Luke Elbert Allen, age 91, passed away peacefully on May 28, 2009, after a short illness. The son of Eugenia Fullbright and Frank Allen, Luke was born September 27, 1917 on land his father homesteaded near Rule Creek, Colorado. He grew up in Elizabeth, Colorado... Farmington and Gallup, New Mexico, and graduated from the Albuquerque High School in 1935. His father was a well known guide to the Southwest. In 1939, Luke married Mollie Chepin of Gallup, New Mexico and they moved to Denver Colorado.

Luke had a life-time love of flying. He had his first plane ride in a barnstormer's biplane. He learned to fly on his own, working odd jobs during the great

the Luke Allen story

depression and renting planes by the hour to accumulate flying hours. Eventually, he bought a tiny bi-plane with a stick for a tail-wheel. In 1937, he graduated from the Curtiss-Wright Institute of Aeronautics. He received his pilot's license in 1938. Then in 1939, He and Mollie traveled to western New York State to pick up a new Piper Cub at the factory, and flew it cross country back to Denver...landing in pastures, borrowing farmer's gasoline, and sometimes hitch-hiking to the nearest town to buy the needed fuel.

In August, 1940, during the Battle of Britain, he traveled to Montreal and then on to England where he enlisted in the Royal Air Force as a pilot officer and was one of the first 'Yanks' to be a member of Squadron-71. The Right Lord Martonmere (Formerly Wing Commander, J. Roland Robinson, and M.P.) recalls the early winter day in 1940 when he was asked if he would show a few Americans around the House of Parliament. "I gladly said yes", he recalls as he had done so many times for his own American friends. "Little did I know that 10-days later we would all be joined together at Kirton-Lindsey Field and forming up the (no.71) Eagle Squadron Team," he went on to say in his English manor.

Luke flew Hurricanes from November 7, 1940 to July 31, 1941 in which time he logged 60 combat missions. He was a very modest man and it wouldn't be learned until many years later that he was a flight leader with "A" Flight.

Upon his return to the United States in 1942, Luke joined the U.S. Army Air Corps as a Captain and served with the 'Fifth Ferry Command' For the next four years, he flew B-17's and B-24's across the North Atlantic to England in every type of weather imaginable. He flew B-29's to India via the South Atlantic; Africa, and Saudi Arabia. He once flew the South Atlantic, in a B-17, from Africa to Brazil after shutting down two engines that were burning excessive oil so that he wouldn't be delayed while the engines were replaced. On that trip, he talked his way into landing at Ascension Island, which was considered to have too short a runway for four engine planes. He once flew a B-29 below the rim of the Grand Canyon, and at another time had two engines fail on a take-off in a B-24. He slept under the wing of an A-20 in southern Greenland on the way to Scotland, and on another mission, developed pneumonia, after trying to get the engines fired up on a B-17 in the subzero temperatures of Maine.

After the fall of the Soviet Union, an aircraft collector found a 'Hurricane' in Russia that had been sent there as part of a lend-lease. They traced it through the Royal Air Force records to Luke and he was able to verify that he had flown it in 1941. That airplane is now fully restored and in a New Zealand museum.

Later in his career, he served with the U.S. Air Force in the Panama Canal Zone, Eglin Field, Florida, and in the Philippines. In 1952, he resigned his commission to become a commercial pilot for Vernon F. Enterprises and the McAllen State Bank, McAllen, Texas. That led into flying a corporate plane for a small Texas oil company.

Luke retired from flying in 1982 having accumulated over 25,000 hours in the air. Luke Elbert Allen was inducted into the National Aviation Hall of Fame in 2002.

I met Luke and his wife Mollie when they became my neighbors on Sheboygan Avenue a quarter of a century ago. Their permanent home was in southern Texas, but they had rented an apartment in my building for the summer months because their only son, Jeffrey Allen, worked here in Madison, at that time, for the State of Wisconsin.

He talked very little about his wartime experiences flying the Hurricanes, but did comment that for most part, he flew transports (Bombers). He did talk about the last corporate aircraft he flew, a 'Swearingen Metro Merlin III.' It was a twin turbo-prop with 845 HP on a side. He said if one engine failed on takeoff, you could go to water-injection on the other for 45 seconds and gain 100HP. And in that 45 seconds, you had the option to land or get the wheels up. If you did not reduce power by 45 seconds, the engine blew up. If you reduced power and did not get the wheels up, you simply fell out of the sky.

Luke told me the reason why he was still alive after being a 'corporate pilot' was that when he was on the ground the owner was the boss, but once in the air, he was.

Luke was a modest man who served the interest of others before his own. He was interred in Fort Logan National Cemetery, Denver, Colorado on June 5, 2009. His headstone reads; "Captain, USAF, World War II, Korea, Royal Air Force, 1940."

Submitted by Brad Witt

Experience is something you don't get until just after you need it.

INDOOR ELECTRIC-FLY EVENT

Craig High School Field House

Janesville, Wisconsin

Sunday, January 3, 2010

MARCS member, **Dave Rush**, will be hosting this indoor fly at the Craig High School Field House on Sunday, January 3rd, 2010. Time: 5:30pm~9:00pm. Cost to fly is \$10.00 which will be donated to the Craig Band Scholarship Fund. Current 2010 **AMA** card is required.

The field house is approx. 120' X 240' with rafter height at 35'. It has 4 basketball courts. A curtain will be dropped between court 3 and 4, providing two flying areas. Flying times will be scheduled so planes have plenty of air time. Number of planes will/may be limited depending upon the type flying and how many flyers are registered.

*Maximum weight of 6 oz. for 3D and racers... 6.5 oz. for slow flyers and those with protected props. ("Bug", "Mini-IFO", and "Pushers") A scale will be onsite. Super slow flyers that weigh over 6 oz. may be allowed on a case by case basis. We will be flying a **left hand pattern**. During open flying in the big area; Race track around the outside of the wood main floor... 3D over the wood floor. The tentative flying schedule is posted below.*

3-Court area...

5:30~6:00...open flying panes
 6:00~6:15...3D 5-6.5oz.planes (Bug/IFO etc. Foamies)
 6:15~6:30...light weight 3Drs – less than 5oz. (Ghost)
 6:30~7:00...open flying planes
 7:00~7:15...stick & tissue and delicats only
 7:15~7:45...open flying (pylon practice)
 7:45~8:00...pylon racing
 (1-open class, 2-EFliteSuhkoi, 3-EFlitP51)
 8:00~8:15...stick & tissue and delicats only
 8:15~8:30...light weight 3Drs – less than 5oz. (Ghost)
 8:30~8:35...how many planes up at once
 (goal being NOT to take each other out)
 8:35~9:00...open flying planes

1-Court area...

[planes & heli's, 2oz. or less]

5:30~6:15...Micro planes
 6:15~6:30...Micro heli's
 6:30~7:15...Micro planes
 7:15~7:30...Micro heli's
 7:30~8:00...open Micro planes &/or heli's
 8:00~8:30...Micro pylon (if interest)
 1.Citab/Centurio 2.Heli's
 8:30~8:35...how many planes up at once
 (This will be on the main 3-court area)
 8:35~9:00...open Micro planes &/or heli's

The school address is: **401 South Randall Avenue, Janesville, WI. 53545.** (You can Google it)
 Coming from Racine St., turn North onto South Randall (Right if coming from the interstate, Right if coming from downtown) Enter at door #8, which is the Northwest corner of the field house

January 7th, 2010

General Meeting Program

We will show the first half-hour of the 2009 Float Fly held at Mark Finley's house/dock

The MARCS CLUB...

Wishes to Thank member, **Ron Lippert**, for donating a New Focus Hitec 4 channel Radio set. Includes; transmitter, receiver, servos, charger, and batteries. Will most likely be a raffle prize some day.

The **NEW HORIZON** series

An inside look at Electric Powered models

By John Steen/Editor

Converting a Gas Model to All Electric

1. You'll need to determine the weight of the model. A good scale will do this or if it was an ARF and appeared in a catalog, the weight will be given there. On a ten/eleven pound air plane, it will lose about a pound, total flying weight once the conversion is done
2. Determine the desired performance. Most people will want the capability to do some tricks with their sport flyer. For this type of performance; 150-200-watts-per-pound. (746watts = one horsepower)
3. Motor selection. Ten pounds X 150-200 watts=1,500 to 2,000 max watts capability motor. Consult your catalog or your hobby shop Guru. The Hacker C50-7XL, for example, has a max watts capability of 1,700 watts. (again, watts=power) Select your motor based on cost, quality, and personal preference. There's a lot to choose from on the market.
4. Use the software program Moto Calc <motocalc.com> .
 - a. Enter in: wingspan, wing area, weight, wing loading, and wing shape
 - b. Enter in: motor constant, no-load current, resistance, weight, brushless, and 'out-runner' or 'in-runner'.
 - c. Enter in: gear ratio, propeller diameter (from motor recommendation range) and propeller pitch (from motor recommendation range)
 - d. You get from the Moto Calc; calculated spread sheet: stall level, level flight speed, top speed, thrust, and max amps.
5. The speed of the propeller is regulated by the ESC, which regulates the frequency of the max amps... low speed is less frequent, high speed is more frequent. Pulse technology.
6. ESC. From the max amps listed in Moto Calc, plus a little head room, select an ESC. In this instance, Moto Calc recommended that the max amps was 107.5 so you could select a Castle Creations Phoenix 125 (max capability of 125 amps) Again, ESC selection depends on cost, quality, and personal preference. There is a lot to choose from on the market.
7. Use Moto Calc for a battery recommendation starting point. Battery capacity is the battery's C rating multiplied by amps (5,000 mAh=5 amps). For this instance, 125C X 5 amps=125 amps drawn capacity. 125 amp > 107.5 amps.
8. The battery tray is formed using 1/8-inch plywood and some 1/4 X 1/4 guide rails on both sides of the tray. A Velcro strap can hold the battery in place.
9. For an electric airplane, the CG is constant; no fuel is used causing the CG to move backwards during flight. Battery placement is used to balance the model.
10. Safety:
 - a. Mount servo switch and motor arming plug well behind the propeller...best so you can stand behind the wing, well away from the propeller.
 - b. Keep in mind the electric motors have 100% torque at 1-rpm. Glow motors build up to that point.
11. Starting sequence:
 - a... Put throttle in the middle position.
 - b... Turn the transmitter on.
 - c... Turn the servo switch on.
 - d... Check control surfaces.
 - e... Plug motor arming plug. (motor will make a tweaking sound)

When you are standing at the pilot station, move the throttle back to the idle position, which will arm the motor. (motor will make another tweaking sound)

You are ready to fly.

*Taken from the AMA Insider newsletter
by Melvin S. Harder*

2010 Club Events

Event:	Date:	Location:
<i>Tom Lazar Memorial</i> ; Hot Chili Fun-Fly	January 1	Kettle Field
MARCS Annual Swap-Meet	March 4	Madison Labor Temple
MARCS Annual Banquet	April ?	Maple Leaf, McFarland
War Birds over Kettle Field	June 13	Kettle Field
Ken Kindschi Scale Rally	July 18	Kettle Field
Boy Scout Aviation Day	?	Kettle Field
2010~ Float-Fly	July 10	Lake Waubesa
2010~ Electric Fun-Fly	August 7-8	Kettle Field

All data is tentative at this time and will be updated as it becomes available.

INDOOR ELECTRIC FLYING

Brodhead Flying:

Brodhead indoor flying dates for 2010

Every Wednesday **except...**
 12/23 & 12/30 (Christmas vacation)
 3/31 (Spring break)
 Any day cancelled or with early release for snow will also cancel indoor flying.

Location..... Brodhead High School Gym

Time..... Every Wednesday pm 7:00~10:30

Cost..... Free, please contribute \$10-20 (or more if able) for janitor's gift.

RULES:

6oz weight limit. Electric, CO2, or Rubber powered aircraft. 6.5oz limit for those with protected prop such as the lightflight.com Bug and IFO. Weights greater than 6oz will be allowed on a case by case basis for very slow flyers. We fly Micro aircraft only (3oz and less) any time and the larger planes such as 3D (3~6.5 oz) the first 1/2 hour of each hour. Other rules; such as flight-line, which bathroom to use, etc. are available from the regulars. Children less than 12 are welcome, but must be accompanied by an adult and must not leave the High School Gym area.

AMA membership not required.

All are welcome including guests

Indoor Electric Flying

CHRISTIAN LIFE HIGH SCHOOL (North gym)

5950 Spring Creek Road, Rockford
 Corner Spring Creek Road & Mulford Road

Airplanes will be limited to a 8oz. Flying weight

Slow flyers and Micros encouraged

Electric Helicopters welcome

\$10.00 flying fee / Spectators FREE

Saturday 1/2.....7:00pm~10:00pm
 Saturday 1/23....7:00pm~10:00pm
 Saturday 2/13....7:00pm~10:00pm
 Saturday 2/27....7:00pm~10:00pm
 Saturday 3/6.....7:00pm~10:00pm

AMA membership required

For more info, contact Jim Hayes (815) 721-5146

—GLOW ENGINE BREAK-IN—

For the initial break-in, it is a good practice to slightly warm up the cylinder head and the cylinder itself (both are finned), before starting it and going through yours or the engine's manufacture's recommended procedures.

The heat-expansion of these parts make the break-in period much easier and allows for less wear on the piston, cylinder liner, and connecting rod.

A heat-gun used for covering or a hair dryer will provide the moderate heat needed for this. Wrap the lower engine with a rag and a few layers of aluminum foil to keep it at a normal temperature while warming the upper-end.

BUILDER'S Work Bench

DRILLING Balsa WOOD SUCCESSFULLY

When drilling a hole through balsa wood, it has a tendency to splinter out and make a nasty mess where the drill bit exits. Here a few tips that I have used and perhaps one or more will help you the next time this procedure is required:

Drip a few drops of thin CA on the exit area and let it cure out. It will weep into the balsa and help hold the wood fibers in position much better.

Clamping or even tightly holding a wood block on that exit area as a support also eliminates some of the tearing effect the balsa wants to go through when the spinning bit breaks through it.

Another trick that works well is to drill a small pilot hole through the piece while holding it down firmly on another piece of wood. Now chuck-up the correct size bit and using the pilot hole as your guide, start drilling the hole from the back-side, but don't allow the bit to drill all the way through. Then turn the piece over and while again holding it firmly on the support block, finish drilling the hole from the top side.

Remember, you are drilling through very soft wood and sometimes even the weight of the drill assembly you are holding itself is too much weight exerted down on the item you're drilling. Learn to neutralize that down-pressure and feel your way through the piece that you're drilling. *John/editor*

SCHULTZ

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Hours: 8:00~5:00 Monday~Friday

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: January 7, 2010

New flying-field sign ~ New entrance route

Bragging about Christmas Gifts

2010 flying events schedule

DAWN~PATROL BREAKFAST

Thursday, Jan. 21th

8:30 am

**PRIME TABLE
RESTAURANT**

4102 Monona Drive
(At: Buckeye Road)

Monona, WI.