SKYMASTERS RADIO CONTROL CLUB OF MICHIGAN

1936 75 2011
AMA
ACADEMY OF MODEL AERONAUTICS

Chartered Club #970
11 Year Gold Leader Club

APRIL 2011

Skywriter

Jim Held showing Doug Norris the location of the engine mounting plate for the 5 ½ hp. Desert Aircraft DA60 gas engine which will power this magnificently built aircraft. Jim has been working a minimum of 2 hours each day for the last year on the 1/5 scale F4U Corsair – Top Flight Kit. The wingspan is abt. 86" it will have Robart Retracts which will rotate the wheels 90° when the landing gear is raised, the tail wheel will also retract. The Corsair has been glassed and is nearly ready to paint. Jim said that as soon as the temperature reaches 72 degrees his Corvette will come out of the garage and he will put up his paint booth and begin painting the aircraft, first with grey primer then Navy Blue, Medium Blue and White for the final colors. The Corsair should be ready to fly in early summer if all goes well.

SKYMASTERS RC
MICHIGAN

2011 Club Officers & Appointees...

President:	Greg Cardillo	2086 Cedar Key Ct.	Lake Orion	48359	248-393-1056
Vice Pres:	Neil Krohn	722 Leinster	Rochester	48309	248-375-0908
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Membership:	Randy MacInnes	8189 Easton Rd S.	Clarkston	48348	248-394-0414

President's Message...

Is it spring yet? Well the calendar says so – but Mother Nature appears not to be too sure…

Bald Mountain Involvement Day

Mark your calendars! Bald Mountain Involvement Day is this month!! Saturday, April 16th. We start at 9am at Park Headquarters on Greenshield Road. Last month we shared some information about how/why we have this day- Look inside this issue for more details on the tasks to be done – there will be something you can do to help out! Lunch provided for all – and a gift certificate to each member family participating! . I again encourage you to set the date aside and come join us and show your support for the park we call our home!

FAA and Model Aviation

As I talked about last month, the AMA has been involved in discussions with the FAA about the upcoming rules proposal regarding UAV aircraft – and whether our modeling activity will be 'in scope' of such regulations. Please continue to see the latest on AMA's website – as the legislative process moves forward. Thanks to those that have already taken the time to write and email! (http://www.modelaircraft.org/gov).

Winter Indoor Flying

Our winter indoor flying has come to an end for the season. Special thanks to Roger Schmelling and Fred Engleman for coordinating the activities – and everyone else that pitched in to help! Another very successful indoor flying season!

Upcoming Meetings

We are ending the winter/spring meeting season with a great lineup! By the time you read this, Horizon will have visited us for a 'Pre Toledo' visit once again to share some of their new products and answer our questions.

Andy Lowe, owner of Electro Dynamics, will be joining us on April 13 to discuss new battery technologies and his line of electronic accessories. Andy runs his business locally – based in Livonia. See more about his company at http://www.electrodynam.com .

Patrick del Castillo, President of Castle Creations, will be with us on April 27th to talk about their line of products – from Speed Controls to BECs and more! Many Castle products are designed and assembled in the USA. See more about Castle at http://www.castlecreations.com .

Thank you and Help Needed…

A big thanks to Al McGee who for more years than I can count has been mowing our field! Al has asked to step down – we certainly appreciate all his time over the years!! Dan Stolz has offered to take over the mowing duties for 2011 – Thank you Dan!

We are still looking for an Event Director for our Electric Fly. If you are interested in finding out more and helping out, please let me know!

Toledo Expo

This weekend is the Toledo Show!. If you've never made the trip – whether for a day or the weekend – give it a try… If you have questions, many of us have been there regularly – just ask – or check their website at http://www.toledoshow.com .

Happy Landings!
Greg Cardillo

OPEN HOUSE

Steve's second open house was another success !

Chuck Hickson (right) talking about the foam Spitfire he built with Bill Stark, this model purchased from Ken Neil who cut the plane on his new CNC machine. It weights 7 ½ oz. complete with battery and has a 27" wingspan. Dave Lange (top) talks over a new seaplane kit the "CUDA" which will be available this summer.

Fred Engelman

Skymasters R/C Club

We'll Teach You To Fly!

Join the Skymasters Radio Control Club for an R/C Symposium

2011 April Meetings!

Electro Dynamics

Wednesday April 13, 2011 – 7PM

Larson Middle School, Troy

With Andy Lowe!

New Battery Technologies and Electronic Accessories for the Hobby

ElectroDynamics & More!
ELECTRONICS FOR THE DISCERNING MODELER

Castle Creations

Wednesday April 27, 2011 – 7PM

Larson Middle School, Troy

With Patrick del Castillo!

Speed Controls, BEC's, and More!

castle™

Free Admission! All Welcome!!!

For more information call Greg Cardillo 248-431-5562

Visit our website at www.skymasters.org

Skymasters Meeting Minutes...

Skymasters
General Meeting Minutes
March 9, 2011
Attendance: 50+ Members

Greg Cardillo called the meeting to order at 7:00PM

Greg Cardillo opened the meeting by discussing some of the upcoming events on the Skymasters calendar.

Tonight's meeting was our annual "In The Bones". The Skymasters membership has been very active this winter building some interesting models covering the many disciplines of our hobby. Fifteen members brought sixteen aircraft to share with us. A brief review follows.

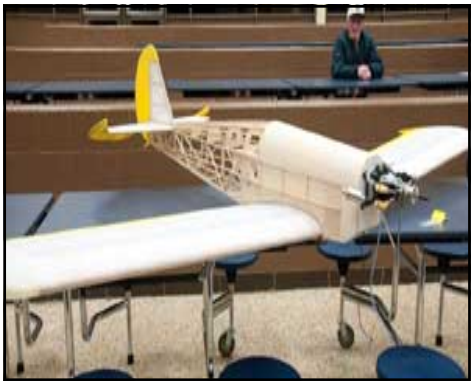
- **J-3 Piper Cub – Hangar 9 ARF**

Owner – Bill Dezur
Wing Span – 81"
Power – Saito 80 w/14-6 prop
Servos – Hitec
Weight – 8 ¾ lbs.
Comments – This was a good quality Hangar 9 ARF although the hardware was "cheap" in Bill's words. The letters/numbers were also a challenge. Bill ended up hand cutting them from vinyl sign material. A nice touch was the fishing rods and basket placed on the luggage compartment. Where's the fish Bill?

- **Spitfire MK IX – Topflite 1/7 scale kit**

Owner – Mike Jones

Wing Span – 62.8"
Power – Super Tigre G90 2-stroke
Servos – Hitec/Futaba
Weight – 11 lbs. including weight used to balance
Comments –Mike took some time to hand paint with Kiltz latex primer and Behr Premium Deep Base for the final colors. Mike used Robart retracts with a Spektrum radio.



Spacewalker – SIG 1/3 scale kit
Owner – David Wendt
Wing Span – 104"
Power – Saito 300 Twin
Servos – Hitec 645 ailerons and Hitec 945 for the rudder and elevator
Weight – targeting 27 lbs.
Comments –David will be finishing his Spacewalker as a scale replica of Hazel SIG's personal airplane. (Secretary's note: Although Hazel has sold many of her full scale airplanes, she still has this one in her hangar.) The first few flights will be done from land. Then it will be dedicated to water and converted to floats provided by Mark Smith. The Spacewalker includes a pull/pull rudder and is covered with SIG Koverall which is a polyester applied with SIG Six-It and an iron. The plane will be painted with custom mixed Air Tractor Yellow and Colorado Red Klasskote to match Hazel's full scale Spacewalker. David sent color samples to Klasskote for them to match.

- **PT-40 – Great Planes kit**

Owner – Joe Pechenick
Wing Span – 71"
Power – .46 2-stroke
Servos – Four servos
Weight – Approx 7-8 lbs.
Comments – This is Joe's first build and he has done a very nice job. Joe is also a new flyer and this is the first time he has attended a Skymasters meeting.

- **Eagle – Vector Systems (makes kites)**

Owner – Wade Wiley
Wing Span – 115"
Power – 800 gram thrust brushless – Premier Generation II Vector Propulsion Systems
Servos – Integrated with power system
Weight – 22.8 oz.
Comments – The power system slides off in one piece. Directional

(Continued on page 6)

Skymasters Meeting Minutes…continued

(Continued from page 5)
steering is provided via vector thrust only. It uses a 3S 1300 mah battery. Wade could install a 2100 mah if needed.

- **Pete-N-Poke Sport 40 – Great Planes kit**

Owner – Bob Crawford
Wing Span – 60”
Power – Thunder Power 46
Servos – ?
Weight – ?

Comments – Bob added 1” extra to the rudder. Also, the original kit had two cockpits but Bob eliminated one.

- **Corsair F4U – Top Flight 1/5 Giant Scale kit**

Owner – Doug Norris (built by Jim Held)
Wing Span – 86”
Power – DA-60 providing 5.5 HP
Servos – JR digital providing 288 oz./in torque
Weight – 27 lbs.
Comments – Jim started building the Corsair in February 2010. It is finished with one layer of ¾ oz. glass cloth and two layers of ZAP finishing resin. Yet to be done, Jim will apply two coats of automotive primer and two coats of Stitts paint which is similar to dope and very light. The Corsair also uses Robart retracts. The maiden flight is planned for late June or early July at the Romeo field.

- **Four Star 60 – SIG kit**

Owner – Gary Weaks
Wing Span – 71”
Power – OS 90-FS
Servos – ?

Weight – Approx 7-8 lbs.
Comments – This is a change for Gary from his usual scale beauties. Gary has built the Four Star 60 and set it up for float flying. Mark Smith provided the floats and Gary covered them with Econokote.

- **Hummer – SIG kit**

Owner – Jim Satawa
Wing Span – 35”
Power – OS 10 LA
Servos – Four
Weight – 19 ounces
Comments – This kit “seasoned” in Jim’s shop for nine years. The kit was originally designed for a .049 but Jim is installing an OS 10 LA. To make it balance, Jim shortened the nose. He has also made the wings bolt on vs. rubber bands. The pilot was “stolen” from Jim’s son who had it in his toy box!

- **Axon Fire Fox**

Owner – Pete Foss
Wing Span – 16”
Power – Sukoi motor and gearbox
Servos – Brick
Weight – 45 grams (1.6 oz.)
Comments – Pete’s Firefox uses elevons and a 1S 160 mah battery. Pete also had to use a penny in the nose for weight.

- **Skyray**

Owner – Pete Foss
Wing Span – 9”
Power – P-51 motor and gearbox
Servos – Brick
Weight – 27grams (1 oz.)
Comments – Pete obtained the plans from “Depron” Dave. It has a 2mm wing and 3mm fuselage.

- **Gloster Gauntlet – scratch build**

Owner – Terry Overton
Wing Span – ?
Power – Saito 100 but will probably be upgraded to a 120 size motor
Servos – Spektrum DS 821 digital servos
Weight – ?
Comments – This is a very special airplane. Terry Overton was working on this biplane at the time of his passing. This is a beautiful model of a 1930’s RAF fighter

(Continued on page 10)

BALD MOUNTAIN INVOLVEMENT DAY

April 16th is approaching fast, it is time for Skymasters members to remember why we have retained an excellent flying site located on State land for over 20 years.

Every April we dedicate one day for working for Bald Mountain State Park. These efforts have led to an excellent relationship with the park managers, their employees and the State of Michigan. This year we have a new park manager who is very ambitious, and dedicated to bringing the park up to the standards of the park that it used to be . His name is Tom Bissett, several of the board members have already met with him and are very impressed with what he already has done to improve the park image. When you see the totally remodeled park office and shop you will realize he gets the job Done, Thank You Tom.

Lets all show Tom what we can accomplish in one day of work for the park. This year he has lined up 8 to 10 projects for us to complete. A few are re roofing the Cherry Ridge pump house, adding several new 3 sided Kiosks (information signs), trail trimming near headquarters, replacing the decking on a dock, picnic table assembly, splitting firewood, and several other light projects. Many members have already signed in on the job assignment sheets, available at our last meeting and also at our future meetings. It is always easier for you and the group leaders to know what job you are going to when you show up. Please sign up early. For more info on the jobs Call Steve Fredericks at 248 693 6686, This year we will have and excellent free lunch served at the Park office at Noon. Also this year Skymasters is giving each volunteer a gift certificate for $10.00 to Flightline Hobbies or PropShop the choice is yours.

Lets all show Tom Bissett what makes Skymasters an excellent asset to Bald Mountain State Park.

Thank You,
Steve Fredericks

Skymasters Apparel

To order Skymasters hats, shirts, jackets, etc. please call Creative Embroidery at (248) 628-9351 or creativeemb@att.net

PROP WASH...

Joe Finkelstine

Hi All,

In keeping up with my habit so far, I have waited as long as possible to make up my mind for what to write this month. I am writing this on a Tuesday evening after attending one of our indoor electric fly's at the soccer arena. As usually happens, something struck me to write about after someone asked me a question.

The question had to do with a pretty fundamental concept about electricity (I was ,after all, at an all electric fly in) and reminded me that I have been asked this question on many occasions and also have received several related ones. There before me was my next column (or two), if I could just settle on how much to tackle on the big subject. I further promise to all of you that I am still a glow engine fan and I am not giving up any of my Saitos!

Our club has many members who are new to the sport and I think it is a good thing to discuss what the more experienced pilots consider to be common knowledge. This month I want to talk about the basics of electric concepts such as volts, amp, watts and such.

From the questions I get, I think that several of these basic terms are not well understood, or are often used in the wrong context. I promise there will be no quiz at the end and no homework to boot - let's get started.

Let me start first by narrowing down our consideration for the rest of the talk to one of the two common terms we often hear. One of those terms is called "DC" for direct current, and the other is called "AC" for alternating current. Even though both of these terms are a bit archaic, I will focus almost exclusively on DC rather than AC. In our RC hobby, almost everything we deal with is in the DC realm. This is not so ,for example, with the train guys, as they use both in some scales they work with. For most of us, AC is what we use to power our plug in tools and chargers. Our RC batteries supply a near constant voltage (at least when they are charged!) to our equipment, our receivers like to work with constant voltage (or at least prefer it), and the workings in and around our planes deal with non alternating current and voltages. Notice I did not say varying voltages, that is a different issue that I will discuss later. For now, we discuss Direct Current, or DC.

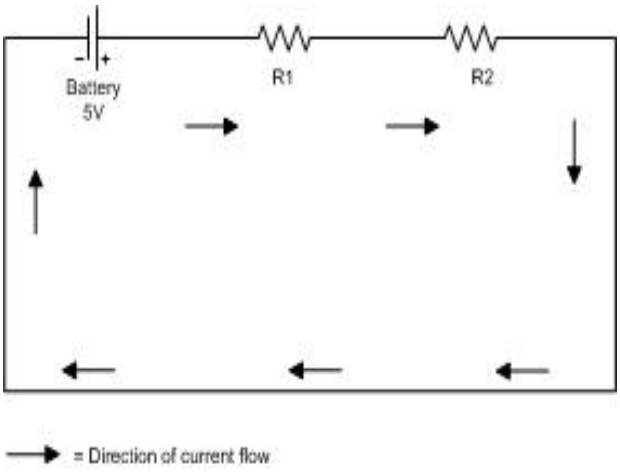
I want to start with two fundamental concepts, that being current and the other being voltage. Historically, I have found the following analogy useful, although it does have some limitations. Imagine if you will, a garden hose all hooked up to an outside spigot, and ready to turn on in the summer. Think for a moment as to what is going on. If things are OK at the Detroit Water department (a large assumption indeed!) we will have water pressure at the spigot, and we then turn the spigot valve and water starts flowing. At this point we have pressure pushing the water through the hose, and a certain amount of water per time (gallons/minute for example) coming out the end of the hose. Voltage is analogous to the water pressure, and current is analogous to the amount of water coming out the end of the hose. Voltage gives the "push" to electrons, similar to water pressure gives the push to the water running through the hose. Current through a point in a circuit is analogous to the water flowing through the hose. Both the hose and the electric circuit have something "flowing" which requires a push to keep it moving. This is a good way to keep the difference between voltage and current clear - think of the water hose when you get a bit confused. The water hose analogy begins to quickly break down after these two basic concepts though, as the differences

(Continued on page 9)

(Continued from page 8)

between them become more apparent. For example, while your garden hose will happily spew water all over your lawn (I.E. "loose" water), an electrical circuit requires closed plumbing, and will not work if we try to make an open hose in the path for electrons.

Returning to the water hose for a minute, imagine now if you were to squeeze a portion of the hose and take a look at how the outflow of water changes. If you squeeze hard enough, you will notice that less water comes out the open end. What is happening is that we now are dealing with another fundamental concept, that being resistance. In our hose example, some of the push (I.E. Water pressure) is used up pushing through the constricted portion of the hose above the normal amount needed to push the water. This has a counterpart for our discussion and it is called the same thing - resistance. In our electric world many things offer resistance. Our wire, our connectors, our motors, our switches, even our batteries! - each one of these requires a push to overcome resistance. Each item the voltage has to push through takes a bit from the total, until miraculously, when we get all the way back to the original source of voltage (I.E. our battery) it is exactly all used up. For a later discussion, I will discuss an often overlooked resistance, and that would be the sometimes long connections we use from receiver to servo - the "push" needed to overcome some long runs can often result in our servos having much less voltage available then what the battery says it will deliver. Anyways, in our electrical world we are considering, resistance always delivers something we often have to deal with and that is heat. You might never consider it, but switches and connectors can also have large resistance, stealing too much of the battery voltage. One of the hidden problems with cheap connectors and switches is that they can develop (or start with) very high resistance without any outward change in appearance. I could write a whole article or two on resistance, but I fear the BOD will revoke my pilot's license if I do, so I'll stop here.



So far , we have voltage, current and resistance, and it just so happens that an old curmudgeon physicist by the last name of Ohm related them together in a simple equation (remember, I promised no quiz!) V = I*R where V = Voltage (you may have seen E used instead of V), I = the current, and R = the resistance.

Normally, we have no real reason to pay much attention to this equation in our hobby, but I will return to it from time to time to point out a few things in our circuits. One place I will return to this equation often is in describing voltage drops across loads in our RC circuits , including the hook up wire we use.

Since I just introduced a new term (circuits) , let's take a look at those in more detail. Unlike our water hose example, an electrical circuit requires a closed loop path. Whereas the water hose was happy to dump all the water out of the end of the hose onto the lawn, we need to make a complete path for our electrons to return to the sender. in practical terms, this means that there must be at least one contiguous path for current to flow from the voltage source positive all the way back to the voltage source negative (this description may bother some of you for a number of reasons, but keep your calm and work with me on this). Let's start with a simple circuit, with a battery and two resistors

In the circuit above, We have a battery (5.0 V in this case) that , with two resistors. In a series circuit, the electrical path is singular in nature in that the electrical current encounters each load item in series, one after the other. The electrical patch has only one possibility to go from battery source to battery sink. The battery gives an initial push (5.0 Volts), and if we account for all loads, it is exactly used up by the time we get back to the battery sink. In the above example, some of the initial 5V from the battery is used "pushing" through R1, and the rest is used to "push" through R2 (We will ignore, for now, the resistance of the wire itself) .We have several series circuits in RC and they are often used together with the other key circuit, the parallel circuit (we look at that one next month) - One of the key things to note about series circuits is that if the circuit path is broken anywhere (for example, a switch), the entire flow is stopped everywhere. Thos of you who have a faulty switch or battery connector know this one well. Common examples of series circuits in our planes are the main power circuit from your battery, through the switch, then to the receiver and back to the battery. If you fly electric, the connection of the speed control is a complex series circuit, and we will discuss that later as well. For now - let's stop here and continue next month.

Joe

Skymasters Meeting Minutes…continued

(Continued from page 6)

which was the last fighter built with an open cockpit. Terry made foam ribs with balsa caps for the wings and carbon fiber stringers for the fuselage. He had the Gauntlet ready for final wood prep. After wood prep, it will need the mechanical hook ups, covering, painting, and detailing. The Skymasters will finish the airplane and fly it in Terry's memory. Dan Stolz will be doing the final wood preparation and Gary Weaks will be doing the covering, finishing, and detail work. We still need somebody to volunteer for the mechanical work. If you are interested, please contact Gary Weaks. Graham Overton's (Terry's son) only instruction was to paint it any color BUT American – his father would like it that way!

- **"Cuda" – Prototype of a new kit offered by Seaplanesupply.com**

Owner – Dave Lange
Wing Span – 63"
Power – 46 2-stroke
Servos – ?
Weight – ?
Comments – The "Cuda" is similar to the Seamaster. It has a T-tail with the elevator and rudder servos mounted in the tail. It is made from CNC wire cut foam by Mark Smith. The "Cuda" will use 1/16" balsa sheeting or glass. There are several guys building these so we should see a fleet of them down the road. Nice looking sea plane!

- **Fokker D VII – Balsa USA ¼ scale kit**

Owner – Greg Brausa
Wing Span – 88"
Power – Zenoah G-38 gas engine
Servos – Hitec 645's
Weight – 18 lbs.
Comments – This was Mike Holmes' old airplane that Greg has repainted to represent the Fokker flown by Oblt. Bolle who had 43 kills. Based on some previous flights, Greg has adjusted the wing incidence to eliminate the down trimmed needed for level flight.

- **Black Magic - kit**

Owner – Joe Finkelstine
Wing Span – ?
Power – Electric with 20X15 prop drawing 80-84 amps
Servos – Hitec 645's for the ailerons and Hitec 945's for the rudder and elevator
Weight – targeting 27 lbs.
Comments – This is a two meter pattern plane made from balsa and foam. To meet the requirements of a two meter pattern plane, the plane must fit in a two meter square and weigh less than 11 lbs. Joe will be using (2) 5S 5000 mah power battery packs wired in series which should provide 9-12 minute flights.

- **EXI 500 CF Helicopter**

Owner – Paul Zabawa
Wing Span – 425mm CF blades
Power – 14 KV motor at 1400 watts with a 6S 3000 mah battery pack
Servos – Hitec for cyclic control and Futaba rudder with GY401 gyro
Weight – 4 lbs.
Comments – Paul has not flown this chopper yet but has attempted to hover (needs a little trimming). It was tail heavy so Paul added 6 oz. to the nose. Paul modified the chopper to accommodate a larger battery pack which should provide six minute flights.

- Fred Engleman won the 50/50 for $12.

Greg adjourned the meeting at 8:46 PM.

Respectfully Submitted
Dan Stolz

SKYMASTERS ~ APRIL 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29 DOME FLYING	30 MEETING @ DOME	31	1 TOLEDO	2 TOLEDO
3 TOLEDO	4 BREAKFAST	5	6	7	8	9
10	11	12	13 MEETING	14	15	16 INVOLVEMENT DAY
17	18 BREAKFAST	19	20	21	22	23
24	25	26	27 MEETING	28	29	30

SKYMASTERS RADIO CONTROL CLUB OF MICHIGAN

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Lake Orion, MI 48359

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Email: *newsletter@skymasters.org*

SEE THE EXPANDED FULL COLOR ISSUE ONLINE

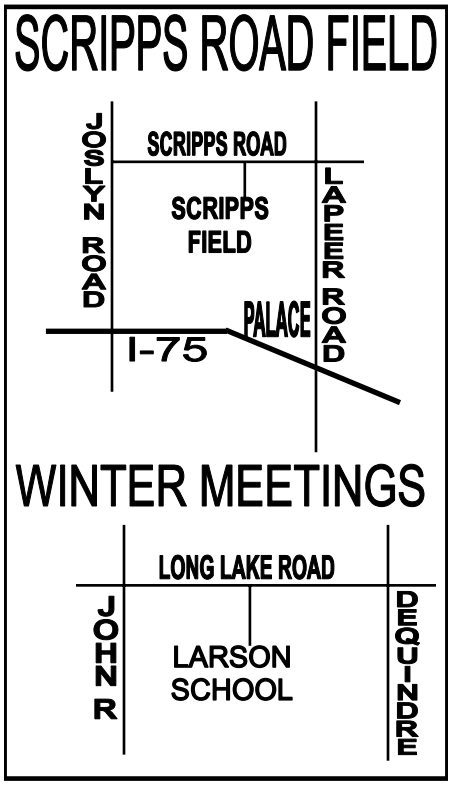
PHOTOGRAPHY
by Greg Cardillo and Fred Engelman

HOME OF THE "MIDWEST REGIONAL FLOAT FLY"

Skymasters Information……

Skymasters field is located within the Bald Mountain State Park on Scripps Road (see map). State Park Permits are required and can be obtained from the Park Headquarters located on Greenshield Road or at club events. Flying is permitted from 10 AM to 8 PM. The noise limit is 94 dBa at 10 feet—this noise rule is strictly enforced.

In the summer, Wednesday evenings are Student Nights and there are usually instructors around all day. Student night is also a pot luck buffet, bring something for the grill & a dish to pass. Meet the Instructors and arrange for more instruction time together on other days. Our Chief Flight Instructor is Ron Sokacz (586) 977-1404.



From June to August, Club meetings are held at the field, on the second Wednesday of the month at 8 PM . A great chance to fly and socialize. Winter meetings—September to May—are held at Larson Middle School (on Long Lake just east of John R—see map) on the second and fourth Wednesday of the month at 7:00 PM. Bring a model for Show and Tell, enjoy coffee with donuts and listen to the speaker of the evening.

The Skywriter newsletter is sent to members, local hobby shops, and other R/C clubs in the area and around the country. All contributions are welcome. Please send articles to the Editor. If you know of anyone who may be interested in R/C Aviation, please give them a copy of this newsletter or a copy of an AMA magazine. It may spark their interest!