



**SKYMASTERS RADIO CONTROL CLUB  
OF MICHIGAN**

AMA Chartered Club #970  
16 Year Gold Leader Club

[www.skymasters.org](http://www.skymasters.org)



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### From the President...



As of this writing, we are in the middle of the busiest 5 week period of our event schedule this year. We have had what I consider to be very successful helicopter, scale and "Recreation 101" events. By the time you read this we will hopefully have had successful Model Aviation Day, Top Gun and Dragon on the Lake events. Once again, I want to give my sincere thanks to all the people that worked very hard to pull these events off.

The public has responded well to our efforts to entertain and engage them. The comments I have heard directly, and also second hand through other members,

have been almost all positive. I think we have showed what an enjoyable hobby this is and what a great group of people participate in it.

It was tough to keep count but I believe we had a couple hundred people at both the Heli Fun Fly and Warbirds & Scale. In both cases cars were parked well beyond the end of the lot and around the first bend in the road. This was despite our best efforts to use the lot as efficiently as possible. But parking overflow is a nice problem to have.

Attendance at the Recreation 101 event was a bit lighter but this gave us a chance to engage each visitor for a longer period of time to make sure they had a good experience. In addition, I know that the Bald Mountain

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personnel are very appreciative that we ran this event.

Most long time club members know that the Midwest Regional Float Fly is coming up in September. [Click this link for the registration page.](#) This is a major event with some attendees coming from hundreds of miles away for a weekend of flying. It takes a lot of effort to put this event on and Greg Cardillo can use all the help he can get. If you can volunteer to help him I would appreciate it and I know he would, too. In particular, the Friday

before the event there is a lot of set up required.

I think that's about it for now. Two more weekends and maybe I can relax a bit!

Best regards and happy landings,

Ken

**Ken Gutelius**

*President, Skymasters*

kennanc@msn.com



### In the land of the giant mushrooms....

I take my micro helis with me on vacation and spotted these big mushrooms where we were camping. (Ewart, MI). I couldn't resist posing my little Bell 47 on one.

#### Front Cover:

A relaxing scene....  
Wednesday evening at our new heli field. No more bare dirt!

*Paul Goelz photo*

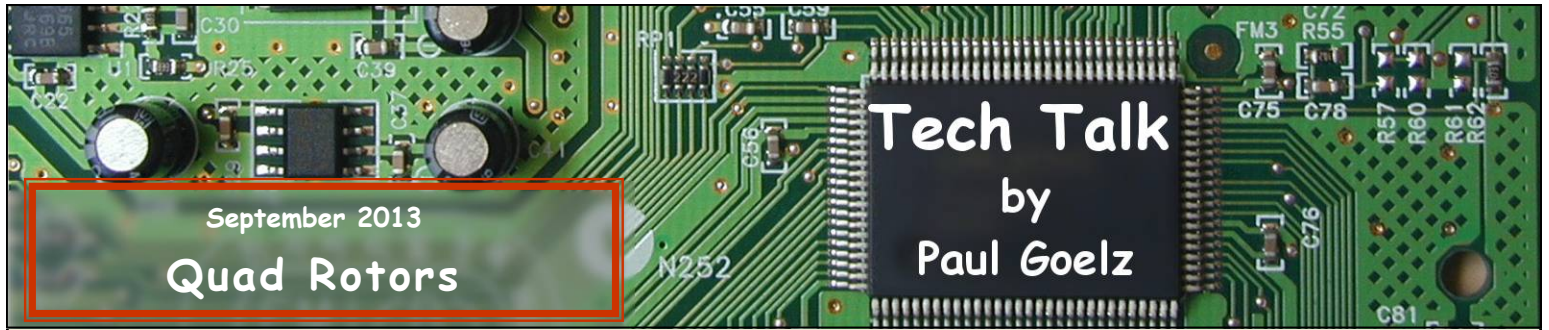
#### *Note from your editor....*

The August and September issues of the Skywriter will be somewhat abbreviated due to the fact that, like other regular contributors, your editor has been and will continue to be extremely busy with non-model activities in July and August.

The October issue will return in all of its former glory ;)

*Paul Goelz*

*Skywriter editor*



September 2013  
Quad Rotors

# Tech Talk by Paul Goelz



Hi there,

This month's column is not strictly speaking about a "technical" subject.

But with the indoor flying season just around the corner, I thought I'd devote some time to talking about quad rotors. What they are, how they fly, and what you can do with them.

So.... **What are they?** Basically a quad rotor (and the related tri, hex and octo copters) are multiple upward facing propellers on a frame. The props generate down thrust that is capable of lifting and supporting the machine. Ideally, the combined force from all the props is at least double what is required to lift the machine. The trick is stability. A quad rotor has none!

So if it is unstable, **how does it fly?** Simple.... In addition to a receiver and one speed controller for each motor, it contains gyros and a microprocessor. The gyros sense the machine tilting and control the relative speeds of the props independently to hold whatever attitude the pilot has commanded. That sounds simple for tilt... just speed up the props on the side that is tilting down. But what about yaw? To control yaw, the controller changes the speed of opposite pairs of props so that the lift is unchanged but the net torque is either clockwise or counter clockwise. Do it right and the machine yaws left or right.

With a three axis gyro and some microcontroller algorithms, a quadrotor will hold any commanded attitude indefinitely. Any force that attempts to cause the machine to deviate will be counteracted by the gyros and microcontroller. But that is not good enough to actually hold a stationary hover. The machine still needs pilot input to fine tune the attitude and lift required to remain in one place as wind (or air currents indoors) cause the machine to drift. It is like flying a helicopter.... It can hold an attitude but it has no idea where it is or how to stay there... that is YOUR job ;)

So.... **What can you do with a quad rotor?** Well, for starters, it is a fixed pitch device so it cannot hover indefinitely inverted. That eliminates some aerobatics, but it is by no means limited to just hovering and flying

around. With a bit of practice, even a [simple quad like the Eflite mQX](#) (right) can loop, flip and perform kinda squared off half reverse Cuban Eights (my latest trick).

The key is.... Timing and inertia. Oh, and maxed out control throws. Mine are set to 150%. And never exceed 90% throttle for more than a second or two or it will become unstable.

**Loops** are easy. Just enter from fast forward flight and smoothly pull full up elevator while lowering the throttle about 50% (but NOT all the way). It should do a nice round loop.

**Flips** are not as easy but not that hard when you get the hang of them. From forward flight into the wind (if any), apply near full throttle, quickly pull full up and almost simultaneously quickly go to ZERO throttle. The idea is to get the flip started and then close the throttle so the machine will not try to control the tumble. Inertia should take it around the flip. Catch it as it comes around to level again by applying a bit more than hover throttle and use the right stick as needed to recover to a level attitude. Pete Foss and I discovered this is MUCH easier if you remove the canopy or (as I do) use a smaller (home made) one.

**Reverse Cuban Eights** are actually easier than I thought they would be. Start a loop. At about the 45 degree point, neutralize the right stick and lower the throttle (but do NOT close it.... You want the stabilization system working). Then, apply full left or right aileron until the machine is inverted. Now, neutralize the aileron and apply up elevator until the machine has come around to near level again. If you do it right, you can continue on into forward flight and the result looks kinda like an airplane maneuver. All in a simple fixed pitch machine that is LOADS of fun to fly.

Until next month.... Paul Goelz



# Student nights / Pot Luck at the field



# "Recreation 101"

This was an event requested by the Bald Mountain Recreation Area folks, hosted by Skymasters and organized by Phil Saunders with help from a dedicated bunch of volunteers.

The idea was to provide an event where interested folks could come out to the field and get some time on a simulator as well as flying the "real thing" on a buddy box. There were lots of Skymasters in attendance flying their own planes and also answering lots of questions. The combination highlighted many aspects of the hobby for people who perhaps had never seen a model fly. I worked with several kids who really applied themselves and could be seen improving in the short time they were on the sim. Everyone got a certificate from Skymasters.

All in all, we had several trainers and three simulators going plus plenty of demo flights.

We also treated it as a Skymasters event.... Ie, we served food for a donation.

This turned out to be an excellent outreach opportunity that would be a good idea for next year. With some advance publicity and signage on M24, we could attract lots of interested future flyers.



# 2013 Top Gun / Corn Roast



The Skymasters Top Gun competition was won this year by Kyle Beidoun, flying his (just a bit overpowered?) "Green Monster". Kyle is one of our younger pilots but I am here to tell you.... WATCH OUT for him. In the year or two since he became a pilot he has made staggering progress and his flight this year proved it to one and all.

And the corn! Wow, that was good! Someone knows how to select tender juicy and SWEET corn. I don't think I have ever had better. In addition to the wonderful corn, we had a terrific spread of desserts too. If you didn't try Edith Engelman's butterscotch cake.... You really missed out.

Once again, the parking lot was full to nearly overflowing. We had five flight stations going for much of the open flying time.

Paul Goelz



# 2013 Top Gun / Corn Roast (continued)



# Warbirds and Scale





# National Model Aviation Day Wounded Warrior Fundraiser Report



The first National Model Aviation Day on Saturday August 17, 2013 was an overwhelming success with \$2,185 raised to benefit the Wounded Warriors Project. This event was a unique combination of both Free Flight and Radio Controlled fixed wing, 3-D, helicopters and quadcopters all in the beautiful facilities at Ultimate Soccer Arenas in Pontiac, MI. 68 pilots enjoyed air conditioned comfort and flew for 4 hours.

George Derderian, one of the principals at Ultimate, was on board

immediately when I asked for his help. Ultimate provided 2 turf covered fields, over 120,000 square feet of flying area, and a meeting room at no charge. Hobbico joined in support by providing a plethora of prizes. Local retailers including John Hoover at Flight Line Hobby, Chris Wrigley at Nankin Hobby, Matt Brubaker at Prop Shop Hobby as well as Mark Freeland of Retro R/C and Max Ettinger of Park Models all made major contributions. Air Age Media donated subscriptions to Model Airplane News. Even though this was an indoor event Merlin Glow Plugs of Western Springs, IL wanted to help the cause and donated gift certificates and merchandise recognizing that many of the participants also fly outdoors.



While an event flyer was put together and distributed throughout southeastern Michigan, the biggest publicity boost came when I had an opportunity to speak on air with Frank Beckmann on the 50,000 watt radio station WJR 760 AM. I had 5 minutes to share with Frank and his audience everything that was going to happen and the great cause that would benefit. I know it worked because folks from as far away as Lansing and Toledo stopped by to see first hand what model aviation is all about and make a contribution.



After the Pledge of Allegiance, Davis Gloff (a member of the Cloudbusters) sang the National Anthem. Davis is an active modeler, singer, songwriter and actor with credits including the movie *Gran Torino*. A group picture was taken. Tim Jesky, our AMA District 7 VP was airborne flying to South Africa to watch his son Andrew fly at the World Championships. Tim asked me to read a short message to the participants. Simultaneously the new managers of the World Cup Grill opened up the restaurant for great food. Now it was time to fly.



About 1 PM I shut down the flight line for some demos. First up was the new Flyzone P-38. Folks were amazed that it not only took off from the "turf" but landed and taxied back. You can fly a twin in the amount of time that it takes to charge the single cell lipo. My son Chris and I then flew a pair of the new Heli-Max Blackhawk helicopters. This is a beautiful rendition of the Blackhawk with a flybarless 4 blade rotor system and gyros. It can handle wind and performs very well, especially in the hands of a skilled pilot like Chris. Two pylons were then added to center stage for the "slowest" race possible. To the music from the movie "Those Magnificent Men



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and Their Flying Machines", 4 pre WWI replicas (2 Antoinettes, a Demoiselle and a Deperdussin) were flown by Bill Brown Sr. and Joe Hass, Bill Brown Jr. and Mark Freeland. The breakneck speed resulted in an astounding 3 laps in the 2 minutes the song played. Neat to see aircraft so big flying so slow.

There was time set aside for all balsa airplanes so that the "builders" could fly in unobstructed air. Other demos included the Great Planes flat foam Citabria and the "flying pizza box" ERAZE. The ERAZE is hard to describe except that it is really cool and, when equipped with a 600MAH 3 cell lipo will go straight up while rolling. It is a lot tamer with 2 cells. Suffice to say that it was **FAST**. Chris and I then took up the Flyzone SE-5 and Triplane for a bit of Snoopy and the Red Baron flying.

The Quad Copter Obstacle Course included a horizontal chicane, a vertical chicane and a rotating hoop that the quad had to fly through. It was a challenge but fun. At this writing I haven't had a chance to see the "course video" recorded on the 1SQVM (a Heli-Max15Q quad copter with an on board video camera all in the palm of your hand).

Jim Held organized a "satellite event" at the Romeo Skyhawks field. First prize there was a chance to fly his giant scale P-51 "Old Crow". This provided a major contribution and a lot of fun.

Throughout the event over \$1,000 in prizes were presented to pilots and donors. There are so many stories about neat people winning neat prizes. One of the free flight pilots won the Parkzone RTF Archer. He always wanted to fly R/C. The two TACTIC 650 transmitters and receivers were won by Bill Stark and Jim Wynn. Bill wasn't at the event so I called his cell. His wife answered, explaining that Bill was driving and he would call me back. I explained what he had won a radio and she said "He will talk to you now!" His excitement, as well as Jim's, was palpable.

My thanks go to the members of M.I.A.A., George Maiorana, Jim Held, Steve Fredericks, Fred Engelman and others who helped. Walt Plentis (the guy who flies the full size J-3 on floats at the September float fly) and his son stayed around to help with tear down. Chuck Adams and Amy Copland of PMAC helped too.

A special thanks to my wife Paula who left her crutches in the car to man the registration area and tolerated 3 months of losing the living room and dining room to "model aviation". She had already lost her spot in the garage to Chris' 35% aircraft.

**Joe Hass**

**248-321-7934**





# Skymasters R/C Club

**We'll Teach you to fly!**

Join the Skymasters Radio Control Club for an R/C Aircraft Event

## Midwest Regional Float Fly

**Saturday/Sunday September 7-8, 2013**

**Island Lake Recreation Area, Brighton, Michigan**

Check in at 8:30AM; Event flying from 9:30AM each day!

*"The best float flying site I've ever seen!" – Dave Brown, Past President AMA*

**Open Flying both days!**

**Pilot's Prizes!**

**Judged Competition**

**Saturday Night Dinner**



40 acre clear lake

1,000 feet sand beach

6 acre lawn/picnic area

Flying open to AMA members

As seen in

**SKS Videos and**

**February 2013 Flying**

**Models Magazine**



- Lots of Parking
- Refreshments available at event
- Great chance to see this exciting hobby!

**Public Welcome!**

Island Lake Recreation Area is located on the south side of I-96 at Kensington Road.  
(12 miles west of I-96/I-275 or 3 miles east of I-96/US-23.)

Vehicles -See reverse for Recreation Passport information

For more information call Greg Cardillo 248-431-5562

On the web at [www.skymasters.org](http://www.skymasters.org) – Email at [floatfly@skymasters.org](mailto:floatfly@skymasters.org)



# Skymasters R/C Club Midwest Regional Float Fly Information

## The Event

Flying from 9:30am both days! Until 4pm Saturday; 2pm Sunday.  
Check-in begins 8:30 each morning.

Aircraft must have been flown & checked for stability and safety before entering this event.  
(A time for test flights will be available prior to the start of the event each day – arrive early if needed!)  
All pilots must show proof of AMA(USA) or MAAC (Canada) membership.

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## The Judged Events:

You may optionally enter up to 2 judged events – Scale (combined Scale & Sport Scale) and Sport.  
Scoring will be based on Static and Flight Judging. Win a Radio in each Category!!  
Bring out your best!!

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## Saturday Night Dinner:

Following flying on Saturday, join us under the tent for catered dinner!  
Check back for menu details and pricing. Purchase tickets with your advance registration.

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## Lodging:

Island Lake State Park allows self-contained camping in the upper parking lot during our event.  
No hookups available. Camping available Friday and Saturday nights.  
(A rustic camping fee will apply for all campers.)

### Local Area Hotels (contact directly for rates and reservations)

*Wyndham Garden Hotel* - 8 miles east of the flying site. Exit I96 at Novi Road south, turn east into the Novi Town Center shopping area - the hotel is located on the access road, on the east side of the center. Call: 248-344-8800

*Kensington Inn* - 15 minutes west of the flying site. I-96 to Exit 137 (D-19) 517-548-3510 (pets)

*Best Western of Howell* - 14 minutes west of the flying site. I-96 to Exit 137 (D-19), 517-548-3510

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## Michigan Recreation Passport:

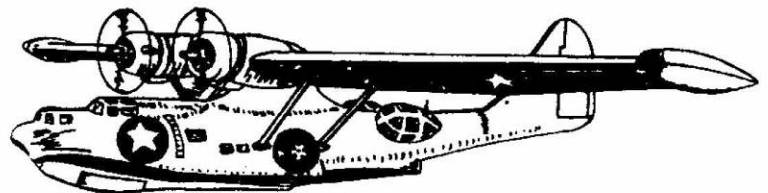
The DNR State Park Stickers have been replaced by a Recreation Passport.  
Vehicles registered in Michigan must display a Recreation Passport – available from Secretary of State (license plate tab) or the DNR (window sticker). \$10 annual fee.  
Out of State vehicles may purchase daily (\$8) or annual (\$29) passes.

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## More Information:

Visit our website at [www.skymasters.org](http://www.skymasters.org) for the latest event details!

Register online at <http://www.skymasters.org>  
Paypal accepted





# Radio Control Model Swap Meet



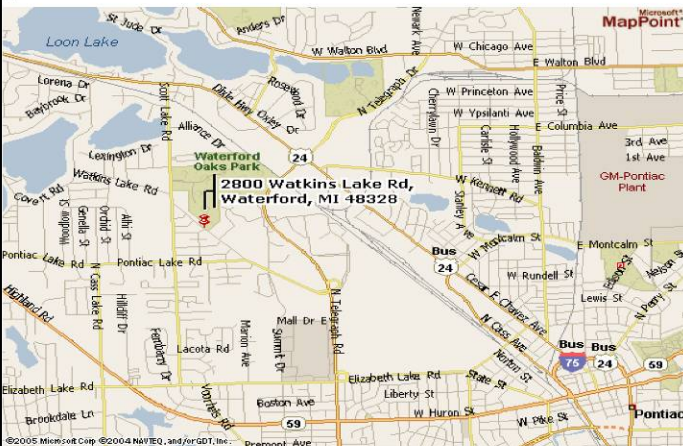
Sunday October 27, 2013 9 a.m. - 1:00 p.m.

Pontiac Miniature Aircraft Club

**Buy-Sell-Trade, Radio Control: Cars, Planes, Boats, and Heli's 50/50 Raffle, 12 p.m. Auction**

*For Details Call or Email: Alvin, 586-404-0205, [ajohns79@sbcglobal.net](mailto:ajohns79@sbcglobal.net) or Visit the club site at <http://www.pmac.us>*

\$5.00 admission, Vendor Setup 8:00 a.m. Tables: \$15 advance \$20 at the door



**Waterford Oaks County Park - Activity Center,  
2800 Watkins Lk. Rd., Waterford MI.48328**

¾ miles south of Dixie, ¼ mile east of Scott Lake Rd,  
Entrance on Watkins Lake Rd



# ON THE WING

## Heli pilots...

Come try out our new exclusive heli-only field. We are still trying to get grass to grow but in the mean time, come check it out. Recreational passport, AMA and Skymasters membership are required but if you have current AMA you can be a guest of a Skymasters member for a couple visits to see if you would like to join the club.



## Next Skymasters Meeting...

September 26th, 6:45PM

at the Orion Center

1335 Joslyn Road

(on the east side of Joslyn, just south of Clarkston Road)  
Lake Orion, MI



Welcome Max Nordlie to our ranks!

Max was just one of several new pilots who were signed off this August.

Way to go Max!!

# September 2013

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4 Float Fly Addison Oaks	5	6	7 Midest Regional Float Fly Island Lake, Brighton
8 Midest Regional Float Fly Island Lake, Brighton	9	10	11 Float Fly Addison Oaks	12	13	14
15	16	17	18 Float Fly Addison Oaks	19 Cub Scouts at the field 6PM to 8PM	20	21
22	23	24	25 Float Fly Addison Oaks	26 Skymasters meeting Orion Center 6:45-8:45PM	27	28
29	30					

# Skymasters Information...

[The Skymasters field is located in Lake Orion, within the Bald Mountain Recreational Area](#) on Scripps Road (see map). A state park permit is required and can be obtained from the Park Headquarters located on Greenshield Road or at club events. Or, you can check the box on your tab renewal for a "Recreational Passport". Flying is permitted from 10 AM to 8 PM. The noise limit is 94 dBa at 10 feet. This noise rule is strictly enforced.

**Wednesday evening (through August) is Family Night** with flying and a pot luck buffet. Bring something for the grill & a dish to pass.

**Wednesday 5PM to 8PM is also Student Night (through August)** but there are usually instructors around all day. Meet the instructors and arrange for more instruction time together on other days. Our Chief Flight Instructor is Greg Brausa, 248-373-8949 [cgbrausa@gmail.com](mailto:cgbrausa@gmail.com)

From June through August, **Club meetings** are held at the field, on the second and fourth Wednesday of the month at 8 PM. A great chance to fly and socialize. **Winter meetings** (September through May) are usually held at the Orion Center, 1335 Joslyn, in Lake Orion. Check the calendar here or on the [web site](#) for

specifics. Bring a model for Show and Tell, enjoy coffee and donuts and listen to the speaker of the evening.

The Skywriter newsletter is available online at the Skymasters web site and is free to all. It may also be printed from the web site if desired. All contributions are welcome. Please send photos and articles to [newsletter@skymasters.org](mailto:newsletter@skymasters.org) If you know of anyone who may be interested in R/C Aviation, please give them a link to this newsletter or give them a copy of an AMA magazine. It may spark their interest!



**Newsletter Submissions**  
Please send all articles, photos and announcements to the Skywriter editor at: [newsletter@skymasters.org](mailto:newsletter@skymasters.org)  
Deadline is the 20th of each month.  
The Skywriter newsletter is published monthly by the Skymasters Radio Control Club of Michigan  
[www.skymasters.org](http://www.skymasters.org)

## 2013 Club Officers & Appointees...

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