February

Skywriter

2014

SKYMASTERS RADIO CONTROL CLUB
OF MICHIGAN
AMA Chartered Club #970
16 Year Gold Leader Club
www.skymasters.org

In this issue:

From the President...

January has been quite wintry, if you hadn't noticed. I'm not one to let the weather stand in my way but between cold, wind and snowfall I've only done two flights since last November. I'm a bit frustrated by that but I'm sure better days are ahead.

Just as we finished the year in grand style with a surprisingly well attended (considering the weather) Krazy Snow Fly and an even better attended Christmas Party, we're going to kick off this year's event schedule with the annual Swap Shop.

But this year we're going to try to raise our game a bit. We've changed the format to an "RC Expo & Swap Shop." This means that we've set aside an area for display of hobby related items. We will have a number of flying related displays but we are also welcoming other things like rockets, RC cars, tanks, etc. We are advertising to the general public as well as to our regular market of RC pilots and we hope to get some more people interested in the hobby. Western Michigan Park Flyers will have an area set up adjacent to the Expo where they will be doing micro indoor flying.

Even if you are not buying a table, you are still welcome to come and display something in the Expo area. You can show a completed model, a work in progress, or perhaps you have some photos or video you could show. Bob

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Chapdelaine has done a fantastic job setting this up and would be very happy to have more things on display. Let him know if you want to participate.

Finally, I want to thank Ed Saumier for being our webmaster for the last two years. He has worked very hard and we appreciate all the effort he has put in. Greg Cardillo has agreed to take back responsibility for the website as Ed has advised us that he needs a break. Thanks to Greg as well. It's a tough job but one that I feel is important for the club.

I hope your 2014 has started out well, aside from the weather. I look forward to seeing everyone back at the field after we recover from this deep freeze.

Happy Landings,

Ken

Ken Gutelius
President, Skymasters
kennanc@msn.com

Lighthouse of Oakland County

PO Box 430508
Pontiac, Michigan 48343
248.920.6000
LighthouseOakland.org

December 30, 2013

Our Thanks to You.

Mr. Fred Engleman
Skymasters
867 South Blvd
Pontiac, MI 48341

Dear Mr. Engleman,

Thank you very much to Skymasters for your donation of toys. On behalf of the residents, Board of Directors, volunteers, and staff please accept our sincere appreciation.

Lighthouse PATH is devoted directly to the elimination of homelessness, a key issue with many families that are struggling with poverty in Oakland County. Since 1991, our program has helped over 1,000 homeless families who were in need of a safe, secure place to live, with employment skills, childcare, and life skills programs.

We are fortunate to have achieved and maintained a 91% success rate in our housing programs. This success is measured by the number of families that are able to become independent and self-sufficient through securing education, employment and housing.

Thanks to the support we receive and generosity of people like you, we are able to continue to ensure the mission of PATH will be achieved and that the lives of our residents and their children will continue to become rewarding and productive.

Sincerely,

John Ziraldo
Interim Executive Director

LIGHTHOUSE PATH
BOARD OF DIRECTORS

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John Ziraldo

John Ziraldo
Interim Executive Director

In accordance with IRS regulations, Lighthouse PATH acknowledges that no goods or services were provided in consideration for this tax-deductible gift. Please retain this letter with your tax information.

NeighborWorks® CHARTERED MEMBER

United Way for Southeastern Michigan

In December, many Skymasters members at the regular Tuesday indoor flying session donated toys for needy families (see the December Skywriter for photos).

Donations went to Lighthouse Path, who recently sent us this thank you letter.

You're welcome!

Front Cover:

From the 2013 Krazy (and KOLD) Snow Fly.

Paul Goelz photo

Propwash

By

Joe Finkelstine

January 2014

The wind on my wings part 1

Hi All,

I would like to continue my long-winded rhetoric again this month, with a topic that I see is still relevant. Before I muster on however, I must give credit to two club members who have suggested specific words they want me to incorporate in this month's column. While I won't give away the specific words, you can thank Joe Rubinstein and Dave Wendt if I send you scrambling for the dictionary.

This month brings a topic that still strikes a bit of concern (if not outright fear) in some of us and that is ***cross wind landings***. I still see many pilots ground themselves in windy conditions and that is not necessarily bad per-se, but many of you don't give yourself enough credit that you fly well enough to handle these conditions given some coaching and/or good old fashioned practice. I will try to offer some verbal help here, but there is no substitute like the real thing.

I originally thought I could get this whole topic in one column, but now that I have it mostly done, I am going to save the last portion of the approach for next month.

Before we get too far however, let me first discuss a key concept that important to understand to make headway (pun intended) and fly with the winds not centered on your nose.

We need to understand the difference between ground speed and (indicated) airspeed. They are much different things, especially when the wind gets the flag moving at our field.

Indicated airspeed is what an airspeed indicator would show if you were sitting in the pilot's seat of the aircraft. In full scale aircraft, the airspeed indicator is a key primary instrument and is one that full scale pilots look at often. For general aviation full scale, the minimum airspeed (stall) and other speeds associated with safe flying are shown on the airspeed indicator. Our military pilots, while also having an indicated airspeed indicator, also have an angle of attack indicator which is a more accurate gauge for determining if one is about to stall. In either case, indicated airspeed is a critical piece of knowledge for those that are in the plane they are flying. It would be very useful to us if we could universally get it as well, but that capability is still somewhat new in our world and certainly not universally available.

One of the key things here is that indicated airspeed is showing you are the speed the air travelling over the wings. It knows not from whence the wind comes and goes, it does not indicate wind direction, and it merely lets you know what speed the plane is moving through air mass you are flying in.

Ground speed is a reflection of how fast the aircraft is moving over the ground, and unlike indicated airspeed, it can vary significantly on a windy day depending on which direction you are flying. The airplane has no idea what its ground speed is, and doesn't care (unless of course, you meet up with the ground unexpectedly!). The wing cares about indicated airspeed, not ground speed. We pilots on the ground certainly care about groundspeed (and its close cousin, ground track)

Let's try an example of a windy day at the field

For the sake of argument, assume the wind is blowing from due north at 15 MPH. This wind speed is certainly a bit brisk, as it will result in the flag at the field being nearly straight out, but it is flyable wind.

Now assume I am flying my trusty 90 size sport plane and I am flying a rectangle pattern with one leg aligned with the runway. Each leg of my flight is on a cardinal compass heading. My path is flying due west, then due north, then

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due east, then due south and I repeat the whole thing over and over. This is a common pattern we have at the field and involves all right hand turns.

Furthermore, I am carefully keeping my power constant and my altitude constant on each leg and each turn.

Finally, I have an indicated airspeed sensor in my ship and it is recording the indicated airspeed for me to later confirm my indicated airspeed remains constant

In my above example, my indicated airspeed would not change (assuming I did not climb, dive, or change power). It would show the same airspeed going directly into the wind flying north, and same indicated airspeed flying due south (big tail wind).

My ground speed (and track) however, would vary considerably. When I fly due north, the ship will appear (to me and everyone watching on the ground) to be moving much slower, when I fly due South, it will zip across the sky typically much faster than I initially expected. The cross wind legs will require me to fly with the nose pointed into the wind to keep my flight legs centered on the intended rectangle I am trying to fly.

The reason I rambled so long about this is that one of the keys to cross wind landings is to realize your ground speed (track) will vary significantly and to plan for it, rather than wildly react to it as I have often seen.

One of the key things to keeping your nerves calm on a windy day is to set up a proper approach and this is where groundspeed (track) awareness and planning come into play.

Let's go back to the example and perhaps see how I allow for the wind and ground speed changes to get to a stable final approach.

So, it's time to land my 90 size sportster, and I am already at the correct pattern height and over the runway. Let's assume I am flying the same pattern direction, I.E. right hand turns. At mid-field, I start with a turn to the north and notice my plane has magically slowed down in the air. I first resist the urge to add power, and remember my ground speed is reduced, so my reaction is to fly ***longer*** heading due north to get to a spot over the trees on the other side of the field I normally like to be at for downwind. This is often the first place I see problems begin. Newer pilots, used to near windless days only, rely on holding the north turn for X seconds. When X seconds is nearly up, a turn to East begins. The other thing I often see is a big increase in power to get back to the ground speed we are expecting. Often, the ship is not over the trees in this condition, because the ground speed was slowed and the approach is already in a bit of trouble, because the plane is on this (pilot's) side of the trees and may actually be still over the far edge of the runway. For those that add throttle, the plane will often begin to mysteriously climb in the landing approach, rather than the hoped for descent.

The next turn (downwind leg) now is at hand. Instead of being flummoxed by the direct cross wind, I choose to point the nose of the ship into the wind, so my groundspeed and subsequent ground track remain over the trees. If I fail to do this, the plane will be "blown" significantly closer to me and wind up on the far edge of the field, or even closer. Think of the situation where we fail to accommodate the wind on both of the initial legs here. The problem is compounded and our plane is going to be way too close to attempt any kind of base leg or final turn.

With this wind from the due North, our ground speed thoughts should actually transform to now consider our ground track – The solution is to point my nose into the wind so that my ground track remains due east. We are still on downwind portion of our approach here and we are pointing our nose towards the north to counter the wind wanting to blow us south of intended flight path.

One thing to keep in mind on this first turn (due north to downwind leg) also is that the turn itself will be different than no wind condition and as we turn from flying due north into due east, we can use this slow turn to our advantage – try to roll out with your nose pointed into the wind, rather than due east.

The next 2 turns are where I see many struggles and let's examine each one individually.

The next turn goes from downwind to base (due east to due south). This turn will wind up with our plane flying with a direct tailwind and will make our plane appear to be flying much faster, as its ground speed dramatically increases. If I don't plan on a higher bank on this turn, I may find myself rolling out of the turn at or behind the flight line, as I have often seen. On this leg (due south, direct tailwind) the plane is really moving and we need to plan on this. A

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larger bank angle will be necessary to complete the turn, or as an alternative, start the turn much sooner than you are used to in no wind conditions.

Perhaps serendipity will favor us and we roll out correctly here, but the odds of that accidentally happening are slim. One common reaction to this increased ground speed I often see is for a big power reduction in hopes of "slowing" the plane down (because we are confusing ground speed with indicated airspeed) – This will lead to problems as we lose indicated airspeed and perhaps stall. Keep the faith and maintain power in this turn, we will need it on final!

The next turn is the one from base to final – this also has been quite problematic for many of us, particularly if we did not execute our planned ground track compensations on the previous legs.

This leg is where all of our miscues and goofs really add up. We hope to be in a position to get our plane to the runway at the correct orientation and airspeed at the end of this final leg. This turn is also going to require planning and if you have been blown way past your intended roll out point, the usual fix I see is to heave in a huge amount of roll and elevator bank to try to get it back on the correct path. This can lead to weaving back and forth, major changes in climb/descent speed, etc. This is where the pucker factor really shows, and the balsa reaper begins to smile as a new member is perhaps a moment away from meeting terra firma in a non-planned way. I prefer to use the term "re-kit" instead of "crash" for these types of wild final approaches – it sounds so much more diplomatic doesn't it?

On this final leg, we again have a direct cross wind and we need to accommodate for it. There are several ways to approach this crucial final leg and the one to use will depend on many factors, not the least of which is the size and speed of your plane, your comfort with non-coordinated flight controls and your ability to think ahead of a plane coming towards you!

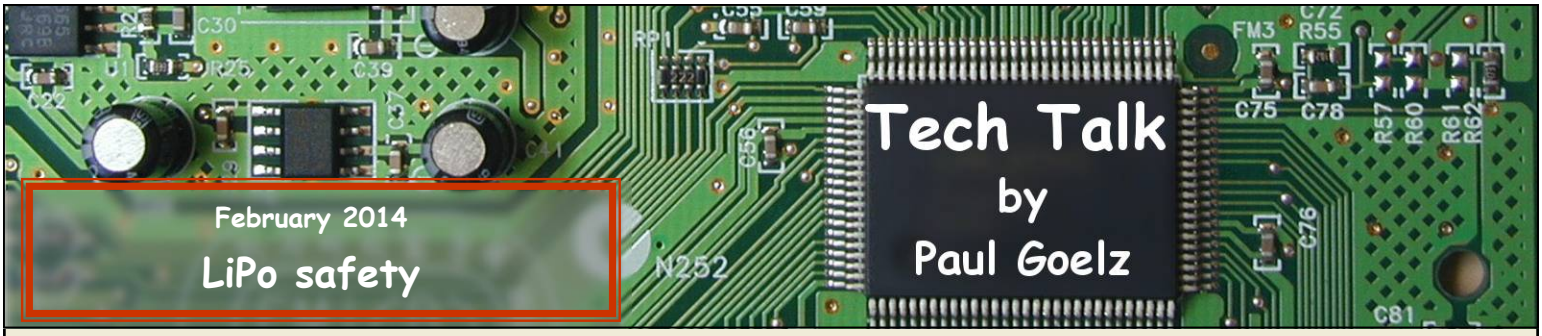
While I will go into more detail next month on final approaches with cross wind (crab angle, side slip, etc.) This month the focus is to remember that we have to get into a position to be able to do any of these techniques on final and that requires us to fly a wind corrected route up to final approach. If this is not done properly, the best bet is to go around and try again as long as you have sufficient fuel and/or energetic electrons left.

Like most of you, I have found simulators a bit less helpful on practicing landings because our view in these environments is incomplete, especially our peripheral view to gauge our height. While this mostly affects the final approach, it is still helpful to crank up the cross wind on the sim and practice getting your plane to a good final approach and become comfortable getting it there. Next month we slip down the glide path and attempt to touch down in one piece!

Try to keep from freezing until next month

Joe Finkelstine

Guys, don't forget the Fazer Kit Bash, promoted by John at Flightline Hobbies. Buy a kit at a group discount and finish it off as creatively as you want. Judging in the spring…. Call the shop for details. 1-877-891-8359



Hi gang,

As you may have heard, the other day there was a battery fire while charging at Ultimate Soccer. I won't get into the details here, but I would like to go over battery safety in this month's column. Properly used, LiPo batteries are quite safe. However, unlike the LoPos in our cellphones and laptops, the batteries we use in our planes and helis have NO protective safety systems (to save weight). Without those safety systems, our LiPos can overheat, vent and in severe cases, can catch fire. Once ignited, a LiPo will continue to burn and is very difficult to extinguish. The larger the pack, the more intense and long lasting the resulting fire can be.

So, how does one abuse a LiPo sufficiently to cause it to burst or ignite? Several ways.

1. Charging at excessive current or to an excessive voltage can cause a cell to burst or ignite.
2. Discharging at an excessive current (like into a short circuit) can also cause a cell to burst or (possibly) ignite. The short can be external (wiring issues) or internal to the cell (due to crash damage).

So, given those relatively limited ways we can start a fire, how do accidents occur?

Manual chargers can easily be set accidentally to an inappropriate charge current. Always double check!

Automatic chargers can misread the pack cell count and/or condition. This is particularly likely if the pack has been over-discharged and the cell voltages are lower than expected for "fully discharged". And of course, the charger can simply malfunction.

Another potential charging accident is charging a multiple cell pack that is seriously out of balance. Lets use a two cell pack as an example. Lets say that one of the two cells is getting old and weak. It will discharge faster than the good one. Dependng on where you stop flying, the COMBINED pack voltage could still be sufficient to fly, but the weak cell could be discharged to a much lower voltage than the absolute minimum 3V for a LiPo cell. Lets say the combined pack voltage was 6V. That would be about the point that the BEC cutout would shut the plane down. However, unless you use a balance charger, you would never know that even though the combined voltage was at the expected end of discharge 6v, one of the cells was at 4V but the other was at 2V. The cell at 2V is toast, but until you charge the pack, nothing bad happens. But now you charge the pack without balancing it. OOPS! The cell that started out at 4V gets charged and continues to be charged far into overcharge territory until the combined pack voltage reaches 8.4V (2X 4.2V). At that point, the cell that started out at 4V has been seriously overcharged and could ignite.

If all this seems too complicated, please go back and take a moment or three to try to absorb it, because it could prevent a fire!

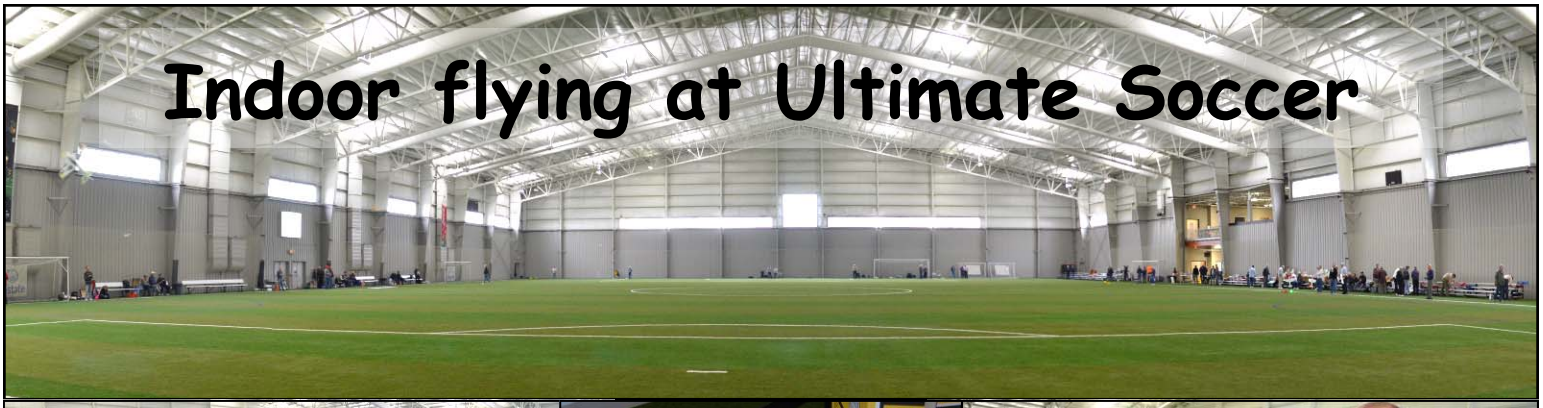
In the mean time, here are some simple rules for safe battery charging.

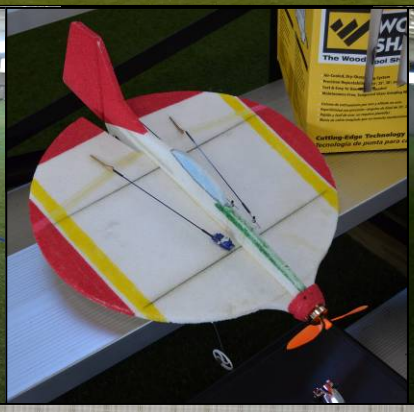
1. ALWAYS use a balance charger when charging multi-cell packs. ALWAYS. No exceptions.
2. ALWAYS double check the charge current and make sure it is appropriate for your pack. A "normal" charge is called a "1C charge". 1C means the charge current is equal to the pack discharge capacity. For example, a 500mAH pack would be charged at 500mA. Some packs can take double or triple that, but make sure you know what you are doing if you intentionally go over a 1C charge.
3. ALWAYS double check the pack cell count when using a charger that can charge more cells than your pack contains. If the charger thinks it is charging a pack with more cells than your pack actually contains, it will charge to an end of charge voltage that could be high enough to cause the pack to ignite.
4. ALWAYS supervise your packs while charging. Things can fail.
5. ALWAYS charge on a fire proof surface to prevent damage to the surface as well as to prevent a fire from spreading.

That's it for this month. Be safe, guys!

Paul

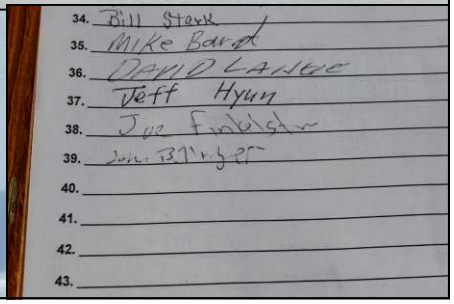
Indoor flying at Ultimate Soccer





2013 KrazySnowFly

2013 KrazySnowFly (continued)



2013 KrazySnowFly (continued even more)



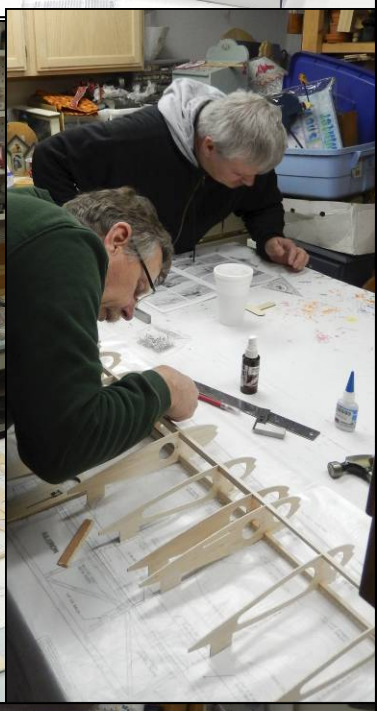




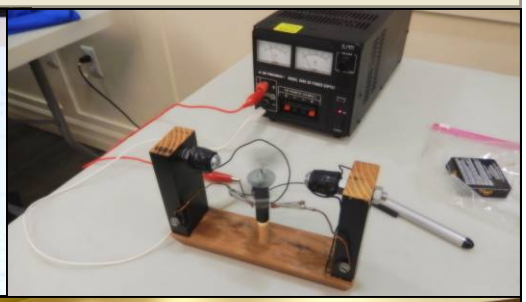


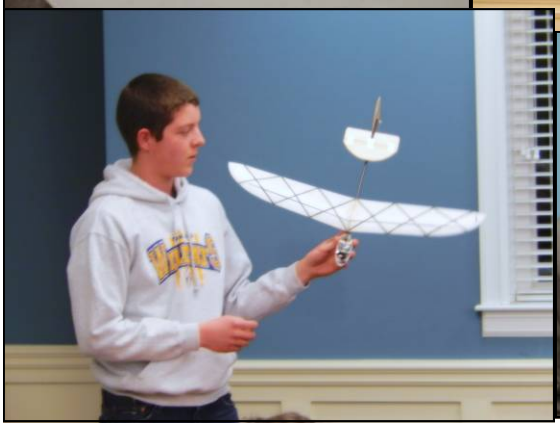


Photos from the Fazer Bash seminar



January 23rd regular meeting





Skymasters R/C Club

In conjunction with the Radio Control Club of Detroit

Indoor Electric Flying

at Ultimate Soccer Arenas
867 South Blvd., Pontiac, MI

2 miles south of the Pontiac Silverdome

Tuesdays from 11 AM to 1 PM

November 5, 2013 thru March 25, 2014

Holiday Sessions and Special Events

Single 2 Hour Session $10.00
Five 2 Hour Sessions $35.00
Season Gold Card $120 – 52 hrs of Flying Fun
Additional Charges for Special Events & Holiday Sessions

All Pilots must have proof of current AMA Membership

Sport, 3D, Micro, and Helicopters flying concurrently in different areas of the arena. See rules for size and weight limits.

Support your local hobby shops:

For more information call Jim Wynn 248-236-9983
Visit Skymasters web site at www.skymasters.org
AMA web site at www.modelaircraft.org

Rev 4

RC FLYERS CLUB

Rates Are Prorated Each Week!

Legacy Mens RC Flyers Club

The Legacy Center of Michigan has partnered with the Hamburg Flyers to offer winter flying times to club Guests. Our times are very family friendly for pilots that would like to fly on weekends. All pilots must carry an AMA current membership and follow all policies and rules.

TIME: 9:00pm- 11:00pm
DAYS: Saturday Evenings

SESSION 1: November through January (12 Weeks)
Please check website for exact flying dates and times.

ONLINE REGISTRATION

REGISTRATION: Online at www.LegacyCenterMichigan.com

COST:	$5/Hour Members
Legacy Membership:	$120 (per session)
One Day Pass:	$20

Partnership with Hamburg Flyers Club

HAMBURG FLYERS

Skymasters RC Club of Michigan presents:

RC Expo & Super Swap

Sat. February 15, 2014 10-2p.m.

Promoting RC Hobbies

—

Many static & informational displays

—

Numerous vendors of RC products

—

Come and LEARN about the world of RC

GREAT THINGS FOR THE ENTIRE FAMILY

Visit our website at:
www.skymasters.org

Lake Orion Community Schools –CERC
Community Education Resource Center
455 East Scripps Rd.—Lake Orion, MI 48360
4.5 miles north of the Palace of Auburn Hills
Take I-75 to exit 81 (Lapeer Rd) go North 4.2 miles, turn right on E Scripps Rd and follow for ¼ mile–Destination will be on left

AIRPLANES, BOATS, GLIDERS, HELICOPTERS, QUADCOPTERS, ROCKETS, CARS, TRUCKS, AND LOTS, LOTS, MORE!!

- ✈ Dealers & vendors welcome
- ✈ Over 100 tables
- ✈ $15/table —set up 9:00 a.m.
- ✈ $5.00 entry fee
- ✈ RC Flight Simulators
- ✈ Many Static Displays!!!!
- ✈ Food and Refreshments
- ✈ All aspects of RC welcome
- ✈ Active Military, women and children under 12 free

CALL : 248-805-1404 or email: superswap@skymasters.org

Skymasters R/C Club

In conjunction with the Radio Control Club of Detroit

Indoor Electric Flying

Monday, Feb. 17th

from 11 AM to 1 PM

Ultimate Soccer Arenas 867 South Blvd., Pontiac, MI

2 Hours of Indoor Flying - $10.00

Spectators Free

Large Enough For Simultaneous Sport, 3 D, Micro and Heli. See rules for size & weight limits.

Visit our web site at www.skymasters.org

Support your local hobby shops:

Nankin Hobby.com

Prop Shop Hobbies

Flight Line Hobby

All Pilots must have proof of current AMA Membership

FLIGHT LINE HOBBY

Mark Your Calendars !!!

The Fazer Build Bash judging will be held at the Orion Center on Saturday March 22nd, 6PM to 9PM

John and Tracy Hover of Flight Line Hobby (1-877-891-8359), our host for the Fazer Build Bash, has locked in Saturday March 22nd from 6:00 pm till 9:00 pm at the Orion Center. This is the same room where we hold our club meetings, and there will be prizes/ gift certificates for the winners.

I`m proud to say that the build factor of this hobby is not dead after all and many people have taken a lot pride in kit building the Fazer. They are very excited to show their work to their peers and compete in this event so please give them all your support on a job well done.

I encourage everyone to attend, whether you built a Fazer or not, this event should be a lot of fun for all.

Support your local hobby shop, they are important to the community.

ON THE WING

Skymasters Breakfast

First and Third Monday of each month through May

9AM
Everyone welcome

Red Olive restaurant
In the strip mall on Walton
across from Crittenton Hospital

Indoor Flying

Every Tuesday

11AM to 1PM

At Ultimate Soccer,
Opdyke and South Blvd
Pontiac, MI

Next Skymasters Meeting...

Thursday February 13th, 6:45PM
Thursday February 27th, 6:45PM
at the Orion Center
1335 Joslyn Road
(on the east side of Joslyn,
just south of Clarkston Road)
Lake Orion, MI

Other local area indoor flying sessions

Premiere Training Center

51379 Quadrate, Macomb MI

(north of 23 mile and east of Hayes)

Thursdays, 9AM to 3PM (yes, that's 6 hours)

Small electric planes and helis (separate heli space)

$10/session, AMA not required

Info: Steve Durecki 586-246-4203 (text or voice)

stevedurecki@comcast.net

Legacy Center

9299 Goble Dr.

Hamburg, MI 48139

(Off of Winans Lake Road, between Rickett Rd. and M23)

Saturday Evenings

9PM—11PM

In partnership with the Hamburg Flyers

February 2014

SUN	MON	TUE	WED	THU	FRI	SAT
						1 "Saturday at Steve's" Click here for more details
2	3 Skymasters Breakfast 9AM Red Olive Rochester	4 Indoor flying 11AM—1PM Ultimate Soccer	5	6 Indoor flying 9AM—3PM Premiere Training Center, Macomb	7	8
9	10	11 Indoor flying 11AM—1PM Ultimate Soccer	12	13 Indoor flying 9AM—3PM Premiere Training Center, Macomb Skymasters Mtg 6:45PM Orion Center	14	15 Skymasters Super Swap and RC Expo 10AM—2PM Lake Orion See flyer in this issue for more details
16	17 Skymasters Breakfast 9AM Red Olive Rochester	18 Indoor flying 11AM—1PM Ultimate Soccer	19	20 Indoor flying 9AM—3PM Premiere Training Center, Macomb	21	22
23	24	25 Indoor flying 11AM—1PM Ultimate Soccer	26	27 Indoor flying 9AM—3PM Premiere Training Center, Macomb Skymasters Mtg 6:45PM Orion Center	28	

Skymasters Information…

The Skymasters field is located in Lake Orion, within the Bald Mountain Recreational Area on Scripps Road, between M24 and Joslyn (see map). A state park permit is required and can be obtained from the Park Headquarters located on Greenshield Road 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 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

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 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** 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!

2013 Club Officers & Appointees...

President:	Ken Gutelius	Lake Orion	248-814-1157	kennanc@msn.com
Vice Pres.:	Dave Lange	Oxford	248-969-3914	dllan65@sbcglobal.net
Secretary:	Pete Foss	Oxford	248-236-0676	petefoss@skymasters.org
Treasurer:	Jim Wynn	Oxford	248-236-9983	jameswynn@charter.net
Editor:	Paul Goelz	Roch. Hills	248-375-9461	paul@pgoelz.com
CFI :	Greg Brausa	Orion	248-373-8949	cgbrausa@gmail.com
Membership:	Bob Chapdelaine	Lake Orion	231-675-8590	rdchapdelaine@gmail.com

Newsletter Submissions

Please send all articles, photos and announcements to the Skywriter editor at: **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