

# Skywriter

official digital newsletter of

AMA Charter Club #970

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

24 year Gold Leader Club

## Skymasters Radio Control Club of Michigan

*it's another beautiful day at Skymasters...*

### November, 2019



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This month we will hold our club officer elections on Thursday November 21 at 6:45 p.m. at the Orion Center. I hope you'll make it out to support (elect) those who choose to volunteer to support our club in leadership positions. We have great club leadership and great club members who keep our club running well. I know I appreciate each and every member of our club who work together for the benefit of our club as a whole. That is why we have such a great club.

If you have a nomination you'd like to make, please let me know. We will also have a presentation at the club meeting of the **annual club financial report**. John Hoover of Flight Line Hobby will also have a presentation about the **2020 Wing-It Project**. We will also vote in our new club members that need to be voted into the membership at this time. Be sure to mark your calendars for our Annual Club Family Christmas Party on Thursday December 5 at the Orion Center 6-8:30 p.m.

It's another beautiful day at Skymasters! See you Indoor Flying!

Bob Chapdelaine, President, Skymasters RC



# Bi-Slob finish Cobra rg project update and Nats project update

## Bi Slob finish:

This month's article will be a little different than most. Usually I try to write articles where there is a logical end and a lead in to the next article. For a variety of reasons my logical progression planning got all garbolixed for this month so I'll be talking about three different projects and begin to plan my work for the winter (where did the Summer and Fall go??). So, the first order of business is to finish up the Bi-Slob project. You may recall from the June and July 2019 articles that I wrote about the building of an ultra maneuverable control line biplane called the Bi-Slob (???). The July article ended with the completed airframe. So, lets get the model covered and ready to fly. I decided to cover the wings and tail with the remarkable HobbyKing film that I have come to use exclusively due to its economy and more importantly its ease of use. I purchased a roll of their black and white checkerboard style. The covering process was easy for the most part but I did find that the checkerboard material takes a little more planning and layout so that the checker pattern lines up properly from the top of the wing to the bottom at the leading edge and the covering of the flaps matches the the wing at the trailing edge. It's not hard, but you just need to do more planning compared to solid colors. If you don't, it will be really obvious.



*Pattern match at the leading edge*



*Pattern match at trailing edge to flap*

When I built the wings, the drawings showed the wingtip rib to be 1/16" balsa. I saw that as a problem as I anticipated that when I shrank the film covering that thin rib would distort and look really bad. I made the tip ribs out of 3/16" hard balsa to deal with the problem. When I covered the wings I still got about 1/16" of distortion. You have to look close to see it but it is definitely there.



*Wing tip distortion*

I wanted to try something different on the fuselage. I've always been interested in the vinyl material that specialty shops use to wrap the entire outside of cars.

## Front Cover

*"Pitts 790, taxi into position and hold. You are #1 for departure. Caution wake turbulence and heavy traffic in the pattern".* The 2019-2020 indoor flying season is officially OPEN at Ultimate Soccer!

*Paul Goelz photo*

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If You have never seen this Google it...it's very interesting what can be done. I believe that this is the same kind of material that some ARF manufacturers use on warbirds where they print all of the panel lines, rivets and markings on the vinyl and then cover the model. They make a chrome material that I thought I'd try. One of the interesting things about the car wrap materials is that they apply it and do not get bubbles. This is due to the inclusion of air passages in the adhesive on the back side. I purchased a 1 yard piece on Ebay to give it a try.



***Vinyl side pieces***

I then applied the material to the fuselage. I didn't have any issues with bubbles but the chrome bumper look I was wanting did not materialize and in general I am disappointed with how it turned out. It looks good from 5 ft away but when you get closer it has a mottled look. When it is applied to cars you don't see that. Maybe it is not the same material. This is not a show plane so I'm not going to redo it. You can see the slight mottling texture in the picture below.



***Air passages on back of the vinyl.***

I've never used chrome films on a model as I have read about how difficult it is to use and how critical it is to have a perfect surface under the film. To deal with that I used filler and primer on the Bi-Slob fuselage until there was no sign of the grain in the balsa.



***"Mottled" texture***

At this point the model is ready for final assembly. It is now basically an ARF so the assembly process requires the trimming of the film where the glue joints will be made. To do the trimming I dry assembled the parts and held everything together with tape while I checked the alignment of the wings and tail. I use bits of tape to mark the alignment points.



***Filled and primed fuselage***

I next made a pattern for the fuselage sides and cut the vinyl pieces.

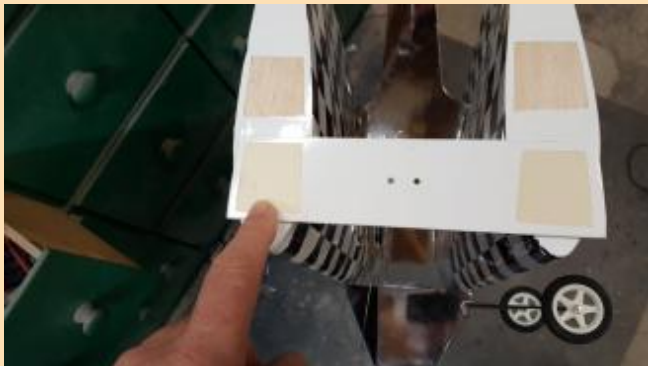
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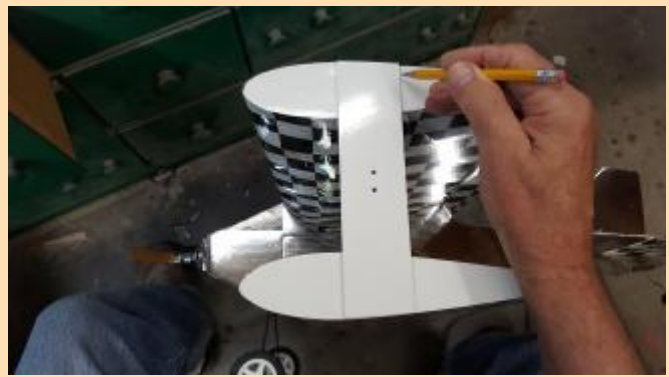
#### ***Tape alignment points***

I disassembled everything and then reassembled the model using the tape strips for alignment. I then re-checked everything to verify that the method will work when there is glue involved. All was well so I mixed 15 mi epoxy and bonded the wings and tail to the fuselage. While the epoxy was still fluid I checked the alignments one last time. The final step in the assembly was to add the top to bottom wing braces at the wing tips. I marked the proper location of the braces and as before I cut the covering away where the glue joints will occur.



#### ***Preparing wing brace glue joints***

Finally, I applied epoxy to the bare wood and aligned the braces to the marks. Note the holes for the control system lead-outs.



#### ***Wing braces epoxied in place***

The final thing is to position the battery, ESC and receiver in the fuselage to achieve the center of gravity.



#### ***Battery and electronics are mounted***



#### ***Completed Bi Slob***

She's ready for a maiden flight. Just waiting for decent weather.

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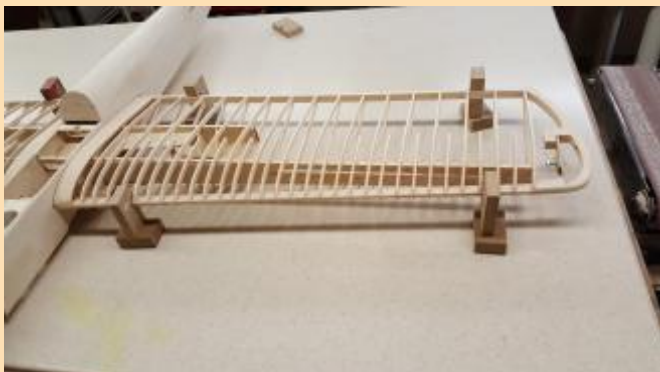
## **Cobra rg progress:**

In the August and September issues of Skywriter, I covered the construction of the wing and fuselage for the retractable landing gear version of the Cobra precision aerobatics model. You may recall that I decided to build the wing in two pieces and marry the covered wing panels to the covered fuselage. This makes it easier to handle the model during the covering process at the expense of keeping the wing panels properly aligned with the fuselage at assembly. At the end of the last article I did a dry fit of the wings to the fuselage.

To get the proper alignment I made a set of fixture blocks that fit to the leading and trailing edges during the wing panel construction. The idea was to use the same blocks during the final assembly as shown below.



*Trailing edge fixture block*



*Wing alignment with fixture blocks*

This system seems to work good. So, I pulled the wing panels out of the fuselage and prepared them for covering. During construction I decided to not line the inside of the wheel wells with wood to save some weight. The result of that decision is that you can see the raw wood wing ribs and other structure through the wheel well openings. I don't like the unfinished look so prior to applying the film covering I spray painted the visible wood with white paint to match the white HobbyKing covering film I will be using.



*Painting exposed wood in wheel wells*

When the paint was dry I proceeded to cover the wings and all of the other individual components with the HobbyKing covering film.



*All components covered and ready for assembly.*

I elected not to cover the cowl with the white film. I have not had great success doing that in the past so I painted it with matching latex and clear coated with Krylon brand acrylic clear. I really like the acrylic clear because it dries fast and you can re-coat anytime.

## **Top Builders Tip:**

When using rattle can paint **read the label.** There is always a paragraph that talks about application techniques, temperatures and **recoat timing.** Many of today's rattle can paint formulations will say something like "recoat within 1 hour or after 48 hours at 70 degrees F. and 50% relative humidity". They don't tell you what will happen if you don't follow the instructions so, I'll tell you. **The paint will wrinkle!** To fix this is a huge PITA. I'll also tell you that the temperature part of the instructions is also very important. If your basement is 65 degrees and 75% relative humidity you will need to wait more than 48 hours before you recoat. How much longer? All I can say is that it depends on your specific circumstances. I've had wrinkling even after 5 days. You can help yourself by placing the painted thing in the warmest room in your house for 48+ hours or buy paint

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that says "recoat anytime". Many of the Krylon paints are the "recoat anytime" type. Most Rustoleum paints are the "recoat within 1 hour or after 48 hours at 70 degrees F. and 50% relative humidity" type. Just so ya know.

Before I do the final assembly I will prepare the hinge slots. I have stopped using CA hinges on control line models because the resulting hinge line is too stiff. Control line models have a limited amount of force that can be applied to the control linkage so you want her hinged surface to be floppy. I use "pinned" hinges exclusively now. To cut the slots for the hinge you can use an electric hinge slotter. I tried a Great Planes Slot Machine a couple of years ago. I was unable to complete one plane before it self destructed. I now do them all by hand using the following technique. A good hinge slot has 4 characteristics:

- It is exactly parallel to the control surface hinge line.
- It is a little longer than the hinge so you can make small adjustments during assembly.
- It is wide enough that the hinge is easily inserted. If it is too tight, there will be an unsightly bulge in the wood surface when you force the hinge in and you'll probably have a bad glue joint. If it is too wide you may have a bad glue joint.
- It is centered on the thickness of the control surface.

I start out by measuring and marking the location of the hinges on both sides of the hinge line.



#### **Locate and mark the hinge locations**

I now measure the thickness of the control surface, 5/16" in this example. I measured the hinge blade and found it is 1/32". I'm going to make a small slit in the control surface edge with my Xacto knife so I will use a drill bit as a height locator for the slit. To determine the size of the drill bit I divide the control surface thickness by 2; 5/32" in this case. I now subtract 1/64"

to account for half of the hinge thickness. The result is a 9/64" diameter drill bit. I now lay this 9/64" drill bit along the edge of the control surface where I have marked the hinge location. Using the shank of the drill bit as a guide, I use my Xacto knife with a new #11 blade and make a shallow slit through the covering and into the wood about 1/8" deep.



#### **Make a shallow slit using the drill shank as a guide**

I now use an Xacto saw blade to cut the hinge slot to its full depth.



#### **Xacto saw blade**

The saw blade will be removing wood to make room for the hinge blade.



#### **Xacto saw blade cutting full depth slot**

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Try the fit of the hinge in the slot. If it is still tight I use a special shop made tool to relieve the slot. The tool is a thin piece of metal about 1/2" wide where I have glued a piece of 80 grit sand paper to the end. You can see the tool above the xacto saw in the picture below.



**Slot sanding tool**



**Slot sander in use**

I sand the slot until I have a nice slip fit for the hinge.

DuBro makes a hinge slotting tool similar to what I describe here but I don't have one and often make my own tools because I enjoy doing it and I save money for other things.

I now prepare the hinge itself by doing 2 things. First I use a solvent like acetone to clean the hinge to remove any mold release that might prevent the epoxy to bond properly. The second thing is to use a toothpick to apply a tiny bit of oil to the hinge joint. This helps prevent cured epoxy from binding up the hinge.

To assemble the hinged control surface I mix a batch of 15 minute epoxy. Don't even think about using CA or 5 minute epoxy. I use a 6" steel pocket ruler to pick up a little epoxy and force it into the prepared hinge slot I insert the ruler with epoxy into the slot and work it around. I put the epoxy in all of the slots. Next I take a paper towel moistened with acetone to clean excess epoxy from the control surfaces. Now, insert the hinge

into the slot and wiggle it around to distribute the epoxy. Do this on one side of the hinge line. Now I align the other half of the control surface with the hinges and push the two parts together. I'll then pull the parts apart about 1/4" and push them together again to make sure the epoxy is fully distributed. I use a fresh paper towel and acetone to clean the joint again. I next move the joint both ways to their full travel. This helps to get all of the hinges aligned with one another. You are done. I only do one control surface at a time so I don't run into problems where the epoxy starts to thicken before you are done.

That's where I am right now. I still need to do the final assembly and paint the cobra skin trim.

### **Nats project update:**

I've got a bunch of flights on the 1/4 scale Miss Los Angeles now and I'm practicing the specific flight maneuvers I'll be flying at the 2020 Nats. I've flown about 30 touch and go's off of a paved surface and have made some trim changes.



I've also decided that if I'm going to go there I want to maximize the experience and grind more models to fly in different classes.

Some of you have seen my P-39Q that was built as an RC model. I'll be converting to control line like I did with Miss L.A.

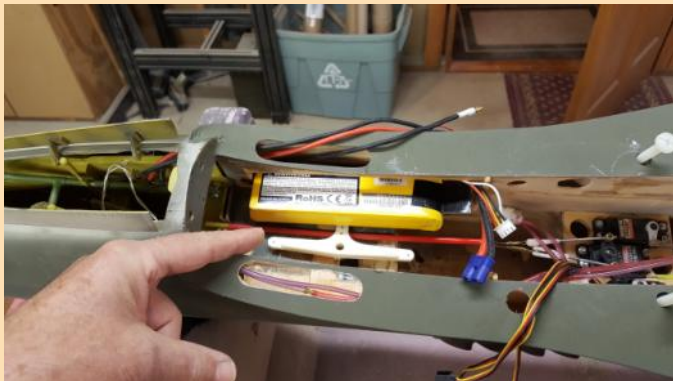
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**P-39 fuselage**

I've cleared out the unnecessary rc stuff to see what I need to do to get a bellcrank in the fuselage. The RC version was set p to fly with an 8s-5000mAh battery (2 4s-5000mAh packs in series) mounted below the full cockpit floor. Just barely fits. The problem is that I need some of that space for the bellcrank. To deal with the problem I have calculated that I can fly the necessary control line competition flight plan with (2) 3s 3700 mAh packs in series. This gives me just enough space to package the bellcrank and its mounting structure.



**Battery and bellcrank packaging**

There's other stuff I need to do to prepare the model. Those things will be dealt with in future articles.

Another model I'll be modifying for the competition is my Focke Wulf 190 A4.



**FW 190 to be converted**

The conversion of this model has its own problems that will also be the subject of future articles.



**FW 190 r/c setup**

The servos are in the area where the control line bellcrank needs to be. The fiberglass fuselage will need some structural reinforcement to deal with the 60 lb bellcrank lateral test load.

So that's it for this month. Next month I will be reporting on the structural mods for the bellcrank mounts done on both models and the thinking on a possible 4<sup>th</sup> model. Stay tuned.

**Steve Kretschmer**



# Indoor resumes at Ultimate Soccer!

*Click anywhere in the collage to view the entire photo album on the Skymasters web site*



# Field closing / Night Fly

October 19th (Paul Goelz photos)

*Click anywhere in the collage to view the entire photo album on the Skymasters web site*



# Five Minutes on Safety

## Random Thoughts

### Range check

- It is a good idea (that many of us ignore) to do a range check before each new flying session. A known good radio system can fail, and you never know when that might happen.

### Prop safety

- ALWAYS treat the propeller on an electric aircraft like a loaded gun whenever the battery is connected.
- ALWAYS treat the propeller on a fuel powered aircraft with extreme respect when the engine is running. Take extra time to think it through when making any needle valve or engine adjustments with the engine running.
- ALWAYS make sure that any cords or cable (like remote glow starters and starter power cords) are well clear before starting the engine.

### Throttle Hold switch

- ALWAYS program, understand and USE a throttle hold switch on your transmitter if the transmitter includes that function. A THROTTLE HOLD switch is different than a THROTTLE KILL switch and is useful on both fuel powered and electric aircraft.
- The THROTTLE HOLD switch locks the throttle channel to idle (fuel powered) or zero throttle (electric) and prevents the throttle from advancing unless the switch is placed in the "non-hold" position.

### Battery disconnect

- Electric aircraft are MUCH safer if they are equipped with a master battery disconnect switch, accessible from the outside of the aircraft with all hatches closed / in place. The disconnect usually takes the form of a shorting plug that can be seen and when NOT inserted, you know for sure that the motor is disabled. This is even more important if the battery plug is not easily accessible in an emergency.

### Taxi safely

- It is good practice when taxiing not to aim directly at an opening between flight stations. When taxiing back to the pits, I angle towards a flight station until I get close and then I taxi parallel to the flightline until I reach the opening where I am standing. While still aiming east or west (ie., NOT towards the pits) I shut the motor down and then carry or tail walk the aircraft back to the pits.

# Help Wanted at Skymasters



## Website Content Editor Updater

Looking for a club member who can keep our club website calendar and website events updated. Requires a little skill getting around but most of it is auto-

mated. Training provided and most of the information is provided for you to add to the site. If you are interested let Bob, club president or Greg, webmaster know.

Email: [president@skymasters.org](mailto:president@skymasters.org) or [webmasters@skymasters.org](mailto:webmasters@skymasters.org). Thanks!

## Club Email System Notice

We have a great club email system. Just an FYI, when you have something to sell or list for sale (or looking for something) please use the

"[classifieds@skymasters.org](mailto:classifieds@skymasters.org)". I encourage use of this email mail list system. Our member to member email address "members@skymasters.org" is for general communications between our members. We have several other great email addresses (actually many) such as the "indoorfly@skymasters.org", [floatfly@skymasters.org](mailto:floatfly@skymasters.org), and many other email lists that you may be on by default. For a complete list, [click this link](#) (you will need to log in with your Skymasters credentials to view the addresses). Each mail list has a specific purpose for our very active club and you'll see that the emails that come as official club communications, i.e. club leadership, event directors or club officers, etc. are marked that way... either way you have control over the emails you receive or don't want to receive... by going to your member profile in your Skymasters Profile and "edit my profile" and then "Edit Email Subscriptions/Options:" I would really advise you to NOT change these unless there is some problem. Email is the primary way we communicate what is happening in our club! NOTE: to communicate TO the club you must use the email address you registered with on the site. Also, it is great when you log into the Skymasters website too! [www.skymasters.org](http://www.skymasters.org).

**Skymasters R/C Club**

# Indoor Flying

**Ultimate Soccer Arenas**



skymasters.org



*the best indoor flying venue anywhere!*

**Join us on Tuesdays\*  
at Ultimate Soccer Arenas**

**Where its always warm and dry!**

**Located on 867 South Blvd., Pontiac, MI 48341**

**Oct. 29<sup>th</sup> thru Apr. 14<sup>th</sup>**

**from 10 AM -1 PM\***

**Spectators Welcomed – Trainer Planes On Site – Come Check It Out**

**Single Flying Session only \$10**

**Any 5 Session Punch Card \$40**

**25 Session Season Pass - \$120**

**Pay at the door or register online after 9/30/10 at:**

**[www.Skymasters.org](http://www.Skymasters.org)**

**Have any questions contact the Event Director at: [Indoorfly@Skymasters.org](mailto:Indoorfly@Skymasters.org)**

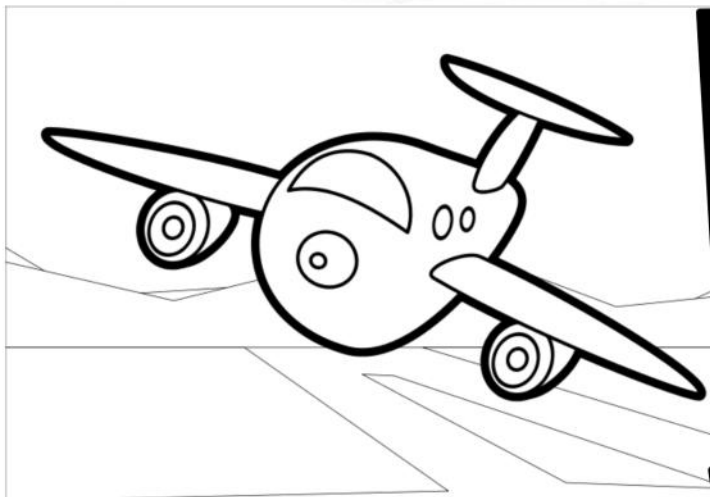
**Or call Fred at 248-770-3239**

**All Pilots must have proof of current AMA Membership**

**A Special 3 Month Trial AMA Membership is Available**

**\* Consult schedule for exact times and dates.**

# FIGHT LINE HOBBY



## Fall Seminars!

3039 S. Baldwin Rd.  
Orion Township  
MI 48359  
(248) 814-8359

Oct. 19: Brian "Watts Up?"  
- Batteries, motors & charging

Oct. 26: Barney "Soar Head"  
- Gliders & thermal soaring with video

Nov. 2: Steve "Round and Round She Goes"  
- All aspects of control line flying  
(Skymasters has a new flying circle!)

Nov. 9: Joe and George "Spray That Again"  
- A yearly favorite, painting and airbrushing tools and tips

Nov 16: John "Gotcha Covered"  
- Tools and techniques for iron on covering.  
Featuring live covering of a wing panel.

11:05 to 12:30 ish  
Coffee & Doughnuts  
Share and Learn





# 2019 CLUB EVENTS

SKYMASTERS RC CLUB – LAKE ORION, MI



## April 2019

Saturday April 27 — **Involvement Day** – Bald Mountain

## May 2019

Saturday May 11 – **Field Opening/Work Day** – Scripps Road Flying Field; Lake Orion

Sunday May 19 — Chet Brady - **Spring Float Fly** – Seven Lakes State Park, Holly MI

Wednesday May 29 – **Student Flight Training & Potluck** begins – Scripps Road Flying Field

## June 2019

Saturday June 8 — **Night Fly (evening)** – Scripps Road Flying Field; Lake Orion

Sunday Jun 9 – **Electric Fly** – Scripps Road Flying Field; Lake Orion

Saturday June 22 — **Control Line Fly In** – Scripps Road Flying Field; Lake Orion

## July 2019

Saturday July 13 – **Open House - Recreation 101**– Scripps Road Flying Field

## August 2019

Sunday August 4—**Warbirds and Scale Fly In** - Scripps Road Flying Field; Lake Orion

Sunday August 18—**Corn Roast and Top Gun Flying** - Scripps Road Flying Field; Lake Orion

## September 2019

Sat. – Sun. September 7-8 - **Midwest Regional Float Fly** – Seven Lakes State Park Rec. Area, Holly

Saturday September 21- **Skymasters Fun Fly** - Scripps Road Flying Field; Lake Orion

## October 2019

Indoor Flying Season Begins – Ultimate Soccer Arenas; Auburn Hills

## December 2019

**Christmas Party** – Orion Center; Lake Orion

dates subject to change – PLEASE always consult current information on website: [www.skymasters.org](http://www.skymasters.org)

# ON THE WING

## Skymasters Breakfast (Everyone is welcome)

First and Third Monday of each month  
*through the summer... and beyond!*

9AM

Red Olive restaurant

In the strip mall on Walton  
across from Crittenton Hospital

Rochester MI

## Skymasters Indoor Flying Tuesdays!

We fly every Tuesday  
through mid April

10AM to 1PM (three hours)

Ultimate Soccer, Opdyke & South Blvd

Pontiac, MI

AMA required



## Other local area indoor flying

### Premiere Sports Center

14901 23 mile, Shelby Twp, MI

(northwest corner of 23 mile and Hayes)

*Every Thursday, 9AM to 3PM*

Electric planes and helis (separate heli  
space)

\$10/session, AMA required

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

<http://www.stevesindoorflying.com/>

### Legacy Center

9299 Goble Dr.

Brighton, MI 48139

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

*Wednesdays 1PM—3PM November through March*

\$10/session

Sponsored by the Hamburg Flyers RC club



# November 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 Saturday Breakfast 8:30AM Iris Café
3 Midwest RC Swap 9AM Northville	4 Skymasters Breakfast 9AM Red Olive, Rochester Hills	5 Indoor Flying 10AM—1PM Ultimate Soc- cer	6	7 Indoor Flying 9AM—3PM Premier Sports Center Shelby TWP	8	9 Saturday Breakfast 8:30AM Iris Café Flightline Seminar 11AM Flightline Hobby
10	11	12 Indoor Flying 10AM—1PM Ultimate Soc- cer	13	14 Indoor Flying 9AM—3PM Premier Sports Center Shelby TWP	15	16 Saturday Breakfast 8:30AM Iris Café Flightline Seminar 11AM Flightline Hobby
17	18 Skymasters Breakfast 9AM Red Olive, Rochester Hills	19 Indoor Flying 10AM—1PM Ultimate Soc- cer	20	21 Indoor Flying 9AM—3PM Premier Sports Center Shelby TWP  Skymasters Meeting 6:45PM Orion Center	22	23 Saturday Breakfast 8:30AM Iris Café Flightline Seminar 11AM Flightline Hobby
24	25	26 Indoor Flying 10AM—1PM Ultimate Soc- cer	27	28 Indoor Flying 9AM—3PM Premier Sports Center Shelby TWP	29	30 Saturday Breakfast 8:30AM Iris Café

# 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 recreation passport or sticker 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 hours:

**QUIET ELECTRICS ONLY** from 8AM to 10AM and 8PM to 10PM. **The noise limit is 80dBa at ten feet.** Regular flying is permitted between 10 AM to 8 PM. **The noise limit is 94 dBa at 10 feet.** These noise limits are enforced.

## Student Instruction & Pot Luck

Every Wednesday, May through September. Flying any time but we eat at 6:00 p.m. - rain or shine, literally! For those participating we ask that

you bring something for the grill - enough to feed (at least) you and your guests -OR- bring a dish to pass -OR- bring your own (non-alcoholic) beverage. **Something for the grill:** The obvious choices are burgers, sausages/brats and hotdogs - but other alternatives are welcome. If you bring it we will cook it! We've cooked pork tenderloin and chops, salmon, venison burgers, steaks and more. Don't forget the buns.

We start cooking about 5:30 p.m. - having grill items by then helps us get everything ready on time.

**Potluck dish to pass:** Don't know what to bring, working late? Each week we'll let you know what is needed for the next week from plates to condiments, charcoal, etc. **Pick one of the needed items to bring instead!** Not one to cook? A quick stop at local supermarket deli

for a side salad, or bakery for dessert always works!

**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. 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!



## 2019 Club Officers & Appointees...

President:	Bob Chapdelaine	Oxford	<a href="mailto:president@skymasters.org">president@skymasters.org</a>
Vice Pres.:	John Billinger	Troy	<a href="mailto:vicepresident@skymasters.org">vicepresident@skymasters.org</a>
Secretary:	Phil Saunders	Rochester Hills	<a href="mailto:secretary@skymasters.org">secretary@skymasters.org</a>
Treasurer:	Jim Satawa	Lake Orion	<a href="mailto:treasurer@skymasters.org">treasurer@skymasters.org</a>
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EOC at large	Dave Stanley	Lake Orion	<a href="mailto:at.large2@skymasters.org">at.large2@skymasters.org</a>
EOC at large	Steve Kretschmer	Oakland	<a href="mailto:at.large1@skymasters.org">at.large1@skymasters.org</a>
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CSO	Greg Brausa	Metamora	<a href="mailto:cso@skymasters.org">cso@skymasters.org</a>

## 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.

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