

# Skywriter

AMA Charter Club #970

official digital newsletter of

[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...*

April, 2020



Hi All

Well I wish this letter was April Fool's but it's not, it's our new reality. We received notice on 3/27 that all flying fields on state land are closed at least through 4/13. Sad to hear since I believe we can fly safely and practice 6' social distancing easily at the field. I can recommend Seymour Lake Park in Oxford as a very good place to park fly with small electrics. There are 4 baseball fields that form a nice area to fly. Please make sure you stay inside the fence line and follow AMA guidelines by NEVER flying over people. I will also be flying helis and quads in my back yard. Maybe now I'll finally take the time to learn FPV?

Seriously, stay safe and pick something new to learn or work on!

PS. We have been considering changing the newsletter to bi-monthly given email, Facebook, etc. Any comments on monthly vs bi-monthly? Please email me at [president@skymasters.org](mailto:president@skymasters.org) and copy Paul at [newsletter@skymasters.org](mailto:newsletter@skymasters.org).

Thanks, Pete  
Pete Foss, President, Skymasters RC

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**Editor's note:** With the change to a bi-monthly newsletter, there will not be a May edition. The next newsletters will be the June and August issues. This change was made because with the exception of Steve Kretschmer's most excellent "Some Assembly Required" column, everything else in the newsletter is already available on the Skymasters web site. As Pete mentioned, please feel free to comment if you prefer monthly newsletters.

**Paul Goelz**  
Skywriter editor

From Bob Chapdelaine:

I found this (letter below) going through my old files and folders sorting out some old hard drives etc. I wrote it, but, don't think I ever did anything with it... Maybe I was too shy or something...

Anyway... Wanted to share it with you now since it's (almost) 9 years later and I ended up serving, I think, 5 years as club president... WOW! Yes, I cannot believe it either. It was great for me. Hope it was for you too. I love Skymasters Club and miss everybody very much. I've had a rough past year (or more) with family issues. Now with this epic pandemic issue, it really makes me appreciate the club, friendships and everyone. I hope that things will get back to some sense of normalcy at some point and we can enjoy our beautiful flying field on Scripps Road again, Indoor Flying, and all our other great club events!

Bob Chapdelaine, former Skymasters President

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August 15, 2012

Thanks, Skymasters!

Being new to Skymasters and all, I just wanted to take a moment and thank everyone for their kindness and hospitality and share a few thoughts.

I have had an absolute blast since the very first meeting in February I attended as guest of Frank Genovese; (a.k.a. "Christmas Tree Frank" or "Crazy Frank" or known by his planes... "Frankenplanes"; and other terms of endearment by those who have known him longer than I). Frank is an incredible man that I have come to admire and respect so much as I know so many others do. Fr. Mike Green, OSB, and I have had a blast getting to know you all and Frank is the best club ambassador EVER!

In between visits to the field throughout the winter months and spring, watching all that goes on there, it had been a wonderful experience. I then attended the club swap meet and then Toledo, which was awesome. I cannot wait to return now that I have some sense of what I'm looking for.

In a very short time I have become acquainted with some great men. Both instructors and other pilots, and each

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#### Front Cover

Just a random scene from our now-cancelled indoor sessions at Ultimate Soccer. Hopefully we can return to a normal schedule in the fall.

**Paul Goelz photo**

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member of the club has incredible gifts and talents and are so willing to share them with one another and I am constantly amazed at their patience with me, students and those who drop by the field to see what it is all about.

The camaraderie and friendship of the men (and women) that are part of Skymasters is amazing and even more incredible is their generosity. I recently spent some time reading all the past issues of the Newsletter that are posted on the web. I was astounded both at the quality and caliber of the newsletter itself but, just as much at the great endeavors taken on by the members of the group. Using their own resources, businesses and often hands, the group takes on some very noble and worthy causes within the local and larger community. Something like that makes one proud to affiliate with such a fine organization.

As Memorial Day approached and the Thursday student times went into effect so did my learning curve. Since the New Year's Day Snow Fly, I've been going over the field to watch and then since early Spring I've worked with different instructors on and off and spent a lot of time listening and learning. Each instructor had their own style and way of teaching and each brought key insights into my learning process. As different as each Instructor was, they all agreed and were consistent on the essentials and important elements of flying RC airplanes and being a member of Skymasters.

At the risk of missing someone I'll make an effort to mention some of you who have provided the opportunity for me to have such a great experience. First, I must thank God for Frank Genovese, as I have come to know him and his dear wife, Cathy, I have such admiration and respect for them. It also helps that they are dear friends of a dear friend of mine, (Diana F), a lady that I knew when I was much younger and encouraged me in so many ways.

Flightline Hobby, John and crew you guys are awesome too! What a blessing you have been to me and I have learned so much from you, and John you speak and treat the greenest newbie with the same respect and courtesy as a season veteran in this hobby, you are an incredible man. Andy Sutter is awesome, Kyle, Greg Brausa, I appreciate so much, Gary Wells, my incredible instructor, Paul Zabawa., Dan Stolz, Brad Muzzy, Ray Nawara, Roger Schmelling, Gary Weak; I love his articles in the newsletter, Paul Goelz, is awesome too! Randy MacInnes, Phil Saunders, Greg Cardillo., all the other instructors and everyone I forgot to mention by name here... you guys are the best.

I also wanted to thank the club President, Dave Lange, who I think is doing a great job. It must be difficult to work with those who have been around this organization for decades and then all those who are newer and somehow make it all work as well as it does.

I am proud and honored to be part of such a fine organization and look forward to many years as a member of Skymasters. Thanks Everyone!!!!

Bob Chapdelaine

New Member of Skymasters 2012

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Anyway, I thought I'd share this with you. Hope all is well with you and your family. See you at the field someday soon. I found the pictures of my sign off as pilot with Paul and Gary! Also, a great picture of me and Fr. Mike with Frank. Fr. Mike and I's first visit to the field was the Crazy Snow Fly 2011! It was a great experience and has been every since.

Thanks everyone!

Bob Chapdelaine



## Nats Control Line "Authentic Scale" FW-190 Project

A short recap for new readers. I'm working on converting 3 r/c models to control line to compete at the 2020 AMA Nationals this summer. The last few articles covered some specific projects aimed at the control line conversion as well as the improvement in the scale detail to bring the model up to the requirements of the "authentic scale" competition. This is the highest competition level where the tiny details matter in a model replicating a specific full scale aircraft. Static judging is done up close as opposed to the 15 ft rule for other classes. This model started out as an FW-190 A4 "yellow 4".



Yellow 4.

Sadly I was not able to find enough documentation that would satisfy the static judges. I've decided to replicate the FW-190 F8 "white 7" at the National Air and Space Museum because I can document it properly and it is one depicted with bombs that I will be able to drop during the flying portion of the competition.



White 7.

In this month's article I'll go through 3 sub projects aimed at improving the scale fidelity. The first one will be the fabricating of a static scale 3-blade prop.

The scale prop needs to be 19.5" diameter and have a scale looking blade shape. Also, the spinner shape is unique for the FW-190. Making matters worse most FW spinners that you may find are likely cut for a 2 blade flying prop. I lucked out here. It turns out that Extreme Flight makes an ARF in my scale and it is flown with a 3 blade prop. The prop is way off from a scale prospective but the spinner is the right size and is cut for a 3 blade prop. They had exactly 1 replacement spinner in stock which I snapped up immediately. For the scale prop on my P-39-Q, I hand carved one blade out of poplar and made a mold to resin cast 3 duplicates. I knew I could do that if I had to but I wanted to simplify things if possible. I scoured the usual sites looking for a manufactured prop with a proper blade shape. The desired shape is not favored for models but I did manage to find one offered by Hobby King that looked good for my purposes. I got two which I would cut in half to get the individual blades I'd need.



Prop blade blanks.

I couldn't simply cut 120 degree bevels on the ends and glue them together. The full scale prop blades have cylindrical ends that fit into blade holders and then mount into a hub. So the first step was to make a hub and blade

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holders to the proper scale. I made the hub out of (2) 2"x2" x1/2" pieces of plywood epoxied together.



**Prop hub blank.**

The hub needed to be bored to provide a thickness that will clear the pop nut and shaft on the propulsion motor.



**Boring the prop hub for prop shaft and nut clearance.**

I rounded out the hub on the bandsaw. I left a little material for later machining.



**Rough shaping the hub.**

Next I set up my indexing head in the milling machine to drill the three holes for the blade holders.



**Drilling blade holder holes in the hub.**

Next I mounted the drilled hub in the lathe and machined it 1/16" under size. Because it's made of plywood I put a layer of Bondo on the hub to cover the plywood look and machined the diameter to the finished size.



**Hub with bondo prior to machining to size.**

Next I machined the three blade holders to the scale size out of PVC rod.

At this point I modified the blade blanks at the hub end to replicate the scale shape and to fit in the machined blade holder.



**Prop blade shaped and fit into the blade holder.**

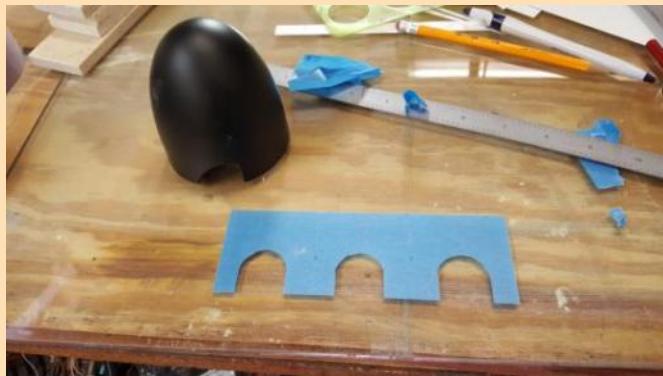
Of course I have no data on the actual shape so that work was done via reference to pictures. It was done by hand using a 3" drum sander in the drill press. It turned out to be pretty easy and I didn't have to use the extra blade blank. The overall blade shape looks very good

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relative to the full scale photos so I did not change them.

The Extreme Flight spinner needed to be modified to clear the much larger scale prop blades and blade holders. I chose to do this by hand because I didn't have a good way to hold it to machine it. I made 3 masking tape templates of the desired shape and size for the scale openings.



**Masking tape prop hub clearance templates.**

Then I shaped the opening using my Dremel tool with a drum sander and the masking tape templates.



**Finished blade holder clearance.**

I then assembled the prop hub, blade holders and blades on a paper guide to assure the 120 degree blade positions. After assembly I final sanded and primed the hub and blades. Here is the primed assembly with the cut spinner.



**Prop assembly in primer.**

I next painted the prop assembly the proper RLM 22 satin black.



**Finish painted prop assembly.**

The full scale FW has the classic spiral paint scheme. This is really tough to mask by eye especially when you need a specific number of "turns". I wrote an article on how to do this and get it right. The article was published in the October 2016 edition of Skywriter. I used that method on this spinner. Here is the finished prop.



**Finished prop and spiral painted spinner.**

If this seems like a lot of work, it is. A long time ago I decided that if I'm going to spend the time and money to go to the Nationals, I'm going there to win so this kind of work is necessary to have a fighting chance.

When I made the decision to redo the model to the F8 version that increased the magnitude of the overall project. A major change to the fuselage is the need to accommodate the larger fuselage mounted guns of the F8 version. That's the second project here.

The FW-190 A4 had a pair of MG17 (7.9mm) guns buried in the nose. In later models including the F8, the guns were changed to the much larger MG131 (13mm) guns. To fit them, large bulges were added to the gun cowl as seen in this picture of the nose of White 7.

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#### ***Gun barrel tunnels.***

The blisters have a bellied shape in side view so I made 2 balsa blanks and fitted them to the radius of the brass tubes.



#### ***Blister blanks.***

The FW190 A4 had very small blisters to clear a part of the 7.9mm gun breech. Those had to be removed first



#### ***FW-190 A4 gun breech blisters.***

The front end of the A8 blisters have to match up with the existing gun barrel tunnels in the nose. To do that I used pieces of brass tubing that I tapered along the entire length of where the blisters will be located to assure I had a nice straight reference to use while shaping the gun blister surface.



#### ***Shaping the blisters.***

Once the proper shape was completed I glued the blisters in place.

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The gun blister shapes needed to be faired into the fuselage as in the full scale. I did this with Bondo catalyzed spot putty using a steel ball to create the proper fillet radius.

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*Gun blisters glued in place.*

The full scale blisters have a small additional blister. To make those I used a steel ball shaped tool to make a depression in a lump of modeling clay. I filled the depression with epoxy. When It was cured I had a plastic hemispherical blister to glue in place.



*Modeling clay small blister mold.*



*Steel ball radius tool.*

I followed that with regular spot putty to finish the blending.



*Spot putty final blending.*

In the full scale FW, the blisters are a part of the gun hood. The gun hood is not a recessed panel. It lays on top of the fuselage skin so there is a raised edge. To create the raised panel look I used 3 layers of masking tape to define the edges. Then I used the Bondo filler to create the simulated overlap on the surface.



*Molded epoxy mini blisters glued in place.*

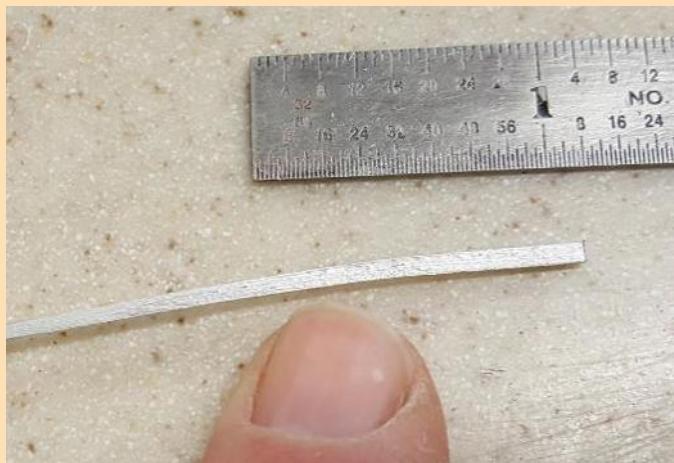
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**Simulated overlapping gun hood edge.**

Finally. The hood on the full scale has a piano hinge at its rear edge. The gun hood opened to the rear on that hinge. To simulate a piano hinge I took 1.0mm aluminum wire and used a file to create a "D" shaped cross section.



**"D shaped aluminum wire.**

I then used a razor saw to cut very thin slots with about a 2.0mm spacing in the "D" shaped wire.

**Simulated piano hinge.**  
Finally, I glued the simulated Piano hinge in the scale location to create the illusion.



**Simulated piano hinge.**

Another thing I needed to do was modify my original aluminum spinner for use with a clockwise rotating propeller. Why? Well, after converting my 1/4 scale Miss Los Angeles to control line I found that at the beginning of the takeoff run the plane wanted to turn pretty hard to the left due to gyroscopic effects and propeller "P" factor. This is a very typical problem with tail wheel airplanes. On an r/c model it is not as critical as it is in a control line model because if the model leaves the control line circle radius you loose elevator control... generally not considered a good thing. With electric models it's easy to have the motor run in a clockwise direction. Of course you need to use a "pusher" propeller to do that. Fortunately an EP 16X10 "pusher" prop for this model is available. But I need to have a spinner of the right size and shape cut for a 2 blade pusher propeller. Such a spinner is not available. So, I needed to mod-

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ify my existing aluminum spinner to deal with the problem. I temporarily glued a 1/64" plywood backer plate to the inside of the propeller covering the normal cut out.



*Thin plywood backer glued in place.*

Having done that I filled the opening from the outside with Bondo and sanded the filler to the spinner contour.



*Bondo filler.*

At that point I removed the backer with a bit of heat leaving a smooth inside surface. The thickness of the filled slot is about 1.0mm. I tried to cut the new slot and the very thin filler broke. So, I redid the process with the backer and Bondo. But this time before I cut the new slot, I put 2 layers of 2 oz, fiberglass cloth as a permanent reinforcement. I re-cut the new slot to fit the EP 16x10 prop and everything worked fine.



*Fiberglass reinforced filler and propeller slot.*

With the finished slots I used the same spiral paint technique but this time the spiral was done the other direction due to the clockwise rotation. So here is the finished flying spinner.



*Finished flying spinner with "pusher" prop.*

That's it for this month. If you are enjoying these articles please let me know...thanks.

Next issue I'll be writing about how I managed to retrofit a retractable tail wheel into the fuselage and how I concealed the controls in the tail. Both will be important for static and flying points.

Until next month...

**Steve Kretschmer**

# New life for an OLD plane

Here's my entry under "What to do under house arrest". Anyone else?

At the Thursday indoor session in Shelby Township, we were talking about a new little plane from Eflight, the UMX Ultrix. I pooh-poohed the idea because it looked like just another 1S brushed flying wing. Don't need another of those! But when I got home and looked it up I discovered that it is a 1S BRUSHLESS, with SAFE and AS3X. That piqued my interest so on the way to the Thursday Skymasters EOC meeting I stopped by Flightline and bought one. Ironically, at the EOC meeting we decided to cancel the balance of the indoor season ;)

Before I even flew it, I realized that the guts of the Ultrix could be a perfect fit for my old OLD Wattage B2 stealth bomber. The Wattage B2 was sold around 2002 back in the NiCd days. With the recommended pack it could barely maintain altitude at full throttle and loved to tip stall. But with the Ultrix guts and 1S 600mAH battery, it would probably weigh less than half what it weighed "back in the day". And as a bonus, you get brushless reliability and AS3X / SAFE stabilization.

So with time on my hands I had to try it!

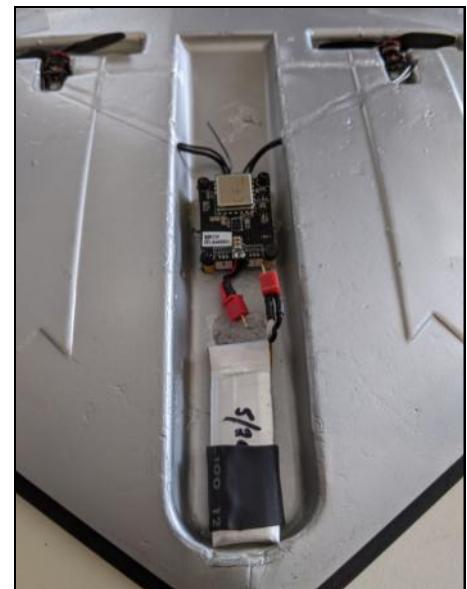
After removing the innards from the Ultrix, I set about laying them out in the B2. Everything fit nicely although I had to cut angled slots for the motor wires to avoid having to lengthen them (see photo). I covered them with thin strips of Blenders and once airbrushed they aren't that noticeable. The hardest part was figuring out how to mount the board. The Ultrix has the board mounted to the underside of the fuselage but the B2 has the equipment bay on top. Since the board needs to be mounted in the same orientation as in the Ultrix, that meant I could not just Velcro it to the floor of the equipment bay with connectors facing up.... it needed to be inverted with the connectors facing down. The solution was to embed four hollow styrene straws in the floor of the equipment bay and mount the board over them. That worked out great. The straws were the right size to mount through the original board grommets and also have a central hole small enough to accept the original mounting screws.

Now that everything was mounted and I was finished working on the pane, it was time for some touch-up paint. Turns out that Tamiya silver acrylic is a perfect match for the original finish and I was able to touch up the dings and filled dents by gently airbrushing over them. I think the result looks pretty good for a 15+ year old foamie!

So, how does it fly? The answer is GREAT. It flies right out of my hand, hands off. It can loop from level flight at around 50% throttle. It is very stable in SAFE as well as AS3X and has a nice power off glide. If anything, it is now a tiny powered sailplane. I get the same 5 minute flight time that I get with the Ultrix, with plenty of reserves on landing.

So now I just have to wait for the field to re-open! And the B2 and the Ultrix will be terrific indoor flyers next fall too!

Paul Goelz



# March Flying at Ultimate Soccer!

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



# 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 automated. 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!

**POSITION FILLED!**



## 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](mailto: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](mailto: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).

# **Indoor flying at Ultimate Cancelled until further notice**

**Out of an abundance of caution and with the safety of our friends in mind, Symasters has decided to cancel indoor flying until the COVID-19 situation dies down. We will Email everyone with any updates.**

**Thanks for your understanding!**

# ON THE WING

## Notice:

The Retirees and  
Wannabes Breakfast  
At Red Olive

Is cancelled until further  
notice due to COVID-19

## Notice:

The Skymasters  
Breakfast  
At Iris Café

Is cancelled until further notice  
due to COVID-19



## 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

Cancelled until further notice  
due to COVID-19

Legacy Center

9299 Goble Dr.

Brighton, MI 48139

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

Cancelled until further notice  
due to COVID-19

# April 2020

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

# 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.

Regulations flying is limited between 10 AM to 8 PM. The

noise limit is 94 dBA at 10 feet.

These noise limits are for electric

Students

Every

tember

at 6:00

For those participating in the

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

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

or via email. It may also be

printed from the web site if desired.

All contributions are welcome. Please

send photo/drawings to newsletter@skymasters.org

If you know of

anyone who would like to be listed in R/C

Aviation, please give them a link to

this newsletter or give them a copy

of it. It may spark

their interest.

**Due to COVID-19 guidelines and restrictions, the Skymasters flying field is CLOSED until further notice.**

**Please check with the Skymasters web site for any updates.**

Airplanes

Helis and C/L

Stadium Dr.

E Scripps Rd

M24

Lapeer Rd.

## 2020 Club Officers & Appointees...

President:	Pete Foss	Oxford	president@skymasters.org
Vice Pres.:	John Billinger	Troy	vicepresident@skymasters.org
Secretary:	Phil Saunders	Rochester Hills	secretary@skymasters.org
Treasurer:	Jim Satawa	Lake Orion	treasurer@skymasters.org
EOC at large	Paul Goelz	Rochester Hills	at.large3@skymasters.org
EOC at large	Dave Stanley	Lake Orion	at.large2@skymasters.org
EOC at large	Steve Kretschmer	Oakland	at.large1@skymasters.org
Membership:	Bob Chadelaine	Oxford	membership@skymasters.org
Editor:	Paul Goelz	Rochester Hills	newsletter@skymasters.org
CFI	Ken Gutelius	Lake Orion	cfi@skymasters.org
CSO	Greg Brausa	Metamora	cso@skymasters.org

### 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 bi-monthly by the Skymasters Radio Control Club of Michigan

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