

# Skywriter

AMA Charter Club #970

www.skymasters.org

24 year Gold Leader Club

## Skymasters Radio Control Club of Michigan

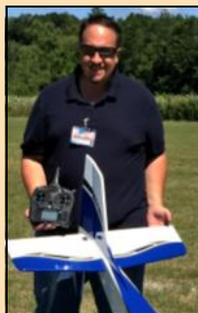
*it's another beautiful day at Skymasters...*

### February, 2019



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### Happy Polar Vortex,

With the cold winter blast in progress I hope you have been able to stay warm and find some time to work on your winter build projects. We had a great Indoor Flying session last week in the midst of one of the coldest days.

This month we have a great Club Meeting on Thursday February 21, at 6:45 p.m. at the Orion Center. We have Commander James Thaden (ret.) a Naval Aviator coming to share with us his over 20 years flying for the Navy. There's a flyer in this newsletter and one was sent out to the membership a few weeks ago. Invite your friends to come hear him speak.

Last month our club meeting topic was "The Glacier Girl" and it was a great presentation. We'll have one more (indoor) club meeting next month (in March) at the Orion Center and we'll have to have our annual "Projects" or "In the Bones" at that meeting, which will be the third Thursday. Holy cow then we're getting into April!

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It's Swap season and there's some great swap meets coming up. Be sure to check the website, calendar and this edition of the Skywriter for all those details.

It's membership renewal time and please get your membership renewed. If you have any questions let us know by sending an email to [membership@skymasters.org](mailto:membership@skymasters.org). Even though we're on a rolling renewal, meaning that your club membership renewal date is aligned with your AMA renewal date a good portion of our members are still on a December 31, renewal date. That means that in a few weeks the system will automatically be adding late fees to your December renewals, if you haven't renewed yet.

I am excited to announce that the Midwest Regional Float Fly this year will be adding an extra day of flying and some cool night float flying at the campground for those who stay overnight. This is great news and due to the huge success of the move to Holly last year and the positive response by all the participants. Thanks to Dave Wendt and team who continue to work on this event year-round. Mark your calendar for September 6-8 and be sure to be ready to reserve your campsite in just another month or so.

See you at the club meeting on Thursday February 21, or before.

*It's another beautiful day at Skymasters!*



**Bob Chapdelaine**

**President, Skymasters RC**

## **2019 FLYING HOURS**

**QUIET ELECTRICS only from 8AM to 10AM and 8PM to 10PM** *The noise limit during these hours is 80 dBa at 10 feet. If in doubt, don't fly.*

**Regular flying is permitted between 10 AM to 8 PM**

**The noise limit during these hours remains 94 dBa at 10 feet.**

### **Front Cover**

John Hoover with his soon to be kitted F-106. I've seen it fly and it has an amazing speed envelope.... At the low end a Sport Cub could keep up with it! And at the top end....watch out! It is also VERY well behaved in the air with effortless high alpha flight. More photos on the January club meeting page.

**Paul Goelz photo**

# "I-Beam" Wing Construction



Back in the late 50's one of the top control line fliers whose name is Bill Werwage honed a new wing structural design with the intent of being able to build fast, accurate and light wings. Bill is the winningest control line precision aerobatics flier of all time. He debuted the wing on an airplane he called "Ares" and won the '59 Nats with it as a teenager. There were a number of other equally successful models that Bill did using the same construction. Steve Wooley another control line champion picked up the design and created a model he called "Cobra". It is the Cobra wing that I will be building to evaluate the construction technique.

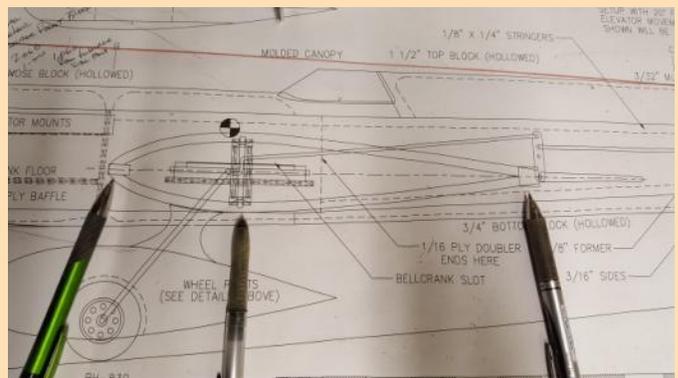
I would guess that everyone reading this knows what an "I" beam is and its use as a major structural element in buildings and bridges. Bill's wing design is called an I beam wing or a "beamer". But in truth I-beam spars in models go back to the first flying models so the fact that Bill used an I-beam spar is not remarkable. The thing that distinguishes his design from others is the way he makes the ribs and attaches them to the leading edge, spar and trailing edge. Keep in mind that control line wings usually have a tapered plan view shape and that in 1959 there were no computers and plotters or lasers to create **30 different** airfoil shaped ribs. It was all done by hand and I can tell you it is extremely tedious and time consuming. Bill's innovation is mainly in how he makes 68 full length rib pieces and 68 half length intercostal ribs in a tapered wing. Sounds daunting but it remarkably simple. Here is how he does it. In the picture below you can see that each rib and each intercostal is made of 2 pieces which are identical. The intercostal rib shape is exactly the same as the full length ribs, just shorter. In my case, I cheated and bought a Cobra short kit from Brodak. The ribs are all laser cut but doing it by hand is pretty easy since all of the parts are identical. To do it you make a plywood template of the top shape of the airfoil and lay it on a sheet of balsa whose length is the same as the widest wing chord. Take your SHARP #11 Xacto knife and cut along the template. Then move the template down 1/4" and make another cut. Voila one rib segment. Keep going until you have as

many identical pieces as you need. Use the same template for the shorter intercostal ribs if you are going to use them.



*Wing rib segments*

One of the important elements of the construction for one piece airplanes is the fitting of the wing shape into the fuselage sides. In this design you do not cut a big airfoil shaped hole in the fuselage side which would drastically reduce the fuselage strength. In this case you only cut openings to match the leading edge piece, the I-beam spar and the trailing edge piece. As shown below.



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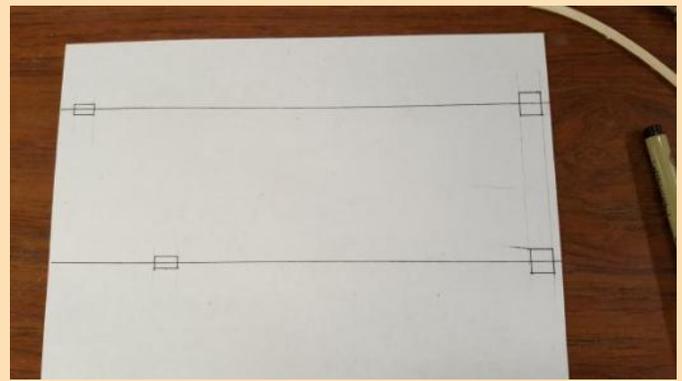
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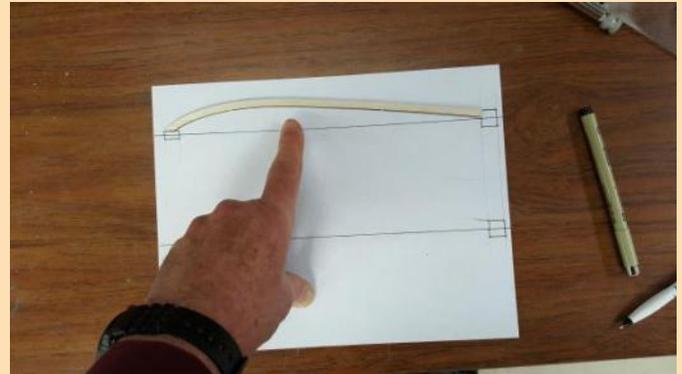
### **Leading edge, spar and trailing edge**

In this design, the wing chord line is parallel with the top of the fuselage. The wing construction is started with the fuselage upside down so the top of the fuselage sides are against your building board and thus the wing chord line is parallel with the building board. This allows us to make a simple locating jig for each wingtip. The jig has openings for the leading edge, I-beam spar and the trailing edge. The center-line of the jig openings is exactly the same height from the building board as the openings in the fuselage. This results in the leading edge, I-beam spar and trailing edge center-lines perfectly parallel to your **FLAT** building board (you checked that right??). This assures a flat twist free finished wing which is critical to a good flying model.

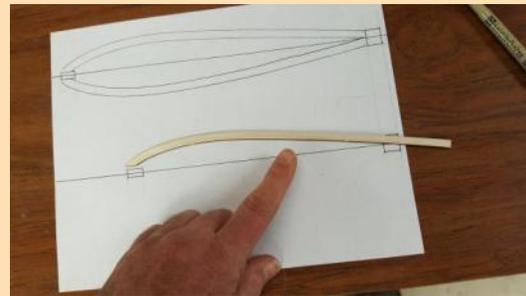
Lets talk about the spar. In our case here the spar has a web (the vertical part of the "I") made of hard 1/4" balsa. The top and bottom flanges are made of 1/2" X 1/4" medium balsa. To cut the taper for the web we need to consider the wing root and tip thickness and the fact that the top and bottom flanges total 1/2". Making this a little more complicated is the fact that the airfoil is changing from the root to the tip. You can of course work this out in your cad program but you can do it manually pretty easy as I show in the sketches below.



**Cord line with the leading edge and trailing edge**



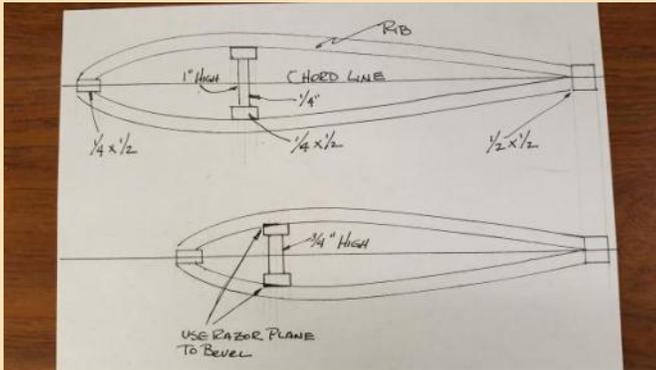
Use a rib segment to draw the upper and lower surfaces at the wing root.



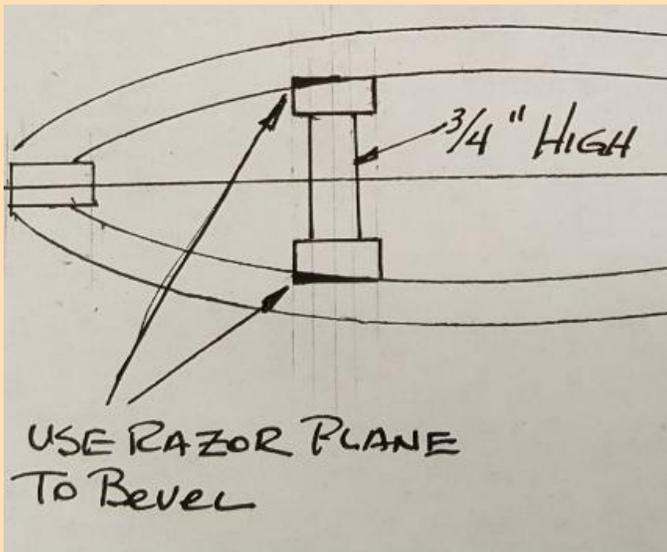
Do the same for the tip airfoil. Note that the rib segment goes beyond the trailing edge. Just draw it as shown. We will deal with the length later in the actual construction.

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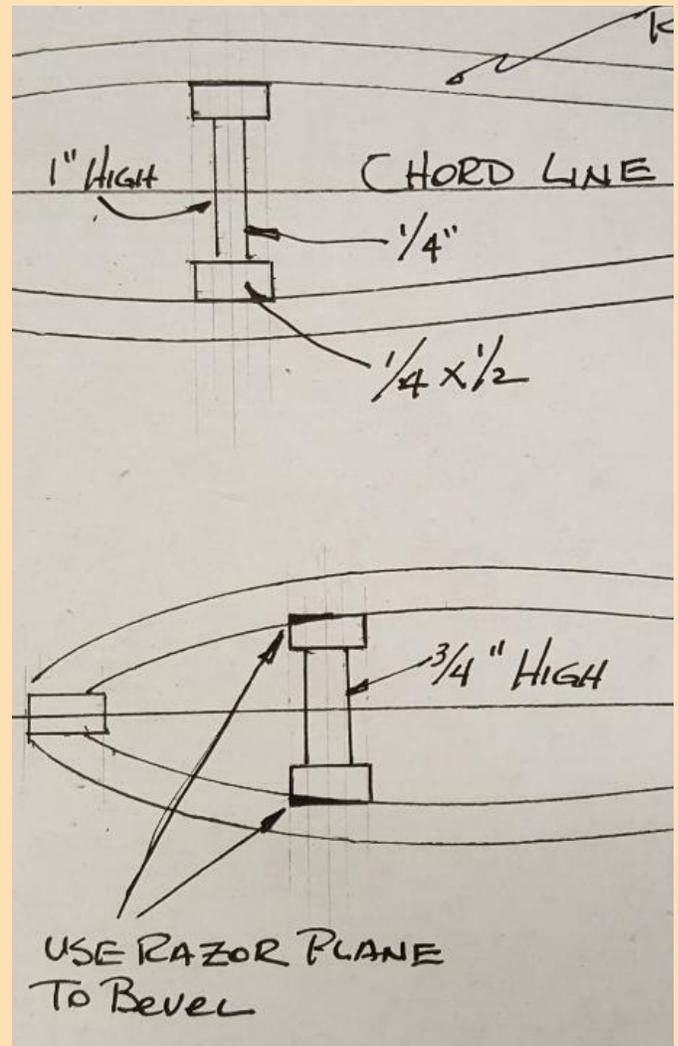
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The spars are added to the drawing. The placement of the spar is somewhat arbitrary. The upper section shows the spar at the thickest section. The lower section shows it forward of the thickest section. In this case the spar caps need to be angled slightly to follow the upper and lower rib shape. You can make this bevel with a simple razor plane as below..



*Spar beveling if necessary*



Simply measure the spar web height in the drawing. This is easy and works well for this part. Simply use these dimensions to fabricate the spar with the caps. Use these dimensions for the spar opening in the fuselage and the wingtip jig.

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sanding and covering so I added a balsa 1/8" X 1/4" strip inside of the wing to tie the intercostals to the main ribs. This worked out very well.



### **Rib stiffener strip added**

At this point the wing / fuselage is turned over to do the top wing rib installation. I used a set of spacer blocks under the leading edge and trailing edge to keep the wing flat relative to the building board. Note that I have not used any pins in the construction.

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Here you can see the fuselage. Tip jigs leading edge, spar and trailing edge ready for installing the rib pieces.

Begin at the root of either right or left panel. Mark the rib location on the leading and trailing edge. In this wing, the spacing for the full length ribs is 1-1/2". Hold a rib piece in place on the leading edge at the marks and trim the trailing edge end of the piece to fit up flush to the trailing edge. Since the wing is tapered, the rib pieces will need to be trimmed more as you go outboard. Glue the rib pieces to the leading edge, spar cap and trailing edge. Continue this process for the entire wing bottom surface. Add the intercostals if you are using them as I did in this wing.



Here is the wing with all of the ribs in place on both sides of the wing.

This is a 1 piece control line airplane so we need to add a 1/2" wide rib at the junction of the wing to the fuselage to provide a surface for attaching the wing covering.



When I added the intercostal ribs I used a stick to be sure that the surfaces line up between the ribs and intercostals. Continue this process until all ribs are in place. I found that the intercostals were a little springy at their ends and thought it might cause a problem when

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sanding to make sure that the rib surfaces are true to one another. I use a 12" long sanding block with a 220 grit paper.

Looking at this method you might be thinking that it is a lot of work. At first I was inclined to agree with that. But the more I think about it, the overall difficulty and time for this method is more favorable compared to a traditional full rib wing with leading edge sheeting and cap strips. In addition this is a really light weight construction. In a control line model there is far more importance put on mass reduction compared to traditional r.c design. Why? Well consider the fact that most control line aerobatic maneuvers occur between 5 ft altitude and about 40 ft altitude at wide open throttle. To do that many maneuvers are pulling about 30g's in the tight corners. A light model can do those turns at a lower coefficient of lift and thus are well away from the wing stall point. Furthermore lighter models accelerate better at a given power setting. Enough said I think,

So that's it. I went into this project to try something different that produces a beautiful looking structure. In my opinion. However, I was skeptical about the articles that touted the ease of construction. Having done one now, I'd have to say I'm a believer. Give this a try, I think you will like it.

This model still has a ways to go before it is finished. The Cobra has the look of models that flew in the 50's and 60's. I am updating the design to produce a more contemporary look. Next month I'll be going through how I am creating that look and the construction methods I am using. Stay tuned.

**Steve Kretschmer**

*(Continued from page 6)*



#### ***1/2" root rib for attaching covering***

In the case of a removable r/c wing 3 or 4 center section ribs would be made to a height of 3/16" rather than the 1/4" height that we made all of the other ribs. This would allow for the traditional center section sheeting. The final thing we need to do is add the wing tips. Since I got a short kit, the laser cut 1/2" wing tips came with the kit and were installed without modification. For the control line wing, the left wingtip has adjustable position lead outs. Brodak makes a simple kit to install the lead outs. I made my own design as shown here.



#### ***Wing tip with adjustable lead outs***

Since the wing ribs and intercostals were laser cut we need to sand the wing surface to get rid of the dark laser burned surface. If you anticipate using a light colored covering this is a must or you will see the dark color through the covering. In addition I like to do this

# A Radio-Controlled Rubber Powered Plane, the Hangar Rat

By Rob Hair



The manner in which the very lightest free flight planes seem to float in the air has been fascinating to me since the first time that I witnessed that type of flight. I had never imagined that an airplane could fly so slowly.

My son was learning to fly an electric R/C craft at the local golf dome, Oakland Yard in Waterford, Michigan. I had dabbled in R/C flight some years ago, but could not honestly say that I had learned to fly successfully. When I saw the free flight planes on our first visit to the golf dome my thought was, "Hey, even I could fly something like that without crashing!" Thus began my quest to make a lightweight free flight plane that was radio controllable. I have since actually learned how to fly an R/C plane and while none of my flying friends would categorize me as a good pilot, I can generally avoid crashes and do some simple aerobatics. Still, my fascination with extremely slow flight remains and the following is an account of my finally successful efforts to radio control a slow flying rubber powered aircraft. The equipment that I developed for this project has the potential for usefulness in other lightweight R/C applications.

Since the expertise that I would bring to this project was in the realm of the electronic and radio design and not in the design of the aircraft, I chose an ARF. That way at least I would begin with a plane that would fly. I would use a BIRD (Built-in Rudder Device, by Fritz Mueller) actuator for non-proportional rudder only control. The "Hangar Rat" (made by Ikara) was available from a local hobby shop. Its wingspan is 19.5" and has an easily adjustable wing position. It is sturdy (perhaps too sturdy), about the size I was looking for and offered the chance to remove unneeded parts that would be very close to the weight of the items that I would add for radio control. The landing gear, plastic prop and wing braces had to go. Items that I added were: 1) larger balsa prop and prop bearing, 2) a stronger motor made of 3/16" rubber, 3) receiver with decoder, 4) lithium coin cell and 5) BIRD actuator. The items removed weighed about 6.6 grams and the four new items weighed as follows:

<b>Balsa prop</b>	<b>1.3 g</b>
<b>Receiver</b>	<b>2 g</b>
<b>CR2016 lithium</b>	<b>1.8 g</b>
<b>BIRD actuator</b>	<b>1 g</b>
<b>Difference between rubber motors</b>	<b>0.5 g</b>
<b>Total for new items</b>	<b>6.6 grams</b>
<b>Total weight for plane ready to fly</b>	<b>17.7 grams</b>

I had planned to use a smaller lithium cell and thus reduce the weight by another gram, but the power available from the smaller cell proved to be insufficient.

The balsa prop was used because it would weigh less than the plastic prop and hopefully perform better. I copied the construction used on some of the free flight planes that I saw at the golf dome. By wetting the prop surfaces and letting them dry while held by rubber bands to a large glass jug, I was able to get a curved shape. While I don't consider the prop design to be optimized, I can get flights between 1 and

## **Editor's note....**

This project first appeared in RC Micro Flight in January of 2002. Rob is a regular at Ultimate Soccer down in the FPV corner. He is also a retired RF engineer and "back in the day", he wanted to build a rubber powered RC plane. Since micro sized RC equipment was not available off the shelf, in the true spirit of RC modeling.... he designed and built his own. Enjoy!

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2 minutes. The proper side thrust was found by experiment so that without rudder control the plane flies straight. Down thrust prevents excessive climbing at the beginning of flight (when the rubber is tighter).

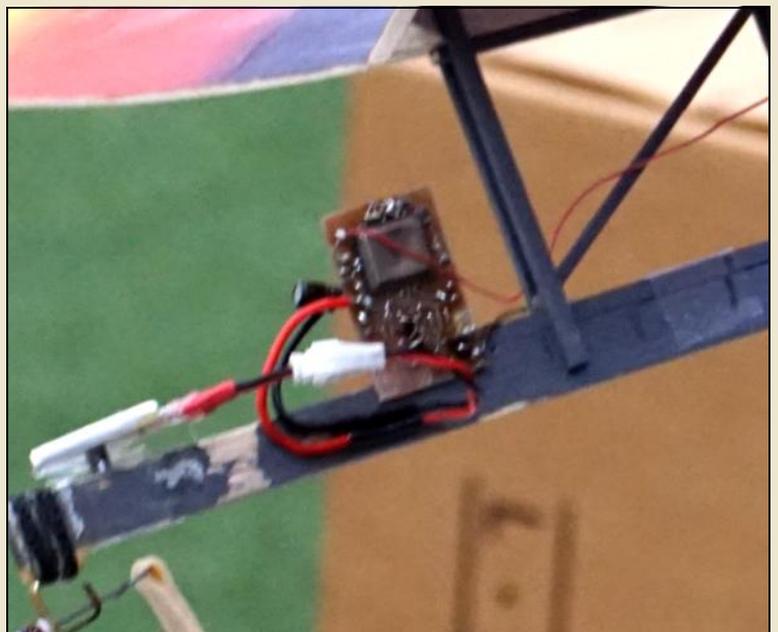
The main trouble that I had was in getting enough control authority from the BIRD actuator. Because of weight constraints, I used a very small cell to power the receiver and actuator (a conventional servo was out of the question). Unless I limited the current to the BIRD actuator with a series resistor, the supply voltage for the receiver was pulled down too low for operation each time that the BIRD was energized. When the BIRD current was reduced enough for reliable receiver operation, the turning radius of the plane was very large - close to 100 feet! Finally, I got the control that I was after by attaching a tab to the rudder that extended to the forward side of the rudder hinge axis. I've seen this used before. It exploits the oncoming airflow to help move and keep the control surface in the desired place. With this tab the BIRD is able to easily control this plane even with the very low current that I allow it to use. The turn radius is now less than 15 feet and could probably be smaller, but I feared losing too much altitude if I tried to turn much sharper.

The radio system that I used for this project is different from what is commonly seen in radio-controlled planes. The most important characteristic was absolutely minimum weight. At first I flew the plane with "light" control. A photocell was used to switch the BIRD. We had to chase around under the plane and try to shine a bright light on the photocell. It was very difficult to hit the moving plane with the light source, but we did get quite a few laughs as we ran around the field.

Traditional modern radio control receivers are of a superheterodyne design. This receiver architecture generally provides the best performance, mainly because filters can be used to produce very narrow bandwidths. The narrow receiver bandwidths make possible the channelization that prevents modelers from causing interference to one another. The need for crystals and filters in a superhet has been a limiter in the miniaturization of this type receiver. Superregenerative receivers can be built with a lower parts count and with very small components, but the bandwidths achievable are much greater. This prevents the superregen from being useful as a replacement for our modern receivers, even though some have hand built some very tiny versions of this type and use them very successfully for specialized applications. The receiver type that I chose is somewhat heavier than the lightest hand built superregens, but its construction lends itself to being easily produced in large quantities by automatic assembly techniques. Thus it was easy for me to assemble the parts onto the printed circuit board. Additionally, it requires no adjustment. Superhets can be made adjustment free, but superregens must be adjusted. The receiver that I used is not going to be a replacement for our modern superhets, but for certain specialized applications it can be a good choice.

The receiver I chose to use is based on a complete receiver in a chip produced by RF Monolithics. It is a variation on the TRF (tuned radio frequency) design that predates all of the other types. This chip contains all of the active and most of the filter functions needed. RF Monolithics calls this an ASH (amplifier-sequenced hybrid) architecture. The limitations of this receiver chip are that its bandwidth, like the superregen, is much wider than our modern R/C receivers and it is available only for certain radio frequencies. For my project these limitations could be accepted. The important features for me were its very small size (low weight) and the ease with which it could be designed into my system.

In addition to the receiver chip, some means was needed to decode the commands that I would transmit and then use these commands to drive the BIRD actuator. While my choice was not the absolute



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smallest solution, it was very easy to implement. I used a decoder chip that is widely used for keyless entry and garage door opener applications. This also let me use a transmitter that was already available. The decoder chip could be a bit smaller and has features that are not needed here, but it will directly drive the BIRD and needs few other components.



I chose to use 433.92 MHz because it is one of the frequencies at which the receiver chip is available and being in a Ham radio band, it is legal for this use to a licensed Ham radio operator. The transmitter power allowed in the Ham band makes system range a non-issue for a small plane like mine. I used a transmitter that was designed for a garage door opener and even at this low transmitter power, the range exceeded 250 feet. The RF Monolithics chips are also available in the 900 MHz band and while transmitter power must be lower here than in the Ham bands, acceptable range for small models should still be achievable. An added benefit of these higher frequencies is that much smaller antennas can be used.

As seen in the photos, I put all components on the same side of the printed circuit board and fashioned a battery holder on the other side. Next versions will have the battery mounted elsewhere and, by putting the parts on both sides, the board will be about half its present size. I hope to get the whole receiver with decoder close to 1 gram in weight.

How does it fly? Well, first of all it is absolutely uncrashable! If you can fly a free flight plane, you can fly this thing! The flight is slow enough so that the amount of turn can be controlled by how long the rudder is held one way or the other. It needs dead calm, like any very light free flight plane or else it will just be carried away by the wind. At the golf dome, it looks just like another of the free flight planes, but those who don't know better seem a bit surprised when it flies a figure eight.

I plan to use this receiver in other planes that will expand the capabilities for control. The decoder has two more outputs that could be used for controlling a second BIRD. A means to toggle an electric motor on and off could also be implemented. If the actuators are replaced by pager motors or similar, proportional control can be achieved. My next project for this radio system will be to put it in an electric free flight plane that weighs just less than 1 oz. I don't have units available for others, but if interest is shown, I may make receivers and transmitters for purchase.

**Rob Hair**



# January Indoor flying

At Ultimate Soccer

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



# Club meeting

January 17th, 2018

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



The January 17th club meeting featured an interesting video presented by Steve Kretschmer about an effort to salvage a squadron of WW2 B-17s and P-38s from a glacier in Iceland. So far, one P-38 has been salvaged, rebuilt and flown. And it was a MASSIVE effort. Over many years and costing many millions of dollars. Quite the interesting story.

# 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 Indoor Flying*

**Oct. 30<sup>th</sup> thru April 16<sup>th</sup>\***

***Join us on Tuesdays\* from 10 AM – 1 PM***

***At Ultimate Soccer Arenas.***

***Where its always warm and dry!***

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



**Single Flying Session \$10**  
**Any 5 Session Punch Card \$40**  
**Season Pass \$120**



All Pilots must have proof of current AMA Membership

A Special 3 Month Trial AMA Membership is Available

Spectators welcomed at no charge. Come in and walk around.

Check us out at: [www.Skymasters.org](http://www.Skymasters.org)

Support your local hobby shops:



\* Indoor Schedule of Dates and Times Subject To Change

# Thursday February 21—Club Meeting

## Skymasters RC Club

### CDR James Thaden—Guest Presenter USN (ret.)

6:45 p.m. Orion Center

1335 Joslyn Rd, Lake Orion, MI 48360

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



Naval aviator 20+ yrs 1980 - 2000

3000+ hrs

412 carrier landings (12 different A/C carriers)

8 different squadrons

Flew primarily S-3A, S-3B Vikings, and a variety of other training and cross training A/C

Stationed:

NAS Pensacola, FL            NAS North Island, CA (Coronado)

NAS Patuxent River, MD    NAS Cecil Field, FL (Jacksonville)

NS Newport, RI            NAS Jacksonville, FL

NS Norfolk, VA

Assignments:

Legal Officer

Ordnance Branch

Avionics/Weapons Division

Avionics/Weapons Test

Tactics Development

Training Department Head

Safety Department Head

Operations Department Head

OIC Tactical Support Center

Combat Direction Center

Department Head (CVN-69)

Operations Department Head (CVN-69)    C4I Operational Department Head





# 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** – Bald Mountain Trout Lake; Lake Orion

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)

## Skymasters 2018-2019

# Club Meetings

Orion Center - 1335 Joslyn Rd, Lake Orion, MI 48360 - Room A

**3<sup>rd</sup> Thursday of Month – 6:45 – 8:45 p.m.**

### **September 2018**

Wednesday 19<sup>th</sup> – Club Meeting – **Scripps Field**

### **October 2018**

Thursday 18<sup>th</sup> – Club Meeting

### **November 2018**

Thursday 15<sup>th</sup> – Club Meeting - (Elections & Club Review)

### **December 2018**

**MONDAY 17<sup>th</sup>** – CHRISTMAS PARTY

### **January 2019**

Thursday 17<sup>th</sup> - Club Meeting

### **February 2019**

Thursday 21<sup>st</sup> – Club Meeting

### **March 2019**

Thursday 21<sup>st</sup> – Club Meeting

\*dates subject to change – PLEASE always consult current information on website:  
[www.skymasters.org](http://www.skymasters.org) and current club email communications\*



# 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

## Next Skymasters Meeting...

Thursday, February 21st

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

### 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

# February 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 Saturday Breakfast 8:30AM Iris Café  Flightline Swap
3	4 Skymasters Breakfast 9AM Red Olive, Rochester Hills	5 Indoor Flying 10AM-1PM Ultimate Soccer, Pontiac	6	7 Indoor Flying 9AM-3PM Premier Sports Cen- ter Shelby TWP	8	9 Saturday Breakfast 8:30AM Iris Café  Detroit Aeromodelers Swap
10 Chesaning Swap	11 Skymasters Breakfast 9AM Red Olive, Rochester Hills	12 Indoor Flying 10AM-1PM Ultimate Soccer, Pontiac	13	14 Indoor Flying 9AM-3PM Premier Sports Cen- ter Shelby TWP	15	16 Saturday Breakfast 8:30AM Iris Cafe
17 PMAC Ice Fly	18 Skymasters Breakfast 9AM Red Olive, Rochester Hills	19 Indoor Flying 10AM-1PM Ultimate Soccer, Pontiac	20	21 Indoor Flying 9AM-3PM Premier Sports Cen- ter Shelby TWP  Skymasters Meeting 6:45PM Orion Center	22	23 Saturday Breakfast 8:30AM Iris Cafe
24	25 Skymasters Breakfast 9AM Red Olive, Rochester Hills	26 Indoor Flying 10AM-1PM Ultimate Soccer, Pontiac	27	28 Indoor Flying 9AM-3PM Premier Sports Cen- ter Shelby TWP		

# 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>
EOC at large	Pete Foss	Oxford	<a href="mailto:at.large3@skymasters.org">at.large3@skymasters.org</a>
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>
Membership:			<a href="mailto:membership@skymasters.org">membership@skymasters.org</a>
Editor:	Paul Goelz	Rochester Hills	<a href="mailto:newsletter@skymasters.org">newsletter@skymasters.org</a>
CFI	Ken Gutelius	Lake Orion	<a href="mailto:cfi@skymasters.org">cfi@skymasters.org</a>
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.

The Skywriter newsletter is published monthly by the Skymasters Radio Control Club of Michigan  
[www.skymasters.org](http://www.skymasters.org)