

official digital newsletter of

# Skywriter

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...*

**June, 2022**



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### Happy June!

Flying season is officially here! The morning retirees have started flying regularly on week-day mornings from 9-noon. Most mornings except Wednesdays I'm there so retired students come on out and get some extra instruction time outside of student night.

Speaking of student night, we have had two successful nights while dodging the rain showers. This coming Wednesday night looks breezy but warm. Hope to see you out there. Remember "We Always Eat, Sometimes We Fly!"

We have had a couple of helicopter pilots who have joined the club and triggered some test modifications to the helicopter rules. ALL 3D helicopters and smaller (500 size and below) must fly on the heli/CL field. But large heli-

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copters can fly pattern style flying on the main runway (NO 3D). Similar to the IMAC and other large scale airplanes, be courteous and give them the airspace for a flight. If it gets to be a time problem please let me and the EOC know. Most of the time there is plenty of time to share the field. Personally I can't wait to see a turbine powered scale heli at the field!

The Romeo Skyhawks organized float flying has started up. We fly from 9-noonish on Wednesday mornings at Addison Oaks for the huge investment of \$5/pilot for the season. Come on out and tune up your float planes for the Midwest Regional Float Fly in September.

Finally, I attended my first event of the year at PMAC. John's Jet Jam was very successful. It was interesting to compare their freshly mowed grass to our field. Theirs was harder to get off than ours. Not sure if it was longer or thicker or both but it was definitely draggier!

Fly Safe

**Pete**

**Pete Foss, President**

**Skymasters RC**

[president@skymasters.org](mailto:president@skymasters.org)

## **Its Skymasters Student Night and Pot Luck Every Wednesday at the field through at least September! Flying & instruction any time but we eat at 6PM**

**For those participating we ask that you:**

- Bring something for the grill - enough to at least feed you and your guests
- Bring a dish to pass (see notes below)
- Bring your own (non-alcoholic) beverage

**We eat at 6pm - rain or shine!** The potluck is sustained by those participating, with no expense to the club.

**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!

Don't forget the buns if appropriate for your contribution!

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

Dish to pass: Don't know what to bring? Each week a board will be up listing supplies needed - 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.



**Front Cover**

Teo Terry at the field in April, flying control line.

**Paul Goelz photo**



### Flying season is finally here

The club held its first official student night on May 10<sup>th</sup> so the season has officially started. Even if you are no longer a student you can stop by to enjoy a meal with fellow club members and talk aviation. The only requirement is that you bring a dish to share.

This month I will cover field charging batteries along with the wrap up for the Shark 402 build.

### Charging bench etiquette

A few years ago, the club installed a charging bench which sees quite a bit of use. The bench is powered by four 12V marine batteries which in turn are kept charged by a solar panel installed on the pavilion's roof.



The bench has four charging stations: one fused for 30 amps while the other three are limited to 10 amps. Although theoretically capable of delivering 60 amps its total power output is roughly equivalent to  $\frac{1}{2}$  of what a household outlet can provide. Additionally, it can only do so for 3 to 4 hours before the batteries run out. The reality is that due to wiring losses and the condition of the batteries the actual power output is somewhat

lower.

I use the bench on occasion, mostly if am hoping to squeeze in another flight. As a matter of routine when heading out to the field I always:

- Fully charge the packs I intend to use.
- Have enough packs to get me through a day of flying.

I understand that packs can be expensive; at the very least consider having two, ideally four. Having multiple packs allows you to continue flying while spent packs are being recharged. On a typical outing this is what my flight box looks like:



Shown in the picture are enough packs for six flights on the Vanquish (10S) or twelve flights (5S) on one of the smaller models.

In case you are wondering, the packs shown were acquired over time; I did not purchase them all at once.

When I first started flying the Vanquish I had enough packs for three flights. The first few years of operation were the most expensive as I would purchase 3 sets packs a season as I tried to build up my inventory while replacing tired packs. It took a few years to collect six sets. On an average year I replace two sets (i.e. four individual batteries). Average life expectancy is about 60 cycles or about 2.5 flying seasons.

### Using the bench:

While using the bench there are a few things to keep in mind since it is a shared resource.

- Be considerate of others; if done charging please unplug so that someone else can use the station.
- Do not overload a station and render it un-usable

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by blowing the fuse.

The current limits at each station are simply an indication of the fuse used; the usable current will be lower.

Rather than thinking in terms of amps it makes more sense to think in watts, or the power which the station can deliver. In my experience, the stations capable of delivering:

- 10 amp station: ~ 70 watts
- 30 amp station: ~160 watts

Knowing this makes determining the acceptable charging current straightforward:

Current = Power in watts/pack voltage

For example, if you would like to use a 70W station to charge a 6S (25.2V) pack you would calculate the current as.

Current = 70W / 25.2V = 2.77 amps

Given the low charging current it is easy to see that a large pack (>3000 mah) will take some time to charge.

Similarly, if you wanted to charge a 4S (16.8V) pack:

Current = 70W / 16.8V = 4.17 amps

As you can see lower cell count packs allow for greater charging currents. The same principles apply if using the 160 watt station.

#### Alternatives to the bench:

When I first got started with electrics a single 3300 mah 5S pack would cost around 180 dollars. My first large packs were made by Polyquest and were rated at 15-20C. In those days I would bring along a deep cycle marine battery so that I could charge at the field. I was also using NiMH packs which worked best if charged right before flight; the 12 volt battery was a necessity. As packs became less expensive my collection expanded and the marine battery became unnecessary once I stopped using NiMh's.

The modern equivalent of a 12V marine battery is the small portable power station popular among those who enjoy camping.



The larger ones (>500Wh) have the capacity needed to charge a few larger packs before they run out of energy.

The deluxe option is to bring along a small portable generator like those made by Honda and others. They allow for unlimited charging at the field.



For those on a budget there is always to option of using larger packs to charge smaller ones. I have several 5S packs which are no longer flightworthy, but which can easily deliver 5 amps. Wanting to avoid the "long walk" from the C/L field to the charging bench I have been using some of my retired R/C packs to charge my C/L packs. This is possible since my charger can accept inputs of up to 24 volts; the 5S packs are nominally 21 volts so they work well. I normally connect a pair in parallel to power the charger.

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The smaller C/L models use a 4S 2600 mah pack while the larger ones use a 6S 2200 mah pack. The set up allows me to charge the 4S packs five times or three times for the 6S packs. Enough for a day of flying.

#### **On the bench: Shark wrap up**

The Shark now has 25 flights on it and I am quite pleased with how it turned out. The kit was an impulse buy during one of my visits to Flightline; at the time I was simply looking for something to build over the winter. I normally put more thought into my purchases, but I viewed building the Shark as a way of improving my building skills.

After thinking about it I decided that I would like to turn the Shark into a model capable of flying the sequence. The result was a model which differed significantly from the original design: longer and deeper fuselage, longer tail moment, added flaps and electric power for propulsion rather than glow.

The electric conversion required a longer nose to make room for the motor and battery. I opted to front mount the motor as it allows for a more streamlined nose which blends in nicely with the spinner.



From the image you can also see that the pack is semi recessed into the fuselage as well.

On the opposite side you can see the installation of the ESC along with the timer. To keep things tidy I shortened the wires as well.



The first flights proved that the model flew well but it took additional flights to figure out the power setting, C.G. location, wing tip weight and control ratios. In its current trim the Shark can fly the entire sequence; however, the hourglass figure remains a challenge. For a 275 dollar investment and 45 hours of my time it turned out quite well.

**Teo Terry**

# At The Field This Spring....

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





# Skymasters R/C Club

We'll Teach you to fly!

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

## Warbirds and Scale Airshow and Fly-in

Sunday June 26, 2022

Bald Mountain Scripps Road Field

Event Flying starts at 10am

Flying open  
to AMA  
members.

Public Welcome  
Refreshments Available  
Civilian and Military Scale Aircraft  
AMA Sanctioned  
Restroom available

94dBa at 10  
feet  
enforced.



Best in Show  
Prize  
Sig 1/4 Scale  
Cub Kit



Flying field is located within the Bald Mountain Recreation Area, about 5 miles north of the Palace of Auburn Hills on Scripps Road between Lapeer Rd (M24) and Joslyn Rd.

For more information email [warbirds@skymasters.org](mailto:warbirds@skymasters.org)  
Visit our website at [www.skymasters.org](http://www.skymasters.org)

# YOU ARE INVITED!

## TO THE SIXTH ANNUAL SKYMASTERS

### CONTROL LINE FLY-IN

Saturday July 23, 2022

10:00 am to 2:00 pm

- Pilots meeting is at 9:45 am
- AMA is required
- We can accommodate 70 ft lines
- Safety lanyards are required
- Pull test equipment will be available
- Public Welcome
- Refreshments Available

Skymasters field is located in Lake Orion on Scripps road ½ mile west of M-24 in the Bald Mountain Recreation area.

For more information contact Jim Satawa and Steve Kretschmer at [ukie@skymasters.org](mailto:ukie@skymasters.org) or [ucontrol@skymasters.org](mailto:ucontrol@skymasters.org)

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





**SKYMASTERS  
MEMBERS  
ONLY!**

# **GIANT ESTATE SALE SETUP and MEMBERS SALE**

**Saturday July 23rd, 2022  
2 PM – 6 PM**

**Oxford Community Room at Seymour Lake Park  
2795 Seymour Lake Road, Oxford MI 48371**

- Balsa RC kits
- RC engines
- Tons of covering
- Mufflers, motor mounts, tools, props, servos, ...



For more information email [president@skymasters.org](mailto:president@skymasters.org)  
Visit our website at [www.skymasters.org](http://www.skymasters.org)



# Skymasters R/C Club

We'll Teach you to fly!

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

## GIANT RC ESTATE SALE

Sunday July 24th, 2022  
10 AM-2 PM

Oxford Community Room at Seymour Lake Park  
2795 Seymour Lake Road, Oxford MI 48371

- Balsa RC kits
- RC engines
- Tons of covering
- Mufflers, motor mounts, tools, props, servos, ...



For more information email [president@skymasters.org](mailto:president@skymasters.org)  
Visit our website at [www.skymasters.org](http://www.skymasters.org)

# ON THE WING

The Retirees and  
Wannabes Breakfast  
At Ram's Horn  
*(new location)*

*9AM, 1st and 3rd Mondays*  
1990 Rochester Road,  
Rochester Hills

Skymasters Breakfast  
At the Orion Grill

*(new name, same place)*

3667 Baldwin Rd  
Orion Charter Township



# June 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 Addison Oaks Float Flying 9AM Addison Oaks Student night and pot luck 5PM Scripps field	2	3	4 Breakfast 8:30AM Orion Grill
5	6 Skymasters Breakfast 9AM Ram's Horn	7	8 Addison Oaks Float Flying 9AM Addison Oaks Student night and pot luck 5PM Scripps field	9	10	11 Breakfast 8:30AM Orion Grill
12	13	14	15 Addison Oaks Float Flying 9AM Addison Oaks Student night and pot luck 5PM Scripps field	16	17	18 Breakfast 8:30AM Orion Grill
19	20 Skymasters Breakfast 9AM Ram's Horn	21	22 Addison Oaks Float Flying 9AM Addison Oaks Student night and pot luck 5PM Scripps field	23	24	25 Breakfast 8:30AM Orion Grill
26 Warbirds and Scale 10AM Scripps Field	27	28	29 Addison Oaks Float Flying 9AM Addison Oaks Student night and pot luck 5PM Scripps field	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.** 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 Night & Pot Luck** Every Wednesday, May 11th 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)

**Want to talk to someone?  
Call us at 248-403-8279 and  
leave a message. We'll get  
right back to you.**



## 2022 Club Officers & Appointees...

President:	Pete Foss	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:	Kurt Kettler	Lake Orion	<a href="mailto:treasurer@skymasters.org">treasurer@skymasters.org</a>
EOC at large	Paul Goelz	Rochester Hills	<a href="mailto:at.large3@skymasters.org">at.large3@skymasters.org</a>
EOC at large	Joe Rubenstien	Oxford	<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:	Joe Rubenstein	Oxford	<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 bi-monthly by the Skymasters Radio Control Club of Michigan  
[www.skymasters.org](http://www.skymasters.org)