

## Hawk Talk



## Hawk Talk

THE VOICE OF THE OMAHAWKS R/C INC Vol 68, # 11  
Corporate Office- 15442 Seward St, Omaha, NE  
68154-4116

President... Rick Sessions  
Vice Pres... Steve Farner

Editor/Publisher  
Joe Hunt

Secretary... Luke Hughes  
Treasurer... Kevin Hyde

NEXT GENERAL MEETING: Friday, Jan 24, 2020—7:00 PM – 9:00 PM \*\*Church of the Cross, 1517 S114<sup>th</sup>  
MEETING PROGRAM: Club updates, cookies, raffle, bring something to show and tell to the meeting.

NEXT BOARD MEETING: Tuesday, Dec 17, 2019-- 7:00PM – 8:30PM \*\*Church of the Cross, 1517 S 114<sup>th</sup> St.

**ALL CLUB MEMBERS ARE ENCOURAGED TO ATTEND BOARD MEETINGS**



### President's Message

Fellow Omahawks,

Job complete! Just in the nick of time, we finished the dirt fill along the runway. It took 10+ loads of dirt, two bobcats; Luke, Norris, Tom G., Ron P. and 20 others to finish the job! Now for the seeding.

Officer nominations are being taken. So far we have: Rick S. (Pres), Luke H. (V.P.), Kevin (Treasurer), Cole (Field Chair), Kip D., Rick H., Skippy, Tom Gulizia, and Dennis B. We need a Secretary! Vote at the November 22 Member Meeting.

**Winter plans include:** Monthly meetings: November 22, January 31, Feb 28, March 27.

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**Winter builds:** Flight Test at Beny Halfcamp's house, early December and Repair Workshop at Steve Farner's garage in January.  
SAC Indoor Air Show, January 18th, 2020.

**Save the date: December 14th, 1pm to 4pm,** Holiday Open house at Rick Sessions' house, where we will recognize our TOP volunteers for the past year. All club members and spouses/significant others are invited. More details to come.

Hope you all have a heartwarming Thanksgiving with family and friends.

Kindest Regards,

Rick Sessions

*Editor's note: I add these minutes in the next monthly newsletter as I receive them.*

### **Omahawks Member Meeting Minutes** **October 25, 2019**

6:30 pm Snacks: Chili, cookies, water, **plus corn bread from Kristy Perkons!**

7:00 pm Treasurer—Kevin

Membership: **6 so far for 2020, finished 2019 at 148. (Up from 120 past 2 years!)**

Labor Day final \$\$: **will present a \$4,000 check to Make-A-Wish on 11/22!**

Auction results: **logistics went well, items sold were lower than last year, net proceeds for Omahawks were \$1,900 which is used to fund our 2020 flying events. Thank you! Kevin for another successful auction!**

Old Business:

Field update: Luke, Cole: **Big project left is filling the runway edges with dirt, grading and seeding. We expect dirt delivery week of 10/28 and work project on morning of 11/2. Port-a-potty structure just south of Kiosk/light pole is a Spring 2020 project.**

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Eagle Scout project—Luke: in discussions with Nathan Wallace to construct a deck area connected to the north side of the existing pavilion. Approximate size: 16' X 14'. Project completion by September 2020.

2020 Club Priorities—Rick

**Training:** Build on the success in 2019. We instructed 63 students and had 48 hours of training from April to September. A high of 15 students and a low of 0. A high of 11 instructors and a low of 4. Youth membership is up to 17 from 9 last year. Every nice training night was a buzz of activity!

**Facilities:** Huge strides with brand new resurfaced runway, 5" thick, 40+ feet wide and 500 feet long, fully painted edges and pattern lines. New Kiosk, new start up benches, new pavilion work area, refurbished bleachers, fresh paint, repaired safety fence, chain link security fence, new gate, and new wind sock. (see below for complete listing of 31 items.)

**Community/social outreach—web site, YouTube, Facebook:** Kevin described how we need to improve the Web Site to be more user friendly and have it linked to other resources like Facebook, YouTube, training and buy/sell site.

**Flying Events---**add a couple more events: Jeff Pinnt described how easy it is to run a new event. He lead the Drone event last year. Have an event you want to sponsor?

**Airplane repair workshops :** We have interest in having a repair workshop and a Flight Test build event. Watch for dates and events to come.

**New Business:**

Volunteer opportunities:

1. Monthly meeting programs: Jan, Feb, March, April: Call Rick (402-312-6482) if you would like to speak at a monthly meeting and share your expertise on a topic of your choice—i.e. monocote, Flight Test, Pattern Flying, LIPO battery care, work shop basics, radio programming, flight simulators....etc.

2. Training: greeter, instructor, Flight recorder, Field Controller: Bryan W

3. Event Planner—plan a new flying event: combat, biplane, park flyer, timed glider (SEE BACK): David/Skippy

4. Field maintenance—projects to be announced.: Skippy

5. Repair workshop host.: Greg Ruhe, Beny H.

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6. Community/social outreach—web site, YouTube, Facebook: **Dan Fitzgerald, Cole, Skippy, Bill Alexander**

Officer/Board Nominations (voting November 22, 2019): **Nominations: Rick S. (President), Luke H. (V.P.), Kevin Hyde (Treasurer), Board: Cole, Rick H., Dennis B, Tom Gulizia, Skippy H. (Steve Farner has indicated he will be involved but will not seek election.)**

Show and Tell: **Lots of Flight Test planes displayed. They are a great way to start building and flying in a cost effective manner. Be watching for a Flight Test workshop and an awesome story about new member: Nathan Biles (11 years old) and his passion for flying!**

Raffle (3 prizes): **Each of 3 raffle winners could select 3 kits/items of their choice donated by Bob Clauss or a Flight Test kit! All winners went away happy!**

Hawk Field Improvements: 2019

1. Runway replacement.
2. Paint runway striping lines and pattern 60 deg. lines.
3. Level and repave taxi area by safety fence.
4. Chain link fence
5. New gate
6. Remove old “cattle” fence near lower parking lot, mow area regularly.
7. Cut long grass East of runway down hill.
8. Power wash and repaint over graffiti.
9. Signage on gate, front and back.
10. Remove/uproot old startup benches, fill holes.
11. Build and install 10 new startup benches
12. Fix safety fence, new netting
13. Pavilion full length workbench added.
14. Remove, haul away old green metal impound rack.
15. Wood tops on metal stands.
16. Replace wood top on large table at south end.

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17. Sand bleachers, replace rotted boards, paint all bleachers, level and straighten.
18. Replace old wind sock, repaint pole, replace bearings, eliminate squeak.
19. Build new kiosk, include window display area for calendar/events.
20. Replace old 72 mhz flags with repainted flags and attach to kiosk.
21. Cut down and remove rotted tree by pavilion.
22. Partial runway side fill and rock removal.
23. Dead tree limb removal by bleachers.
24. Clean out shed, toss old stuff.
25. Repaint all benches in pilot area.
26. Purchase new flag pole.
27. Remove bushes by flag pole.
28. Mow grass weekly, kill weeds, keep field looking pristine!
29. Security cameras on light pole.
30. Small caution signs re: "low flying planes"
31. Leveling/smoothing of parking lot to smooth ruts. (Needed again.)

Meeting Adjourn 8:45pm

### **Omahawks Business Meeting Minutes**

October 15 2019

*No business meeting minutes provided to Editor this month.*

**Need help with a build project? Please contact one of our Technical Advisors.**

**New Pilots/Training/Equipment -**

**Bob Wheeler [rjwheeler01@gmail.com](mailto:rjwheeler01@gmail.com)**

**Tom Floyd [tom.floyd@cox.net](mailto:tom.floyd@cox.net)**

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## Nitro/Gas Engines -

**Harry Perkins** [hpairboat@msn.com](mailto:hpairboat@msn.com)

402-201-6761

**Bernie Baker** [bjb050@cox.net](mailto:bjb050@cox.net)

## Electric Motors/Battery/ESC Systems-

**David Haney** [davidhaney2017@gmail.com](mailto:davidhaney2017@gmail.com)

402-506-2358

## Radio/Receiver

**Ed Paasch** [bigedmustafa@hotmail.com](mailto:bigedmustafa@hotmail.com)

402-321-3781

**Tom Floyd** [tom.floyd@cox.net](mailto:tom.floyd@cox.net)

## Kit Building/Repair

**Ron Pacana** [rpacana@q.com](mailto:rpacana@q.com)

## Test Pilot for Maidens/Repairs

**David Haney** [davidhaney2017@gmail.com](mailto:davidhaney2017@gmail.com) 402-506-2358

## Extra Set of hands, inexperienced but willing to assist in all phases

**Joe Hunt** [yovanguy@gmail.com](mailto:yovanguy@gmail.com)

402-291-9039 (leave message)

## Past events

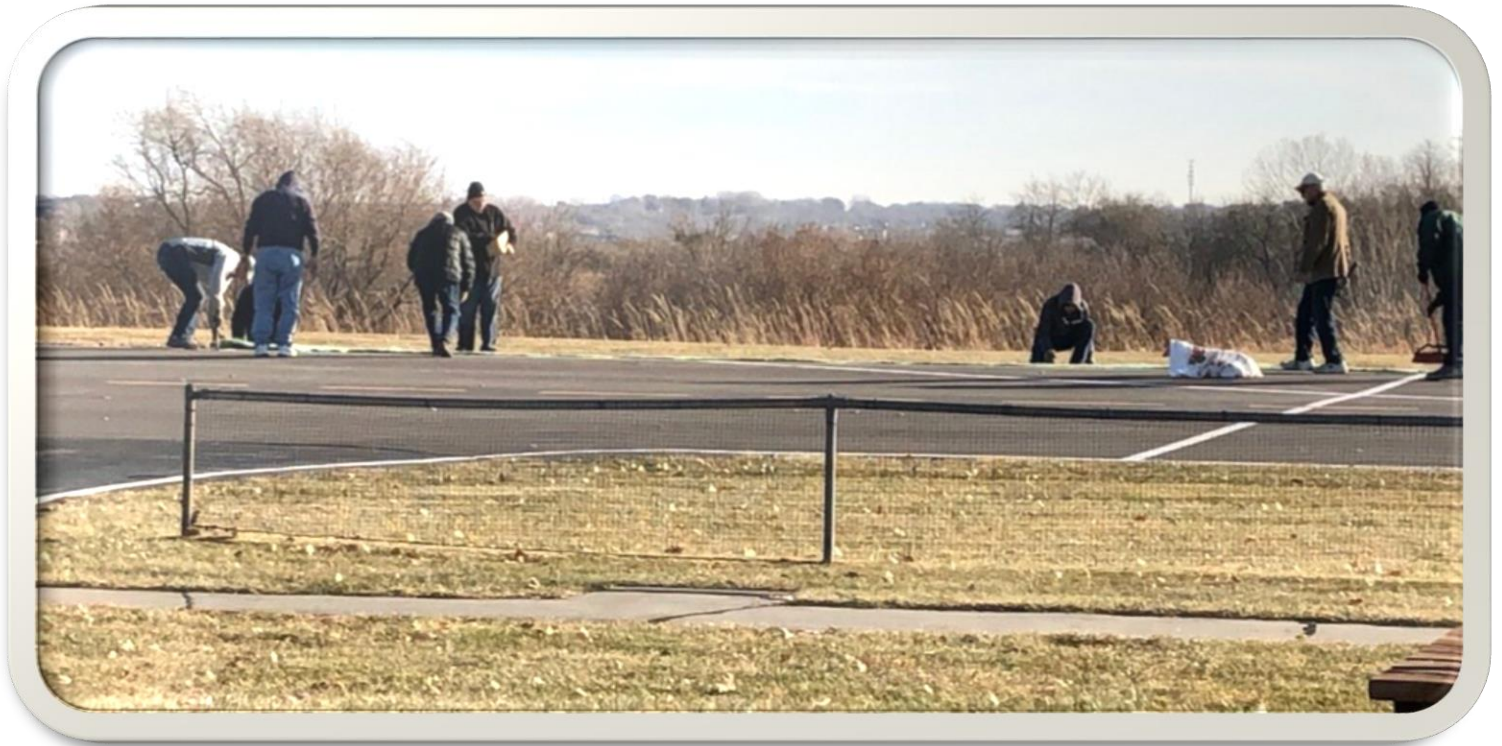
Hawk Field Improvements

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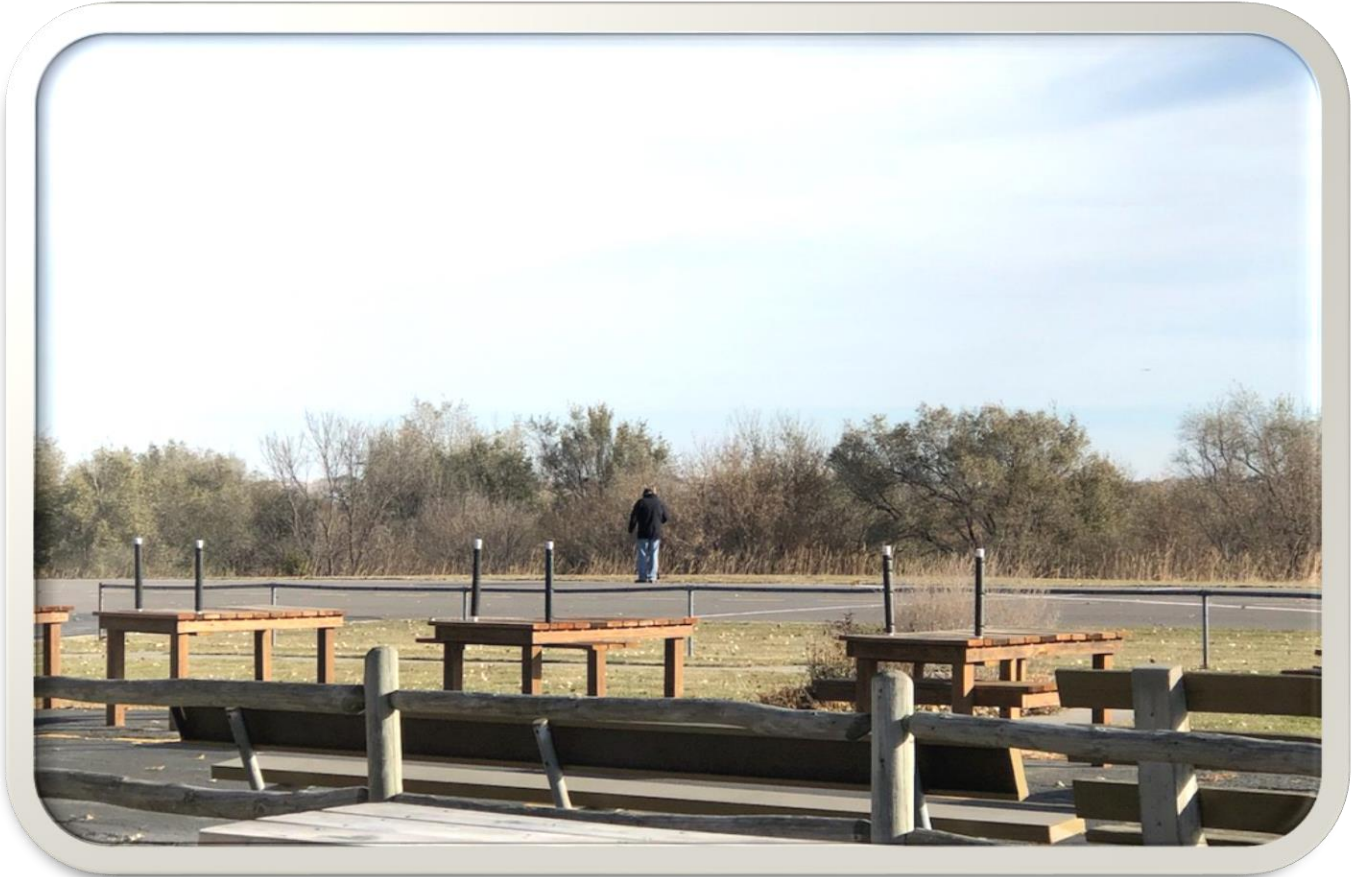
Over the last couple of months many of our fellow flyers have been diligently working and making steady progress on finishing up our flying field improvements that were undertaken this year!

Find below many of the pictures of leveling of dirt piles around the runway edges as explained in the General Meeting Minutes above. Thanks to Paul and Cindy as well as Rick S, for the many picture submissions.

Participants reported included: Luke Hughes, Tom Gulizia, Kip Dirkschneider, Dr Greg Nelson, Bob Wheeler, Bryan Weeks, Skip Brown, Tim Cady, Doug Hartman, Ethan Hughes, Joe Kresl, Paul & Cindy Edmunds and Rick Sessions.



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**On Saturday November 16<sup>th</sup> another Field Improvement Day** was planned the following individuals participated: Paul & Cindy E, Tom F, Tom Gulizia, Hague, Fred W, Bryan W, Bob T, Bob W, Rick S. and also Tim P. As you can see in the attached pictures seeded matting was added to the Runway Edges... There was coffee and Homemade Cinnamon rolls were baked and provided by Mr. Paul Edmunds!!

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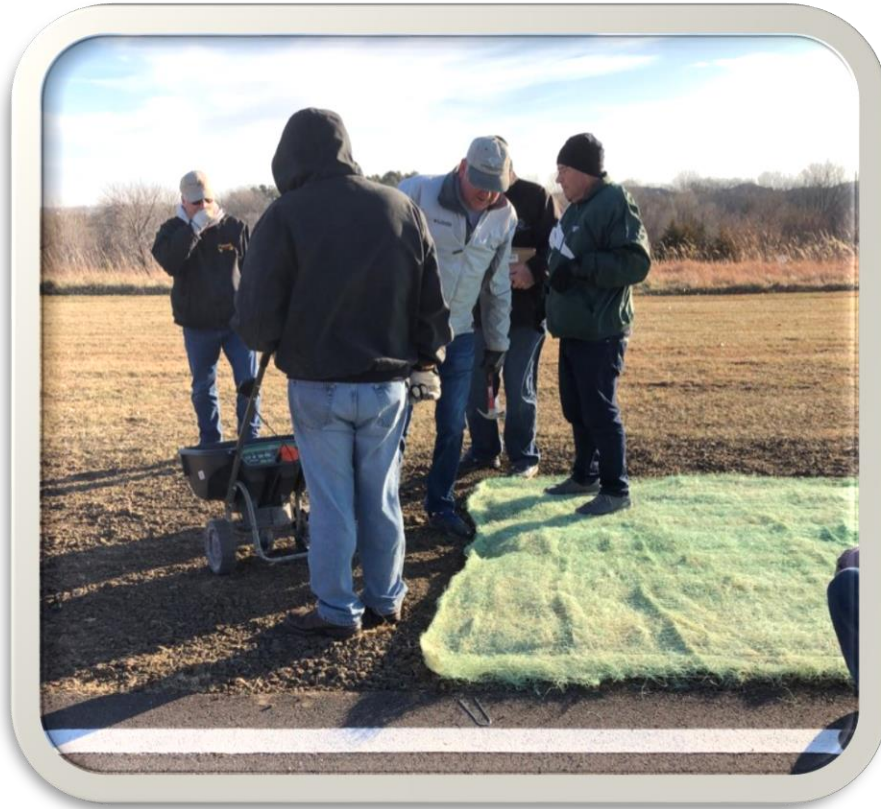
Morning Field Preparations

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Unrolling the Mat

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Looking North

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Northwest corner of the runway

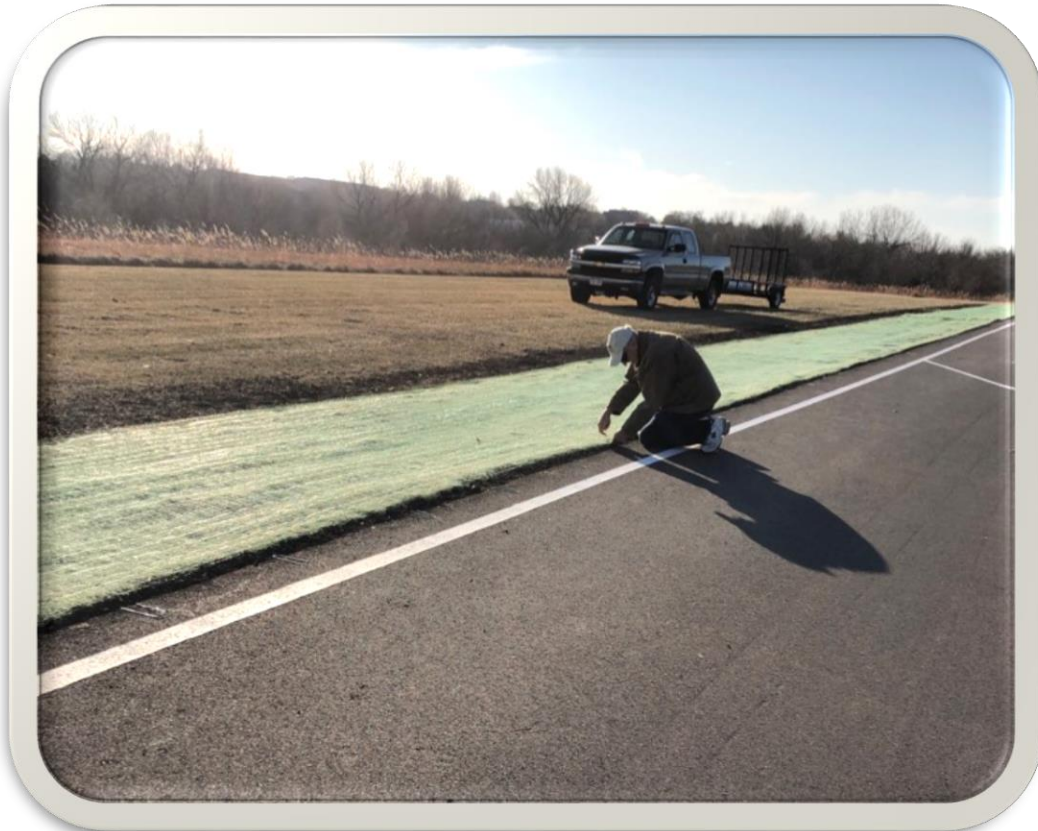


Northwest corner of the runway Picture #2

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Happy Crew, dreaming of perfect landings ahead!



Looking Southeast

**Featured Article**

**Lipo Battery Use and Safety**

This article is not meant to be a “tell all” about the risks of current battery technology in the RC Sport, my intent is only to raise your awareness of the potential dangers associated with their use, and to give you food for thought that you really need to educate yourself on this extremely important aspect of the hobby. There is one thing that I like to stress for myself personally throughout my past multiple careers and throughout my life, that is “**Safety First**”.

I been really encouraged by the increased number of new flyers we have in our club, many older folks that are re-entering the hobby after years of being away as I did three years ago after a 19 year break. On the other hand many younger folks are joining as well, so regardless of what demographic you belong to I hope that you’ll take a serious look at the battery technology your using and take positive steps to ensure your safety and that of your love ones while they are stored in your vehicles or residences.

Most participants in the current use of flying vehicles in our hobby have experienced the dramatic shift in battery technology in recent years, when I first was introduced to Radio Control flying back 1996 the use of Nickel Cadmium (NiCad) Batteries (1.2 Volts per Cell) were very common place then. They were normally very familiar looking to most folks as they mimicked the alkaline batteries. we use to power most portable electronics in the day, and still do, i.e. AA, AAA, C, D batteries (1.5 Volts per Cell). NiCad’s are relatively safe to handle, store, and use with the exception of a direct short circuit between the Positive and Negative Terminals.

Starting in 2000 rechargeable battery technology shifted to a newer technology called Nickel Metal Hydride (NiMH) these cells were identical looking to the Alkaline, and NiCad’s in cell size and Voltage of 1.2 Volts per Cell. They exhibit the same level of safety that these other cells did previously, although they tended to have higher



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output capacities and were more forgiving in the ability to be recharged. The short circuit condition, I spoke of above was still an issue, as these cells higher outputs could turn a inert battery cell extremely hot and glowing bright red if the terminals were shorted together, although this is an extreme case, they normally don't produce fire like Lithium Polymer Battery (Lipo) batteries have reported to do.

In the Mid 2000's Lipo batteries were first being introduced in large numbers in the Automotive Industry for Hybrid cars. They were preferred as they offered a much higher capacity versus there weight as compared to NiCad's or NiMH battery technology. As you can image that made them particularly suited to use in the RC Hobby. But Lipo batteries have a "Achilles Heel", they are inherently dangerous from simple things that we take for granted in this hobby. They typically come packages in a flexible soft membrane while some come in hard shell cases. A puncture during an accidental crash or from misuse can cause the battery pack to self-ignite.

Another warning sign I read about is the swelling of the soft membrane between each cell, which is a build up of hydron gas one of the byproducts of the lithium as it ages.

The Internet abounds with pictures and stories articles of how dangerous these cells can be, from allowing the battery voltage to get too low below 3.0 Volts per Cell, or overcharging a battery past the Maximum Voltage of 4.2 volts per cell. If speaking about multiple cell batteries (known as 2S for two cell count, or 3S for three, 4S, etc.) there is many warnings about maintaining the charging of your batteries in a balanced fashion, so the voltage differences per cell stays close to the voltages of the other cells in the pack.

There is also some concerns about proper long term storage of Lipo's during extended periods of none use, the storage voltage of Lipo's is reported to be best at 3.8 volts per cell. There is also a concern about what temperature a Lipo should be stored at, if you're like me I use my unheated garage as my storage location, so based on the chart below I will have to rethink that strategy.

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Below I included a chart from one of the larger manufacturers of batteries which stresses not to allow your lipo battery to freeze to a frozen solid state:

**Note:** we are not talking the freezing temperature of Water see chart below.

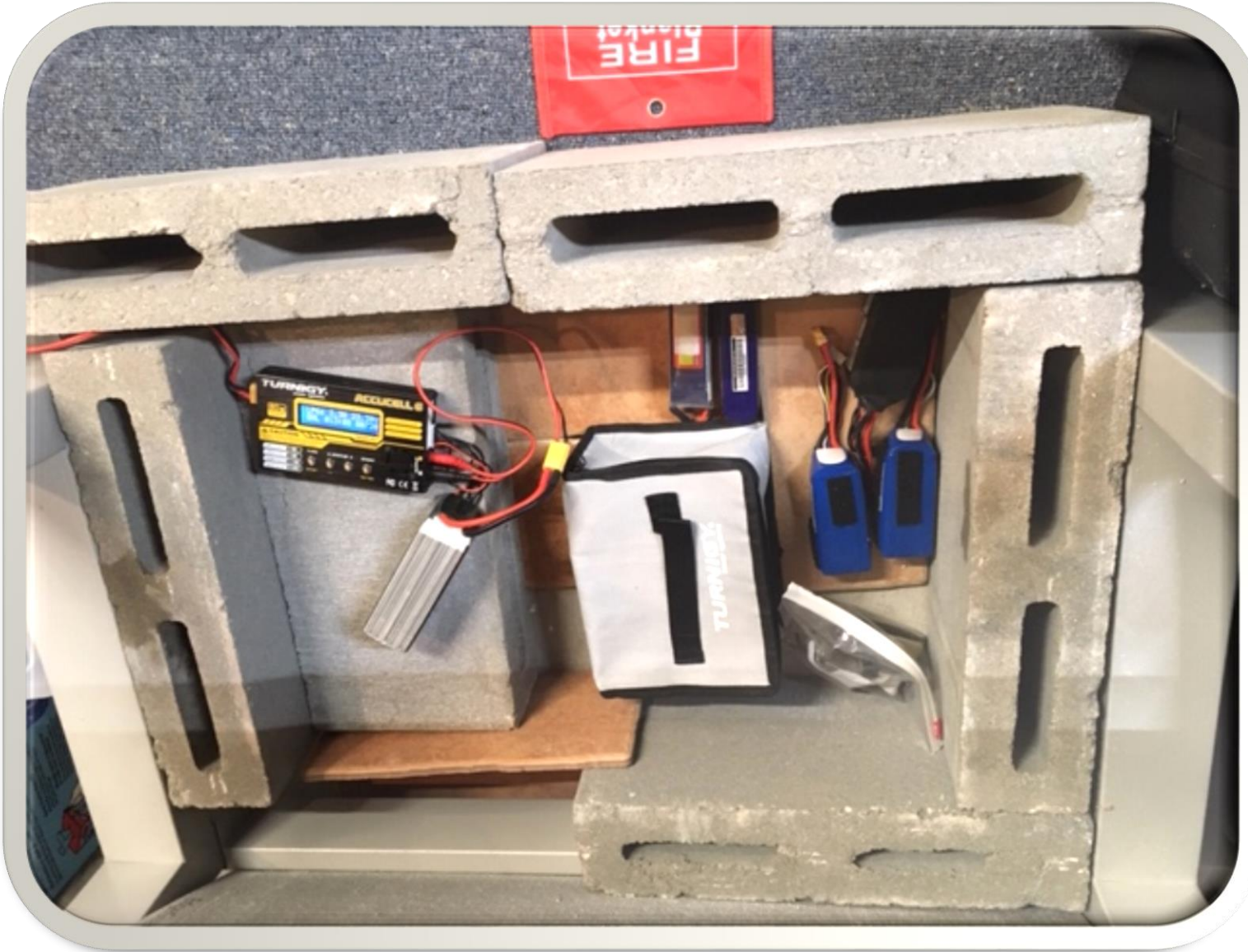
### TYPICAL LITHIUM ION POLYMER TECHNICAL DATA

Lithium Polymer Cell Specification		
Nominal Voltage		3.7V
Nominal Capacity		100mAh to 4500mAh‡
Charge	Method	Constant Current (CC) / Constant Voltage (CV)
	Max. Current	1C
	Max. Voltage	4.2V†
Discharge	Max. Current	1C (higher rate cells available)
	Termination	3.0V†
Operating Temperature	Charge	0°C to +45°C (32 degrees F)
	Discharge	-20°C to +60°C (-4 degrees F)
Storage	1 month	-20°C to +35°C (-4 degrees F)
	4 months	-20°C to +25°C (-4 degrees F)
Life Expectancy	Minimum ¥	>300 cycles (80% rated capacity)
	Typical	500 cycles (see graph below)
Notes:		
† Charge termination and discharge termination required.		
‡ CC/CV charge 4.2V, 1C until current drops below 0.01C , rest for 1-2 hrs then CC discharge 0.2C to 3.0V (temperature 20±5°C), may require up to 5 cycles.		
¥ CC/CV charge 4.2V, 1C until current drops below 0.01C , rest for 10 min. then CC discharge 1C to 3.0V, rest for 10 min and repeat cycle (temperature 20±5°C).		

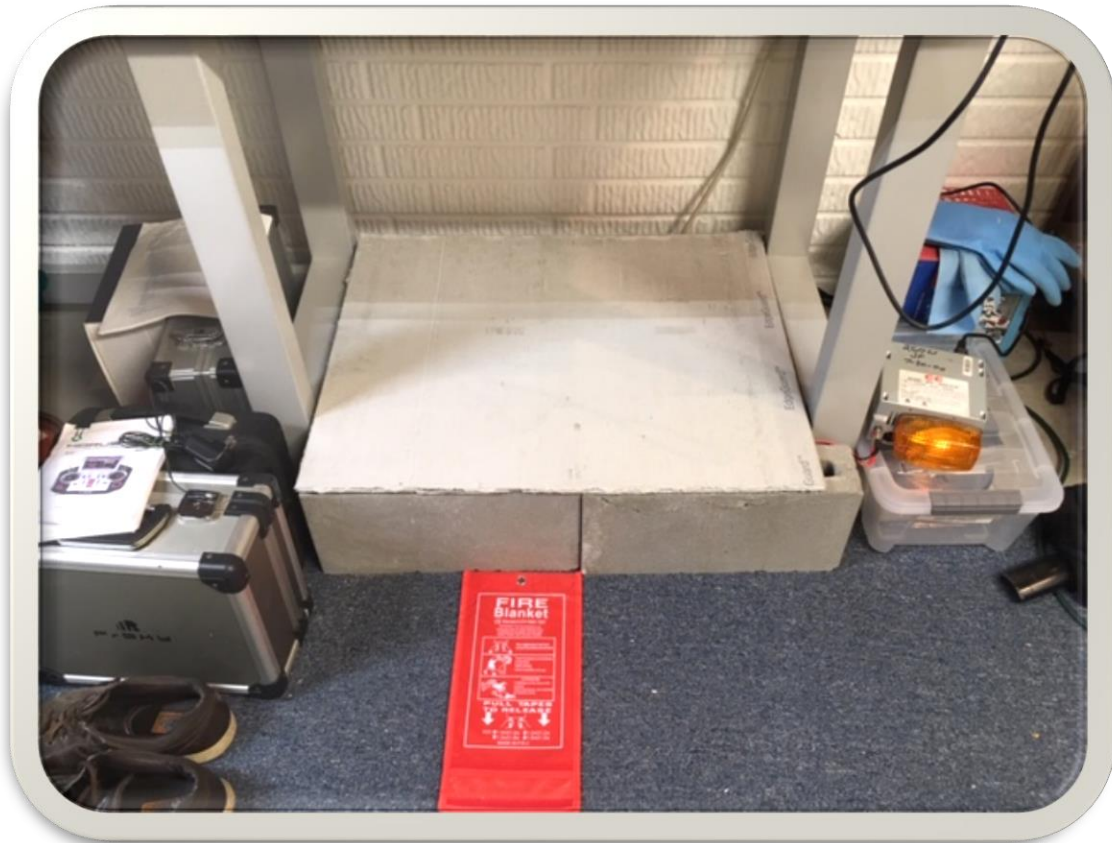
Most of us will need a transportation solution in order to safely move our Lipo batteries from our residence to the flying field, many of us have discovered and use a Lipo Safe canvas bag and utilize them as a solution to protect yourself during the movement of the batteries. These bags come in various shapes and sizes, and I definitely recommend you getting one of them, but my research has proven that they are not all created equal. I found this video that tests many bag solutions and provides actual fire tests for the different products, take a look at this interesting video: [https://www.youtube.com/watch?v=atkgUwGHL\\_k](https://www.youtube.com/watch?v=atkgUwGHL_k)

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Rick Sessions, recently sent out an email to all the club members stressing the need to have a safe and adequate charging area both at your residence after a member of our club had a close call. He copied I believe a charging area setup that was made popular by the Flite Test Company, here is the link I found on YouTube that you can review: <https://www.youtube.com/watch?v=gobFcNzGG9I>



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While I like the concept of keeping my batteries safe with the use of cinder blocks while charging as shown in Ricks photos; I find that I don't have the physical space for such a setup. Additional searching on the internet, I came across a different solution that I think I will employ. It is basically a Metal Tool box that is lined with ½ inch dry-wall sealed with expanding glue. Furthermore; the creator offered a fire demonstration of this box concept. I like this as it makes it somewhat portable. Here is a link to the build video: <https://www.youtube.com/watch?v=l8vyRO7HYHY> and a picture of the completed box.



At the end of the day it's your call, but I hope you'll handle this task sooner than later. Your safety is paramount and a Lipo fire could ruin your day!

**Happy Thanks Giving to all Club Members!**

## Upcoming Events

- Breakfast get together every Tuesday Morning @ Hy-Vee, 10808 Fort St, Omaha
- Cobras Indoor Flying from 10:00 AM - 1:00 PM @ **Community of Christ Church Gym, 140 W. Kaneshville Blvd. Council Bluffs IA.**
- Flying times will be 10:00 AM to 1:00 PM on most Thursday's. Verify on Omaha Metro Area Club Schedule at bottom link below.
  - The cost is \$3.00 per day.
  - AMA Membership required.
  - **No flying on Thursday Nov 28, 2019 (Thanksgiving Day)**
- **First Flight – Jan 1, 2020 – 9:00 AM -- Rain, Snow or Whatever - Hawk Field**
- **SAC Museum RC Flying – Jan 18, 2020**
- **General Membership Meeting: Friday, Jan 24, 2020—7:00 PM – 9:00 PM**  
**\*\*Church of the Cross, 1517 S 114th St., Omaha**
- For a complete list of all the Omaha Metro Area upcoming events please follow this link: [http://www.metrorcflying.com/metro\\_schedule.htm](http://www.metrorcflying.com/metro_schedule.htm)

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