



AMA Club # 393  
**Phantom Flyers**  
 St. Peters, Mo R/C Club



**Newsletter of the Phantom Flyers R/C Club** <http://phantomflyersrc.com>

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**August 2014**

**Upcoming Events/Important Notices**

**18 August, Club Meeting, Flying Field**

**23-24 August, Pattern Contest, Flying Field**

**30 August, Innsbrook Fall Float Fly**

**5 September, Blue Ray Pylon Race/Carrier Fun Fly, Field**

**13 September, Joint Wright & Phantom Flyers Fun Fly,  
 Wright Flyers Field**

**27 September, VISTA Sailplane Contest, Flying Field**

Articles, pictures, and tech notes for publishing in the Carrier Wave are always appreciated. Please submit articles a week and a half before the meetings. Send pictures, preferably in JPEG format, in separate files from text files. Text should be in MS Word format, simple text file format, or some format that MS Word can read.



AMA Club # 303  
**Phantom Flyers**  
St. Charles, Mo RC Club



## **July Phantom Flyers Club Meeting**

**July 21, 2014**

The meeting was called to order by the Club President Ed White at 7:00PM. The July meeting was held at the Club flying field. 10 members were in attendance and there were no new members.

The Secretary was not present, Kevin Cox took the minutes.

Minutes from the June meeting were approved as printed in the newsletter.

Treasure's Report: Treasure was not present; Ed White gave the following report:

The club has a balance \$\$\$\$.\$\$. The lease payment is coming up.

Report approved.

Safety Report:

Safety Officer was not present.

Field Managers Report:

The field is being well used (enjoyed). Don Grzina repaired the table and sprayed weeds.

Activities Director:

The glider contest will maintain the same format as the previous one, i.e., EP and Pure gliders will still compete together with the ALS set to 100 meters for the EP gliders.

Jan Jansen has plans for the up and coming Joint Fun Fly at Phantom Flyers Field. Some items he mentioned included a Taxi Solomon and a modified Carrier type challenge. A Flyer will be created giving everyone information.

Meet Me in STL Pattern had 2 visitors.

New Business:

It was mentioned that the ones doing mowing should also empty the trash cans for that week. You should double bag it before putting them in your vehicle.

Mowers need to clean the Z-turn mower after using it. Also make sure that the container is properly LOCKED before leaving.

Old Business:

Ed talked more about what would be involved in sealing the runway. The By-Laws require voting of 75% of the membership. The plan is to accomplish this via email. More details coming on the voting.

Tech Session:

Field Charging Station

Ed discussed its operation and demonstrated the use of it.

The meeting was adjourned at 7:36PM

## Phantom·Flyers·RC·Event·2014·Calendar

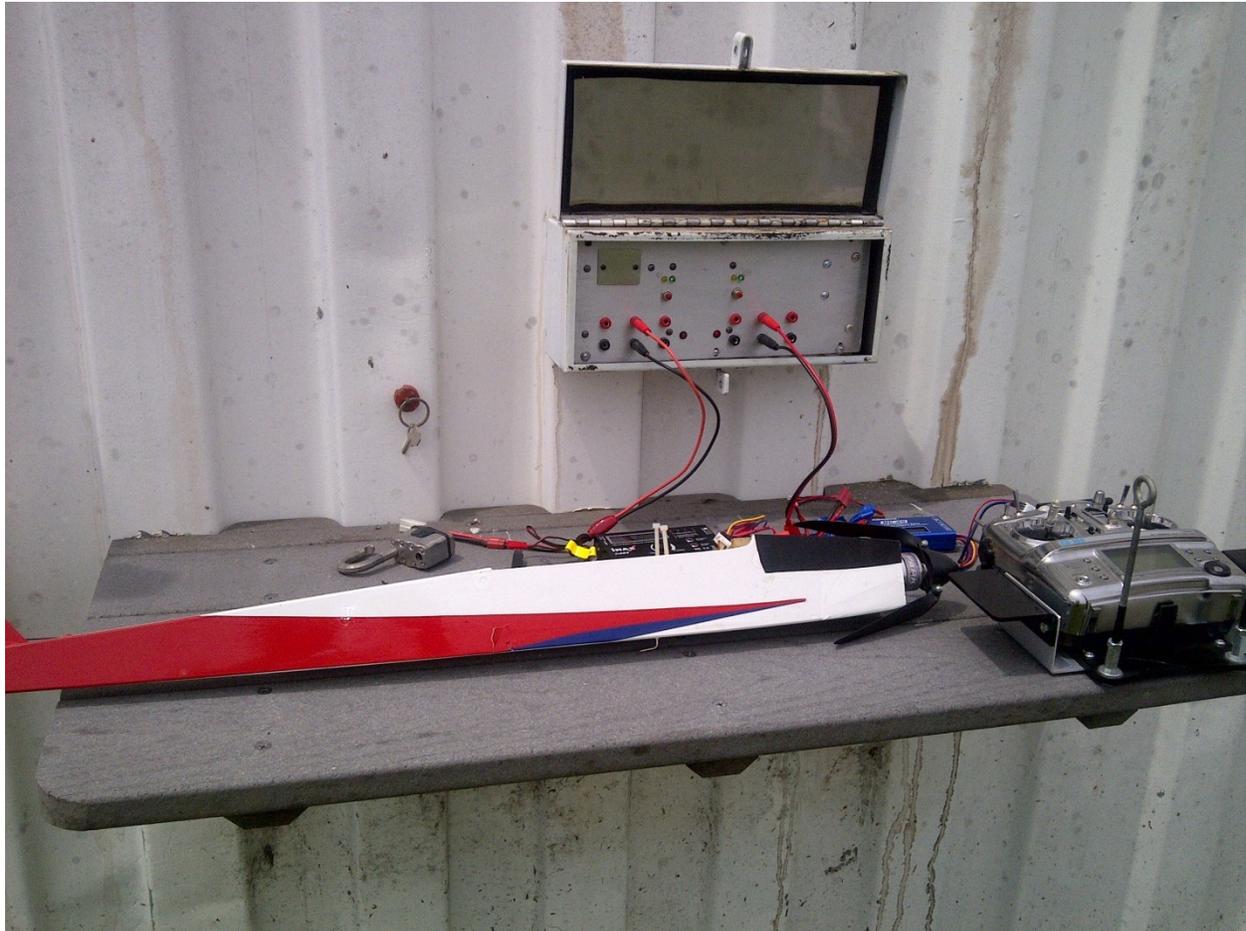
Event	Date	Day	CD
Snow·Fly	1·Jan	¶	Ed·White
Hayes·Lake·Float·Fly	3·May	Sat	Don·Vetrone
Blue·Ray·Pylon·Race/Carrier·Fun·Fly	10·May	Sat	Jan·Jansen
Sportsman/ <u>Interm.</u> ·Pattern·Contest	17·May	Sat	Ed·White
Innsbrook·Float·Fly	24·May	Sat	Don·Vetrone
Field·work·Party	31·May	Sat	Don· <u>Grzina</u>
Blue·Ray·Pylon·Race	11·Jun	Wed	Jan·Jansen
Electric·Fly	14·Jun	Sat	¶
Vista/Electric·Sailplane·Contest	21·Jun	Sat	Harold·Weaver
Float·Fly·WF	28·Jun	Sat	Don·Vetrone
Meet·Me·In·St·Louis·Pattern·Meet	19·Jul	Sat	Ed·White
Float·Fly·WF	26·Jul	¶	Don·Vetrone
Vista/Electric·Sailplane·Contest	2·Aug	Sat	Harold·Weaver
Joint·Fun·Fly·at·Phantom·Flyers	9·Aug	Sat	Jan·Jansen
Float·Fly·WF	30·Aug	¶	Don·Vetrone
Pattern·Contest	23-24 Aug	Sat-Sun	Ed·White
Blue·Ray·Pylon·Race/Carrier·Fun·Fly	5·Sep	Sat	Jan·Jansen
Joint·Fun·Fly·at·Wright·Flyer's	13·Sep	Sat	M·Walter
Vista/Electric·Sailplane·Contest	27·Sep	Sat	Harold·Weaver
¶	¶	¶	¶
Christmas·Dinner	¶	¶	¶
¶	¶	¶	¶
¶			

## Charging Station Open at the Field

We have finally gotten a charging station up and running. It turned out to be more complex than we originally thought. The primary reason for the complexity is that the battery in the container has a primary job of running the container security system. We need to make sure that the charging station doesn't drain the battery so much it can't open the door.

**A big round of applause to Phil Moore and Donn Albert for getting the station designed, built and installed.**

Here is the station at work



The station is on the back side of the container. There is a hinged table that can be raised. The station is in a metal box with a pad lock. The key is kept in the john on a red magnet (in the picture its hanging on the side of the container to the left of the charging station).

**IMPORTANT !!!** The charging station is in a weather proof box. **But it is only weather proof *if it is closed*.** It is imperative that you close the box after you are done.

**Using the Charging Station:** You will need to provide banana plugs for your charger. It was impractical to provide every kind of connector every charger might use and banana plugs are widely used and readily available. There are separate right and left circuits, each powers three sets of banana plugs. Controls are

quite simple, there's an on/off push button for each side. Just push one of the buttons, plug your charger into the banana jacks and charge. A red indicator will show power on to the jacks.

## **CHARGING STATION LIMITS**

The station has two limits, how much it can charge at one time and how much it can charge total without running the container battery down. The station is designed to provide power for charging small to medium size batteries. That means **NOT FOR 10S/5000 mAH** pattern packs. Large packs will take too much out of the container battery. What's too large is not easy to answer. For now let's say 4S/4000 mAH would be the largest.

The limit for how much power it can supply at one time is 15 amps. That is 15 amps provided **TO** the chargers the chargers. That may be very different than the total of the amps that the chargers are providing to the batteries. If you want to know how much current your charger is getting from the station, you can estimate that as described below. If the 15 amps to the chargers is exceeded the station will shut down. If that happens, reduce the number of people charging at once and start it up again.

Normally when charging the green LED on the charging station will be on (see the indicators in the picture below). If the charging station detects that the container battery is starting to get low, the yellow LED will come on. You can still keep charging. If the station thinks the container battery gets too low, it will turn off the charging station and the yellow and green LED's will flash. No further charging will be possible until the container battery gets recharged from the solar cells. This will take days under the best of conditions (bright sun).

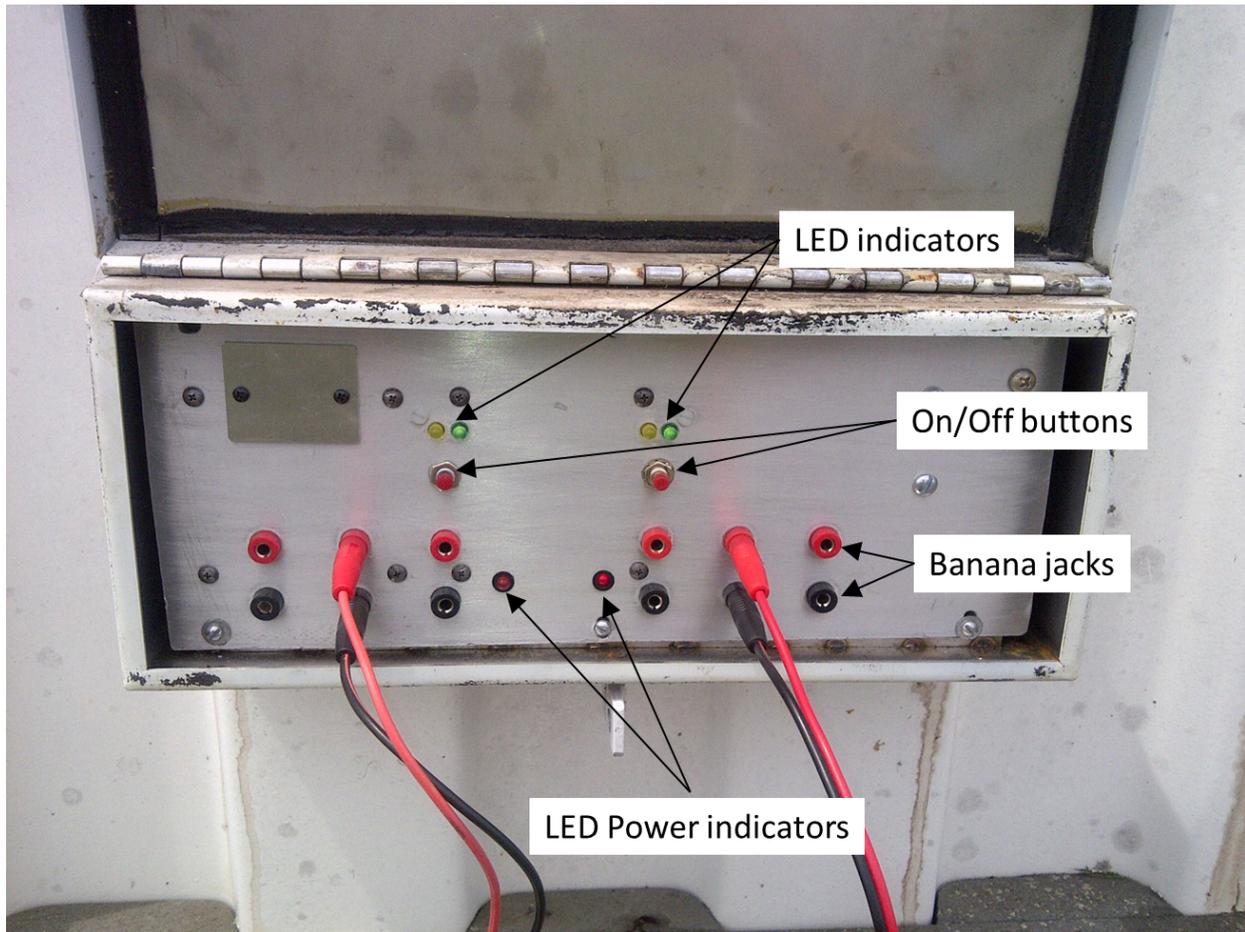
### **Automatic turn-off**

If the charging station detects that it is not being used for three minutes, it will turn itself off. Just push the button to turn it back on. Note that when charging lipos, toward the end of charge very little current is going to the charger and the charging station may think it is not being used and will turn itself off after three minutes. If this becomes a problem for people, let us know we may have to reprogram the station.

If you have problems with the station, please contact Ed White.

**DID I MENTION THAT THIS IS IMPORTANT ?** The charging station is in a weather proof box. **But it is only weather proof *if it is closed*.** It is imperative that you close the box after you are done.

Close up of the controls and indicators.



**How do I know how many amps my charger is using?** Unless you can measure it or your charger tells you, the best you can do is estimate. Here is how to estimate: Take the number of cells times the maximum voltage of each cell (4.2 V for any Lipo) times the charging current times 1.5 divided by 12. Easiest is an example. Consider a Lipo, 3S/3000 mAh charging at 1C (3 amps).

Charger current is approximately =  $3S \times 4.2 \text{ V} \times 3 \text{ Amps} \times 1.5 = 56.7$ . Now divide by 12 = 4.7 amps. This says in order to charge your 3S/3000 mAh battery at 3 amps, your charger needs 4.7 amps from the charging station, or about one third of the station capability.

# VISTA/2 METER SAILPLANE CONTEST #11

August 2, 2014

Eleven flyers (see results chart below, significant scores are shown in red) enjoyed a sunny warm and slightly with a light wind which unfortunately was from the North and slightly downwind to our high starts as the day went on. The days winners were Kevin Cox (Aspire, second win in a row!), Jan Jansen (Vista), and Jose Espinosa (Vista EP), with 1791, 1316, and 1312 pts.. There were 11 participants.



Lift was pretty hard to find until the 6<sup>th</sup> round when some small cumulus clouds began to form. Ed White stayed up for 19 minutes and 40 seconds on this round, was in a cloud, and came down of his own accord, and Jan stayed up 9 minutes and 40 seconds. We did not penalize these two for going over the 7 minute limit since

they were staying up to show off for the rest of us. Since the best lift has been more around noon at most of our contests we may start a little later in the day in the future.

Unfortunately Danne Anderson damaged his Vista during the first round due to what appeared to be a rudder failure. Jose landed way out in the bean field to the South in one of the early rounds and it took a while to find his EP Vista, however he recovered to come in 3<sup>rd</sup> in the contest. On the 6<sup>th</sup> round Al Bone's Spectra EP broke one of the prop's folding blades off, vibrating severely until he got the motor shut down.



The joint competition of Pure and EP gliders seems to be going well. I hope everyone had a good time!

8/2/2014		Round 1				Round 2				Round 3			
Name		Min.	Sec.	LPt	Pts.	Min.	Sec.	LPt	Pts.	Min.	Sec.	LPt	Pts.
1	K Cox - Aspire	3	7	0	187	6	58	0	418	2	52	50	222
2	Jan Jansen - Vista	1	44	0	104	1	48	50	158	3	10	50	240
3	J Espinosa-Vista EP	1	26	0	86	2	22	0	142	1	20	0	80
4	J West - Vista	2	51	50	221	1	41	0	101	2	18	50	188
5	L Anderson - Vista	3	40	0	220	2	25	50	195	3	1	50	231
6	E White - Vista EP	2	23	0	143	2	3	0	123	3	3	50	233
7	H Weaver - Radion EP	2	48	50	218	2	14	50	184	3	1	50	231
8	A Bone - Spectra EP	4	53	0	293	2	17	0	137	6	42	0	402
9	J Brandt - CANARROW	1	38	50	148	1	45	0	105	2	4	50	174
10	D Grinza - CANARROW	2	23	0	143	2	10	50	180	2	25	0	145
11	D Anderson - Vista	Crash			### #				0				0

Round 4				Round 5				Round 6				Tot.	Tot.	Tot.
Min.	Sec.	LPt	Pts.	Min.	Sec.	LPt	Pts.	Min.	Sec.	LPt	Pts.	LPt	Rd. Pts.	Pts.
6	28	50	438	3	20	50	250	3	46	50	276	200	1591	1791
3	43	0	223	1	11	50	121	7	0	50	470	200	1116	1316
6	58	50	468	2	40	0	160	6	16	0	376	50	1262	1312
3	36	0	216	1	37	50	147	7	14	0	406	150	1129	1279
3	18	0	198	2	50	50	220	2	31	50	201	200	1065	1265
2	56	0	176	1	36	0	96	7	0	50	470	100	1141	1241
2	30	50	200	1	40	0	100	4	17	50	307	250	990	1240
1	49	50	159	1	29	50	139	0	0	0	0	100	1030	1130
3	15	50	245	1	33	50	143	2	53	50	223	250	788	1038
1	32	50	142	2	56	0	176	3	19	0	199	100	885	985
			0				0				0	0	#####	####

Harold Weaver  
Vista Contest CD

# P-40 Legacy

## By Herb Johnson

John Kowalski III is one of my friends from work with whom I've shared many adventures during our years in Flight Test at Boeing. I've come to know his family, and his late father, John Kowalski, Jr, is at the heart of this story. Senior Kowalski was a Master Cabinet Maker, a maker of fine furniture, and a maker of beautiful model planes. His most beautiful plane, a Top Flite



P-40, is the subject here.

Mr. Kowalski flew RC but never at an advanced skill level. His building skill, however, was at the top level. He built the P-40 in the mid-1990's and included the extras of flaps and scale retracting landing gear. Warbirds are known for being a handful to fly as their weight increases, and this model had a wing loading of 38 oz/sq-ft, which is about 30% above the typical sport model range. We knew there was notable risk flying this model. He never flew it and hung it as a display

in his home, and that's where I first saw it in 2001. He started talking about me flying it for him someday, but I had the vision of busting it into a thousand pieces in front of family and friends, and the memory would haunt me forever.

Things changed when Mr. Kowalski succumbed to cancer a few years ago. As his family dealt with his estate they decided I should have the plane with the understanding that I would fly it. I took the airplane and dragged my feet about flying it because of fear of crashing it. I did start tinkering with it and modifying it, because it was now a good part of 20 years old and in need of maintenance and upgrading. The biggest change I made was upgrading it to a 2.4GHz Hitec system. The OS 120 Surpass 4-stroke was still brand new and runs beautifully. The Robart landing gear is finicky and has required constant adjustment and is not reliable. I decided that first flights would be gear down.

This past July had some of the coolest weather ever for July, and John and I decided "now or never", it was time to fly it. John and his buddy, Ed Hall, met me at the field. It was breezy, but the wind was down the runway. On the first takeoff attempt the plane aggressively turned "left" on the runway and went into the grass. This happened a couple of times, as the engine had too much power for the airframe and had



no offset to the “right” to compensate for torque and P-factor. The landing gear was also “wobbly” and had to be tweaked, but we finally got it to fly. It was trimmed great and flew fine and needed less than half throttle for normal flight. As expected due to high wing loading, it would snap out of controlled flight at low airspeed with a fast elevator input, so care was needed for that trait. We also knew it was going to be a bear to stop on the runway because of its weight and landing speed, and sure enough on the first landing the rough “arrival” “discombooberated” its wheel alignment which required field maintenance. We straightened the gear, but in the meantime the wind swung around to a direct crosswind, and the end

result of that was I chickened out and called it a day so the plane would go home in one piece.

The plane had flown as Mr. Kowalski had built it, but we agreed I could make changes to make it easier to handle. I removed the retracting gear system which lightened the plane almost a half pound. I moved things around inside the fuselage to make the CG less nose heavy. I inserted a firewall wedge to offset the engine thrust line several degrees to the right. I rigged the throttle linkage and used computer inputs to reduce the engine power output. The plane should be more manageable on takeoff.



This will never be an everyday flying model. It’s too much a testament to Mr. Kowalski’s building skill and has too many memories attached. On special occasions when the wind is down the runway and my confidence is up we’ll take it for a flight, and it will always invoke John Kowalski’s memory.