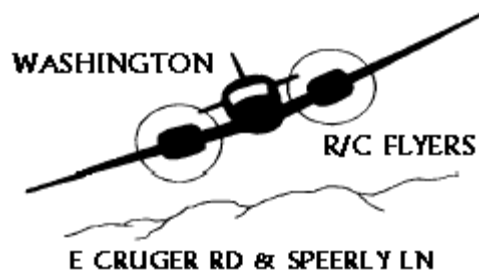


Washington R/C Flyers Newsletter



June 2005

www.washingtonrcflyers.com

Next Meeting

Our next meeting will be at the New Washington R/C Field at 7:00 pm on Tuesday, June 14, 2005. If it's raining, please go to the Navy Marine Club.



Mow Schedule



The grass is growing! Even though there hasn't been much rain this year to make our grass grow, we'll soon need to start mowing it on a regular basis. A mow schedule will be posted in the new equipment shed, on the website and published in the monthly Newsletter. The system will be much the same as we had with the old field. John Bremankamp, our Maintenance and Grounds Committee Chairman is in charge of the schedule.

Safety Tip of The Month

When we are given the word that we can fly at the new field, you will want to have your equipment

ready to use. Your transmitter is one of the most important pieces of equipment you have and will need some preparation prior to hitting the field. Make sure you have the batteries charged and don't forget to do the all important range check. Having the frequency pin clipped to your antenna before you turn your transmitter on is a very important requirement. If you have a computer radio, make sure it has the proper model selected. If you do happen to turn it on with the wrong model selected, don't change the model selection with the airplane receiver turned on! Remember to turn the transmitter on before you turn the receiver on and turn the receiver off before you turn the transmitter off.

From the Presidents Hanger

I know it's a long time till Thanksgiving but the Club has had many things happen in the last few weeks, that has "gone our way". Speerly Lane and the parking area are about done, the "Skunkworks" (vault toilet), is well on its way to completion, as is "Walter Mitty's Hanger", (the equipment shed). The AMA has sent us a check for \$1,000.00, the City of Washington and the Township have worked on the lane, RP Lumber has granted us a 10% discount, we have

President	Vern Mall
Vice President	Wally Walwer
Sec./Treasurer	Jim Martin
Newsletter Editor	Steve Grob
Safety & Rules Committee	Bryan Miller
Maint. & Grounds Committee	John Bremenkamp
Events Committee	Jim Allen Paul Wann
Social & Education Committee	Kayton Heavrin
Site Committee	Paul Cobb

wonderful neighbors who have contributed labor and machinery and we have had a good turnout of members for the work parties. The only thing we are a little short of is rain. And that will come!

Lease/Constitution

The Lease for Washington R/C Field and the amended Constitution documents are now available for viewing on the club website in the Members Only section.

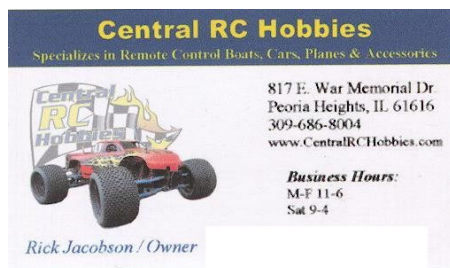
Site Team Update

Since the beginning of May we have had three official workdays and numerous days where members just showed up to finish up loose ends. John Bremenkamp installed signs at the entrance identifying the address as 1774 Cruger Road. (Continued on next page)

Site Team Update Continued

The field grass is growing well in spite of the lack of rain, but a little moisture would help. The gravel roads and parking areas are complete thanks to the city and Dan Wissel. We built the toilet vault and floor for the storage shed in May, and expect to complete those buildings in June. The shed was enlarged slightly to accommodate two mowers and related equipment. A second mower to be used for trimming is being provided by a club member. The next club meeting is at the field—see you there. —Paul Cobb

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Work Party!

There have been 2 work parties to date and both have been very productive. There will be a third Work Party weather permitting this coming Saturday, June 4 at 8:00 am. Plans are to build the side walls, sheet the sides, cut and install the rafters, sheet the roof and put on the black felt on "Walter Mitty's Hanger". Also we hope to pick up the big chunks of asphalt in Speerly Lane and deposit them in the first crossing. If the mower gets serviced and repaired by Wiegans, we hope to mow the grass for the first time. Kayton Heavrin and his son will be providing the generator, compressor and nailers. We might need an 8' stepladder or two, and any small tools you think we might

need. A garden rake or two might be handy for the roadwork. So come on out and enjoy the party. If you are physically unable to work, that is fine. Maybe you can run and errand or just offer advice. Here's a photo of the work party on 5/14/2005. What a bunch of hard working pilots!



New Names

For those of you not present at the May membership meeting, names were voted on for the flying field and the outhouse. Despite a valiant effort by Tom Clark (alias Walter Mitty), the official name of the field is Washington R/C Field. The outhouse is officially named The Skunkworks.

Field Testing The Equipment

Our President tests the proposed location of the Skunkworks.



Quote

Another thing that makes the world go around is a detour sign.

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June Meeting Agenda

Washington R/C Flyers

June 14, 2005

"The will of the members will propel our Club forward!"

Welcome - Vern Mall

Roll Call - Jim Martin

Quorum - Jim Martin

Financial Report, Dues & Bonds - Jim Martin

Guests - 1st time? 2nd time?

From this point on: Please stand to be acknowledged, and when addressing the membership

Officers Comments - Wally

Walwer - Steve Grob

Safety Update - Bryan Miller

Old Business –

Item 1. Site Committee Update -

Paul Cobb & committee members

Item 2. Logo shirts, hats & jackets

- Jim Martin

Item 3. Ground Breaking

Ceremony - Vern Mall

Item 4. Web Site update - Bryan

Miller

Item 5. AMA Grant & RP Lumber

Discount update - Vern Mall

Item 6. Other old business????

New Business

Item 1. Opening Day July 2, 3 or

4? - Vern Mall

Item 2. Open House Sept? - Vern

Mall

Item 3. Safety Rules approval -

Bryan Miller

Item 4. Other new business????

Entertain motion to adjourn

Show & Tell or Program

Battery Failure

From the Indianapolis RC South club, Indianapolis IN

By Doug Gifford

Robert Braham, editor

Whether you are a seasoned pilot or a new flier, we all share the risk of experiencing a crash due to battery failure—the most common RC equipment failure. Let's face it, rechargeable batteries die, and they often don't give us much warning. If the application is critical (such as with our glow-powered model aircraft) the trick is to stay ahead of the game and detect the pending failure before your prized creation goes down. If you are not paying attention to your batteries you will probably not see the signs of pending failure. Most glow aircraft use a four-cell series connected pack of AA Ni-Cd batteries to power the radio flight pack in the aircraft. The series connection of four cells gives a nominal voltage of 4.8 volts (approximately 1.2 volts per cell), and usually can produce 600 to 700 milliamperes per hour mAh. Six hundred mAh means a healthy pack will supply a current flow of roughly 600 milliamperes (mA) for about one hour at near its rated voltage. Drawing an average current less than 600 mA will result in longer endurance time.

Our transmitters often use eight of the same cells in a series resulting in a nominal 9.6 volts (1.2v per cell x 8). Transmitters usually draw a constant current level of approximately 150 to 250 mA while transmitting. Flight packs typically draw 30-60 mA when idle, but when flying the servo motors are in constant use drawing higher currents. Two standard servos can draw peaks of more than 400 mA. If a flight surface is a bit stiff, servo current

draw can increase considerably. The wall chargers supplied with typical radios do a fine job. They charge at a relatively constant current of 50-70 milliamps. This is one-tenth of the battery capacity specification.

These chargers are known as one tenth-C, or slow chargers. This is the most reliable and simple arrangement, because almost all Ni-Cds can tolerate considerable overcharge (days or even weeks) if the charge current is one tenth C or less. Higher charging schemes need charge-end detection and automatic shutdown in order to prevent overcharge damage.

Sounds complex? It's not so bad.

There is much you can do to enhance your reliability without spending money on extra equipment. For starters, here is a list of good practice items:

1. Protect the battery pack from excessive vibration by wrapping a layer of foam around it.
2. Make sure you have a good charge before flying—a full 10-12 hours. If you know your batteries are low give them a full 18-24 hours.
3. Avoid using a wall socket controlled by a switch. It might get turned off. Confirm charging by making sure the LEDs are lit.
4. Batteries self-discharge slowly over time. Batteries can differ in this area, and older batteries can lose charge more quickly. If you charged your batteries immediately after last week's flights, and you plan on flying tomorrow—charge them again. You want them at their best.
5. Keep connections clean and in good shape.
6. Typical transmitters have a battery meter, display, or LEDs to help monitor the transmitter. Learn how yours reacts when batteries are new. What does a normal full charge look like? How about after a half hour of

use? If it begins to behave differently, have it checked out. 7. Batteries that are in their third flying season deserve more attention. With fourth and fifth season batteries you can almost expect a failure.

Typically it will be a single-cell failing, but do not trust the other cells unless the pack is new. Individual cells can be replaced, but it's typically not worthwhile. A four-year-old pack with one bad cell replaced will probably give trouble again very soon.

8. With a full charge, how do the servos act? Are they responsive and quick? If you ever develop a sluggish servo get it checked out. 9. Consider four to five flights maximum if you don't have a way to check the batteries, and be sure to turn your equipment off between flights.

10. If for any reason you think you might have a problem, ask another flier for assistance. Many experienced fliers have battery checking and field-charging equipment on hand and would be happy to help. If you are thinking about purchasing extra equipment, I would recommend buying a digital voltmeter with an internal load specifically designed for RC use (I use a Hobbico. It cost about \$25). Before digital became popular, there were analog Ni-Cd checkers. (Continued on next page)

Battery Failure Continued

Expanded Scale Voltmeters (Hobbico still makes these at around \$12) provide a scale expansion that allows more accurate reading around the voltages of battery packs (the 4.8 and 9.6 volts). Why expanded scale or digital? NiCads (and also Nickel-Metal Hydrides - NiMH) are known to have a relatively flat voltage-discharge curve. In other words, as they progress from fully charged to fully discharged, the voltage decreases very little. For this reason it is difficult to measure the battery's charge state without an accurate meter where you can see the small differences between the two. You also must have some knowledge of what the battery usually measures to see the change. The load feature puts a brief 75 to 200 mA load on the battery.

Always measure battery voltage under some load in order to see how voltage holds under typical discharge load. The best defense against the battery failure, and/or the inadvertent "fly until discharged" crash, is frequent checking under load with an accurate voltmeter.

You will hear fliers talk of cyclers that test and exercise batteries.

These are good, but not necessary.

A cycler will discharge a battery and count how many milliamperes per unit time (milliamperhours) the battery will supply while maintaining voltage above a certain voltage (typically 1.1 volts per cell). I use a cycler sometimes, but it basically is detecting early loss of voltage during discharge. Occasionally checking batteries under load with a simple voltmeter essentially accomplishes the same

thing. Know your battery's voltage history. Know that they are fully charged for the start of your session. Check the voltage before your first flight, maybe after the third, and any other subsequent flights. You will be doing the most you can to avoid the third most common cause of pilot error—the error of not paying proper attention to your equipment.

Washington R/C Flyers, Inc. RULES AND REGULATIONS
(Last updated 5/31/2005)

It shall be the responsibility of each member of Washington R/C Flyers Inc. to be advised of the rules and regulations of the clubs flying site. It is also the responsibility of each member to remind any member, and/or nonmember guest of any infraction of these rules and regulations and to report any consistent infractions to the club officers. These rules and regulations were formulated through many years of experience and adopted by the club members of Washington R/C Flyers Inc. to promote safety and good flying habits. A consistent set of rules and regulations are necessary to maintain "traffic control" in order that all model pilots and spectators can enjoy our hobby to its fullest extent in as safe a fashion as possible.

GENERAL RULES AND REGULATIONS

1. No flying or engine running prior to 9am Monday thru Saturday and noon on Sunday or after sundown. With exception of electric power aircraft which can be flown sunup to sundown.
2. All spectators must stay at least 10 feet West of the Pit area markers and/or behind the safety fence.
3. All radios must comply with the current frequency requirements of AMA sanctioned events. All 72-megahertz equipment must be narrow band.
4. A readily identifiable Frequency Flag indicating operating frequency must be displayed on all transmitters.
5. No chairs or other obstacles shall be placed on the flight stations. This rule does not apply to persons confined to wheelchairs due to permanent or temporary physical handicaps. In this case the person is allowed to occupy a flight station provided a helper is at his side to assist in all matters, including safety.
6. Mufflers are required on all engines above 0.051 c.i.d.
7. Engines are to be started within the Pit Area, and on return, shut down prior to crossing the Flight Line or pilot stations. (The Engine Test Area is the only exception)
8. All AMA rules and regulations shall be adhered to strictly.
9. There will be no running or horseplay in the pit area. Members are responsible for their guests, children, and pets.
10. Should any complaints arise from a non-member, get their name and address, and assure them that their concern will be relayed to the club officers who will address their complaint and reply to them in a timely and appropriate manner.

FLYING RULES AND REGULATIONS

1. The field is laid out by 3 lines in a North/South direction. The westernmost set of colored blocks is the Pit Area. The easternmost set of colored blocks is the pilot stations and Flight Line. **The Safety Line is an imaginary line located 10 feet east of the Flight Line and it extends from horizon to horizon.**
2. The Runway and Flight Area begins 10 feet East of the easternmost set of colored marker blocks (Flight Line) and extends North to the tree line; South to the railroad tracks and East to the tree line. Aircraft range must be kept with-in these boundaries or so visibility is such to maintain safe flight.
3. All engines shall be started in the pit area. Absolutely no starting of engines is allowed west of the pit areas.
4. The Engine Test Area is provided for test running engines and as an extended engine break-in area. It is located South of the mower shed and restroom along the tree line and with the aircraft facing the tree line.
5. All take-offs, flying, and landings must be made with the pilots standing at a designated Flight Station with the following exceptions:
 - New Models (first few flights)
 - Emergencies
 - Students* (*after take-off, the pilot (and instructor) must immediately return to a designated Flight Station.)
6. All take-offs, flying, and landings will be executed using the agreed upon pattern, that which favors the current wind direction, and is parallel to and east of the Safety Line.
7. After take off, all turns must be made away from the Flight Line once the model is airborne.
8. All take-offs must yield to landing models (i.e. landing aircraft have the right-of-way).
 - To ensure right-of-way of dead stick landings "Dead Stick" shall be announced in a loud and clear voice. No take-offs or landings are allowed while anyone is on the runway and any person must obtain permission of all airborne pilots before entering the flight area.
9. No flying in the immediate direction of pilots or pit area will be allowed.
10. Low passes, 3D maneuvers (e.g. torque rolls, hovering, etc.) must be kept East of the Safety Line.
11. No more than five aircraft will be permitted in the air at any one time.
12. Pilots of new or repaired aircraft may request clear air for flight-testing. At that time, no other pilot may operate his equipment until the pilot requesting clear air has had the opportunity to flight test his craft. Pilots with planes in the air may complete their flight.
13. Pilots must not turn on transmitters prior to securing the frequency pin via the Frequency Control Board.
14. A frequency is secured by placing your AMA membership card into the frequency pin holder marked with the frequency corresponding to the frequency of your transmitter.
15. Don't practice multiple consecutive flights; other pilots may be waiting to use the frequency. Be considerate.
16. When in doubt, use good common sense. Special consideration shall be given emergency situations.
17. Make an attempt to know what fellow members share your frequency. This knowledge will allow you to approach that member and let them know that you are sharing their frequency long before one of the two of you is able to forget to check that the frequency is available.
18. If you are unfamiliar with the operation of the frequency control board simply ask a fellow member for help. As a member, it is your responsibility to know how the board is used to avoid accidents.

ENFORCEMENT OF RULES AND REGULATIONS

Safety at the flying field, through adherence to our safety rules and regulations, is the responsibility of all club members. The responsibility is not limited just to following the safety practices, but includes helping others understand when their actions are not in accord with the club safety norms. The following steps are defined to ensure that all members understand their roles and responsibilities within the enforcement procedures:

Step 1 - Safety Knowledge: The Safety Officer and Club Officers will provide each new member with a copy of the club safety rules and regulations. An additional copy of the rules and regulations shall be prominently posted at the frequency board and on the club web site. It is the responsibility of all members to read, understand and adhere to the club safety rules and regulations.

Step 2 – Guidance: All club members are responsible for maintaining a high level of safety at the flying field. That includes a responsibility for making visitors and fellow club members aware of the correct safe operating procedures when a deviation is noticed. It is the responsibility of all club members to both give and receive safety guidance in a professional manner.

Step 3 - Verbal Warning: When a club member feels that a fellow member is disregarding guidance and continuing to operate in an unsafe manner, they have a responsibility to make the Safety Officer or a Club Officer aware of their concerns. The Safety or Club Officer will then investigate the stated concerns. If the concerns are deemed to be accurate, then the safety officer is responsible for providing the member with a verbal warning.

Step 4 - Written Warning: If a further infraction occurs, the verbal warning will be followed with a written warning in the form of a document from the safety officer to the individual who continues to commit the safety infractions. This document will be written with the consensus of the safety and club officers and will provide the club member with the steps to be taken if further infractions occur. Those steps, depending upon the severity of the infraction, could include either a grounding period or a termination of membership.

Step 5 – Grounding: If a further infraction occurs, the written warning will be followed with a letter communicating that the actions outlined in the “written warning” are being enforced.

Club Expulsion: In the event that the safety and club officers determine the infraction is severe enough, or that the general safety of fellow club members and or flying site visitors is repeatedly being disregarded, the Club Officers reserve the right to terminate the membership of the responsible individual. The decision of the officers will be in a written form delivered either in the mail or in person. At the discretion of the Safety and Club Officers, the expulsion may be brought before the membership for a Vote.