

Washington R/C Flyers Newsletter

www.washingtonrcflyers.com

January 2008

WASHINGTON



R/C FLYERS

E CRUGER RD & SPEERLY LN

Next Meeting

Our next meeting will be at 7 pm on February 12, 2008 at Washington Park District on Spruce and Walnut. If you have not paid your dues yet, please consider bringing your checkbook.

RADIO & SERVO FOOD – TAKE HEED LEST STARVATION

Be good to your R/C radio power source by observing Ni-Cd battery care. These little jewels are still our friends of flight even with Lithium Power on the ascendancy. Here are some tidbits you already know, but needed reminders are not wasted on effort given and results obtained.

Should you first discharge Ni-Cd batteries.

Yes, you should always discharge Ni-Cd batteries to the point where they are depleted and no longer usable in the application they are intended for (i.e. car pack, transmitter pack, or receiver pack).

How do you know when to stop charging?

If you are using a modern peak detection type charger, this is not something you will have to worry about - the charger will automatically stop charging for you. If however, you own a charger with a timer, there are 2 things you can do to determine when to stop charging.

1. Continually to monitor the temperature of the battery pack when charging. When you notice it becoming warm to the touch, stop charging. This should allow the battery to become roughly 85% charged.

2. To safely reach a full capacity charge you will need to add a voltmeter in parallel with the battery to monitor its voltage as it is charging. As soon as the voltage on the voltmeter begins to drop (.005V per cell), the battery pack is fully charged.

Is capacity a factor in charge time?

Yes. With a fixed charge rate the higher the capacity of the batteries the longer it will take to charge a battery pack. To determine

how long it will take to charge a fully discharged battery pack use the following: $\text{Time} = (\text{Capacity} / \text{Charge Rate}) \times .06$, where .06 is the conversion factor for converting hours into minutes and amp into milliamp. Let say you have a 1500mAh battery pack and a charger that charges at a 4amp rate. Plugging these figures in would give us $1500/4 \times .06 = 22.5$ minutes.

Do Ni-Cds really have a memory factor? If so, how do you deal with it?

Yes. Most people often notice these phenomena in the form of reduced battery runtime (capacity) and lower

performance due to repeatedly charging the Ni-Cd pack without completely discharging it after use. In many instances you can overcome this phenomena by regularly going through the cycle of discharging your Ni-Cd pack completely after using it and then charging it right before you plan to use it again. This will help most packs regain some capacity, but not necessarily all of its capacity.

How often should you change your batteries?

Ni-Cd batteries are fairly durable batteries so you will not need to change them often unless you notice any performance decrease.

Will running Ni-Cds down to empty before charging diminish their lifespan?

Running Ni-Cds down to empty is good as long as none of the cells in a battery pack go into reverse polarity. You can prevent cell reversal from happening by remembering to not leave your radio gear, or airplane on that will drain the battery pack indefinitely.

What's the trick to getting the most charges out of Ni-Cds?

Completely discharge your Ni-Cd batteries after you use it. Let the batteries cool down and rest several hours before you charge it again. When charging with fast chargers or lots of amps, do not let your batteries become overcharged to the point where the pack is too hot to touch. If



Washington R/C Flyers Newsletter

www.washingtonrcflyers.com

January 2008



the cells do become overcharged and vents, it releases chemicals and gases, which make up the battery and therefore reduce its useful life. Trickle charging at 250 milliamps or lower can last for days without harm.

[In what condition should you store Ni-CD batteries.?](#)

In either state, fully charged or discharged.

[Do Ni-MH batteries have charging cautions?](#)

The latest generation of Nickel Metal Hydride batteries incorporates a new chemistry mandated to be more environmentally friendly. These batteries, when charged with peak detection fast chargers, have tendencies to repeatedly false peak (not fully charge). These include all brands of Ni-MH batteries. It's actually not good for them by using fast chargers. It is recommended to use a trickle charger that can display total charge current. Then note the number of mAh put into a discharged pack to verify it has been charged to capacity.

FORMULA 4-STAR RACING RULES & REGS

This year four R/C clubs will participate in formula 4-Star .40 pylon racing: Washington, Pekin, Bloomington and Peoria. The following was posted on the Pekin Web site and repeated here for your convenience and curiosity.

Mission

This will be fun racing. The airplane and power plant have been chosen to slow the event and appeal to a wider group of flyers. This is to be considered as "entry level" pylon competition. Competing in this program will improve the flying skills of all who participate and provide comradery in a relatively low-stress race environment.

Terminology

CD: The hosting club's contest director.

Center Line: The centerline of the flying field.

Contest: The total event, consisting of "heats" and "rounds".

Dead Zone: The area between the *Pilots Line* and the *Pylon Line*.

Heat: 2, 3 or 4 contestants' race around the pylon to complete 10 laps.

Lap: One circular course around the pylons beginning and ending at the Start/Finish line.

Pilot Line: An imaginary line connecting all the pilot stations that is parallel to the runway.

Pilot Station: the club designated position where the pilot's must stand while flying.

Pylon Cut: A race situation where the airplane does not break the plane of the Pylon Turn Line.

Pylon Line: An imaginary line running between the two pylons and parallel with the flying field.

Pylon Turn Line: At each end of the field, a line running perpendicular to the pilot's line and intersecting with the pylon.

Round: The point at which all contestants have competed one heat. 5 rounds constitute a completed contest.

Equipment

Airplane

To compete, you must fly the SIG Four Star 40 (either kit or ARF) with **no modifications** or additions. The controlling document for modification control will be the kit plans. Pilot figures are allowed but optional.

Wheels

Standard 2.75" wheels (as specified in the plans) must be used. These can be rubber, plastic or foam. No speed wheels (hub and O-ring) are allowed. Wheel pants are NOT allowed.

Power

Only the Thunder Tiger 40 Pro with the stock muffler can be used for power. No muffler or engine modifications are allowed. The engine must be installed (upright) as per the plans.

Prop

Only the APC 10 X 6 propeller can be used. No modifications can be made to this prop other than balancing.

Spinner

Each airplane must have a 2" spinner. Either plastic or aluminum is allowed.

Fuel

During competition, the hosting club will supply fuel. Fuel will contain 15% nitro-methane and can be of any manufacture.

Minimum Weight

No airplane can weigh less than **4 lbs** (dry weight). This insures that no

Washington R/C Flyers Newsletter

www.washingtonrcflyers.com

January 2008

WASHINGTON



R/C FLYERS

E CRUGER RD & SPEERLY LN

hidden major structural modifications have been made.

Race Course

Pylons

Distance apart

There will be two pylons located at least 350 feet apart and equal distance from the field *Center Line*. Other than this minimum requirement, each hosting club is at liberty to place the pylons at whatever distance apart that best fits their field dimensions.

Offset

The pylons will be positioned such that the *Pylon Line* will be 100 feet in front of the *Pilot's Line*. This area will be referred to as the "Dead Zone".

Start/Finish Line

The Start/Finish line will be a perpendicular line drawn across the center point of the field. In most cases this will be the same as the field's *Center Line*.

Flight Path

Except at takeoff and landing, all competitors will strive to stay out of *The Dead Zone* while racing.

All competitors must maintain a 50-foot minimum altitude. Excessive flying at lower altitude is considered a safety hazard. Also, flying at abnormally high altitudes makes it difficult for officials to judge pylon cuts. It will be at the discretion of the hosting club CD to assign warnings, penalties or disqualifications for excessive infractions.

Note: Any flying behind the *Pilot's Line* is automatic disqualification for the heat being flown. The pilot will receive a "0" for that heat

only. The pilot is still eligible to fly in other rounds and accumulated scores for previous rounds are still counted.

Safety

At the beginning of competition, all aircraft will be checked for air-worthiness and rules adherence by the hosting club Safety Officer. Only the CD can disqualify a competitor. Only pilots, callers, counters and judges are allowed on the flight line during competition. A disqualified aircraft should immediately pull up to a high altitude and orbit until the heat has concluded before landing. All safety rules and restrictions of the hosting club must be followed.

Race Rules

Competitors

There must be at least two pilots for an official race. No more than four pilots will fly per race heat. Each pilot will be assigned to a *Pilot's Station* and will remain at that *Pilot's Station* during flying operations.

Callers

Each pilot must have a caller. The caller will assist in airplane start, release and retrieval. In addition, the caller will assist the pilot during the race flight by noting time-to-turn, cuts, position and safety concerns. The caller will always station himself behind the pilot and not interfere with the general field of view.

Officials

CD: A CD from the hosting club will be in charge of all racing and be

the final authority for all disputes. The CD will also be responsible for starting each heat.

Safety Officer: The Safety Officer from the hosting club will be responsible for checking each aircraft for air-worthiness and rule conformance.

Starter: This position can be combined with the CD or Lap Counter.

Lap Counter: This position can be combined with the CD or Starter.

Flagger: A *Flagger* will be assigned to each pylon and will signal (by raising a flag) each time an aircraft passes the plane of the *Pylon Turn Line*.

Cut Recorder: A *Cut Recorder* will be assigned to each pylon for the sole purpose of recording pylon cuts.

Scribe: The Scribe will be in charge of recording all race data.

Start Sequence

1. Competitors for each heat will have a 2-minute countdown to start engines and move the airplane to the Start/Finish line. The CD will announce the "Start Engine countdown".

2. The starting judge will check each airplanes position relative to the starting line. **There will be no assisted take-offs.**

3. Once satisfied that all aircraft are behind the line, the starting judge will raise his flag.

4. The starting judge will point at each pilot to confirm they are ready.

5. After the last confirmation the starting judge will raise the other arm and then lower the starting flag to start the race.

Laps

Washington R/C Flyers Newsletter

www.washingtonrcflyers.com

January 2008

WASHINGTON



R/C FLYERS

E CRUGER RD & SPEERLY LN

1. Beginning and ending at the start/finish line, each lap must break the plane of the *Pylon Turn Line*.
2. A race heat will consist of 10 laps.
3. The Lap Counter official will vocally announce each completed lap of the race leader.

Note: It is not necessary to circle the pylons, only to pass through or break the plane of the "Pylon Turn line".

Finish Sequence

1. When a contestant completes 10 laps they will pull the airplane vertical and orbit at a safe altitude until all aircraft have completed the heat.
2. The Lap Counter will announce, "*Race complete*" when all contestants have completed the race.
3. Contestants will land their airplanes as quickly, and as safely, as possible.

Individual Scoring

1. The winner of each race will receive 4 points, 2nd place will receive 3 points, 3rd place will receive 2 points and 4th place will receive 1 point.
2. One cut will subtract 2 points from the competitors score. Two cuts will disqualify the flyer for that heat (only) and he will receive 0 points.
3. After 5 rounds of competition have been completed each pilot's score will be totaled. The pilot with the highest cumulative score will win the contest.
4. Ties can be negotiated by either a race off (if time permits) or a coin flip.

Club Scoring

1. Each club member will contribute his score to the club total.

2. The club with the highest score counts will win the "Fastest Club" distinction for that contest.
3. At the end of the year, the club points will be totaled for the "Bragging

Rights" distinction.

VERN MALL

As almost all of you now know, Vern Mall is no longer with us in his physical presence as we are accustomed to seeing him engaged in flying activities.



Above is the display of Vern's 4-Star that he loved and flew frequently. It was one of many displays set up at his visitation at the funeral home for all to appreciate. The Club sent flowers and many signed a card that attended the banquet. Vern is receiving special recognition this month in our newsletter because of his dedication to our club's development in 2005 and 2006. We all owe him our thanks and should remember him from time to time.

Vernon Mall

WASHINGTON — Vernon Julian Mall, 73, of Washington passed away Tuesday, Jan. 8, 2008, at OSF Saint Francis Medical Center in Peoria.

Born April 12, 1934, in Kansas City, Kan., he was educated at Sacred Heart Catholic School in Kansas City, Jameson Grade and Marshfield High School in Marshfield, Mo. He continued his education by serving in an apprenticeship at Caterpillar Tractor Company,



VERN MALL
2007

where he retired after serving for 38 years and achieving the position of superintendent of the tool room at the East Peoria plant.

Surviving are his wife of 52 years, Norma; daughters, Lora (Randy) Benway of Horicon, Wis., Alissa (Ron) Adams-Simmons of Vista, Calif., Mary (Gregg) Larson of Coeur d'Alene, Idaho, Angela (Tom) Larson of Pecatonica, Ill., and Maureen (Ned) Mall Burns of Rockford, Ill.; and seven grandchildren, Joel, Ellen, Tony, Tim, Stephen, Charlie and Jonathan.

He was preceded in death by his parents, Anthony and Clara Beeker Mall; daughter and fishing buddy, Leah Marie Mall; brother, Elmer Mall; and sister, Mary Lorene Young.

Vern was active in his church, St. Patrick Catholic Church in Washington. He served on the Parish Pastoral Council as chairman of the Building and Grounds Committee under three pastors. He also hosted the Parish prayer chain and was the author and administrator of the Parish Web site. He was a member of the Knights of Columbus, Father John Manco Council 6707, Pine Lakes Golf Club, and the Washington R/C Flyers, where he had served as president.

A celebration of life will be from 5 to 8 p.m. Friday, Jan. 11, 2008, at Deiters Funeral Home in Washington, where a prayer service will be at 7:45 p.m. The celebration will continue at St. Patrick Catholic Church with a funeral Mass being offered by Father Joseph P. Danton at 2 p.m. Saturday, Jan. 12, 2008. The conclusion of the celebration will be at Glendale Cemetery in Washington, with a dinner to follow.

In lieu of flowers, memorial contributions may be made to St. Patrick Church, John Holtzman Maintenance Fund, the Knights of Columbus, or to the Washington R/C Flyers.

To send condolences online, please visit www.deitersfuneralhome.com.

***Washington R/C Flyers
Newsletter***

www.washingtonrcflyers.com

January 2008

WASHINGTON



R/C FLYERS

E CRUGER RD & SPEERLY LN

