

---

*EXTRA! EXTRA! Read all about it! Get all the latest scoop on R/C Helicopters.*

## CHOPPER NEWS

All your chopper needs and expert help are as close as your local hobby shop!!!

One of

The World's Largest R/C Helicopter Club

AMA CHARTER NO.2099 June, 2001

Next Club Meeting, 7 pm Tuesday, June 12th

At our Forest Preserve Flying Field

## Editorial

This month's meeting will be held at our flying field at 7p.m. Let's all hope for good weather. Field meetings are always a great way to get together to share ideas and help one another.

If you didn't make the last meeting you missed all of Steve's interesting information on antennas, and Terry led a very lively debate on needle valve settings and related glow plug issues. Most everyone present added his 2 cents worth. It was great to see so many members get involved in the discussion. May's meeting was yet another example of a very instructive club meeting by Terry and Steve. Today at the flying field I saw that member Ray Capitolo was using Steve's antenna system and said he liked it a lot, and it solved all of his antenna problems. Looks like a hot setup. Steve has acquired a lot of valuable knowledge through all of his expert 3 D experience.

I hope everyone had the chance to try out Chef Neil's Pepper and Cheese Quesadilla, in last month's Good Eats section. Our Club's number one proofreader and I gave it a try. It was fast and easy and made an excellent dinner. Lots of fun! Cook up a bunch and surprise your significant other. *Note: Remember safety first; in case you have not visited the kitchen in quite sometime, it might be wise to have your significant other sit down before you inform her that you have prepared dinner.*

Well, this is it. The unparalleled, long awaited, Al Fuchsen Memorial Helicopter Fun Fly will be here soon, June 23<sup>rd</sup> and 24<sup>th</sup>. I just can't wait!!! When was the last time you got to see the best of the best all at one Fun Fly and get to enjoy all those great demo's? Maybe even enter the fray yourself with beginner, intermediate, and expert welcome. Check out our [Event Calendar](#) section for particulars.

All I can say is, it's a good thing that I don't work at a railroad switch yard! Once again I fell asleep at the switch. I forgot to thank Ross for his many long hours and superb carpentry work in making our frequency board at our flying field. Ross put a lot of first rate, excellent craftsmanship into this masterpiece of his. The

frequency board should hold up well for many, many years out in the elements. It is truly comforting to know that we have a carpenter in the house.

Recently it was brought to my attention that there has been some concern that I am pushing my sidekick too hard with special assignments, impossible time schedules, and long hours. I don't believe this to be the case. Throughout history sidekicks have proven to be a very durable sort and always held up well under pressure. A couple of notable examples would be Poncho, Tonto, and now we have The Grill Man. All I can say is that my sidekick is relatively young, and he'll bounce back!!!

Have you paid a visit to our new web page layout recently? Rich Erikson did a superb job in producing a very professional web page with lots of neat stuff. It must have taken lots and lots of Rich's spare time to complete. Rich, the whole club thanks you!!!

We witnessed Neil's first ever auto (Raptor with wood blades) this last weekend, and I must say I am a little jealous. He brought it down to within a foot of the ground and then stretched out the landing for about ten feet before setting it down. Picture perfect!!! His next auto had just a touch of a bounce at the end, and his third auto had a little more of a bounce and a very small boom nick. Make room, Neil is on a meteoric rise to the top!!!

This month I take great pleasure in introducing a grand bunch of energetic new members to our club. Peter Cangelosi from Bloomingdale, Mauro Garcia from Joliet, Steve Krauleidis from Palatine, Henry and Albert Kroschel from DesPlaines, and, last but not least, the son of an old airplane flying buddy of mine, Dave Mosquera from West Chicago. I am sure all will be a credit to the organization, and let's hope that a few will volunteer to add a little something to our newsletter. Welcome to The Club, men!!!

Here are two corrections from last month's club roster. I muffed Jeff Anderson's Email address. It should read, [JeffreyA@Lp-machinery.com](mailto:JeffreyA@Lp-machinery.com) and Bob Culver's Channels used are 28 and 52. My pudgy little fingers sometimes hit the wrong keys. With me at the helm I can only promise one thing -- there will always be an occasional stupefaction from time to time.

I had to change email server to Juno because AT&T got sooo slooow and disconnected me at random. My new address for your convenience is: [ChopperNews2@juno.com](mailto:ChopperNews2@juno.com) . I have been searching for a DSL connection with no luck. Any ideas?

#### President's Message

This month's meeting will be held at the Grace Street Flying Field. We will start the meeting around 7:00p. m. instead of 7:30 p.m. The field meeting is a perfect time to bring your heli out to get help with set up or maybe get one of our better pilots to watch your maneuver that you can't get perfected. The field meetings are less structured so we can help, watch, and fly. We will hold the crash and smash, and the raffle. Then we will try to head to John's for pizza and good stories!

Soft Landings! Terry

#### VP Message, Steve

The last meeting was an enjoyable one, including the heckling. All in good fun. Apparently, tuning a needle

valve can be a science, but most of us prefer to be artists instead. See you at the runway on meeting night or, if the weather stinks, see you at John's.

Just in case you've missed the news or don't realize what a good event it is, it'd be a shame to miss the "Al Fuchsen Memorial Helicopter Fun-Fly" (formerly known to most as the Fermilab Fun-Fly). It's June 23rd and 24th and by now you probably know the details. If not, see us on meeting night or call Al's, or maybe there are more details elsewhere in this newsletter. The BEST pilots (and also the rest of us) will be there and it's nothing but FUN.

I wrote an article last month discussing setting up the trims (For a Futaba 8-Channel) in idle-1 and idle-2. One reader thought that the trim display on the screen showed that what I was discussing wasn't necessary because the trim was always indicated as identical when he switched between norm and the others. The problem is this; the displayed trim is for norm only, even when you're not in norm. I know of no easy way to "see" the trim position outside of norm.

Flying has been good this month. A bit breezy at times, but that builds character. I had a vacation week from May 14th through May 18th; from the 12<sup>th</sup> through the 20<sup>th</sup>, the only day I didn't fly was Mother's Day. Had 5 full flights each of those days and found that one gallon lasts 16 flights. That was 40 flights (2 ½ gallons), bringing this year's total to just over 10 gallons through the Raptor's OS .32. That's 24 gallons through the same engine since March of last year and, except for one crankshaft, it's still running strong.

I'm a believer in simulators because they can teach you the skills necessary to fly better and can make progress at the field come much more rapidly. There's no substitute for the real-life at-the-field stick time when it comes to building the confidence necessary to implement those skills.

### **Club Meeting Minutes from 5/8/01**

The meeting was called to order by Terry at 7:40 PM. There were 19 members and 5 guests present.

The treasurer reported the club balance to be \$291.32.

#### **Old Business:**

*Terry enlightened everyone that our new frequency board was up and working and looked great.*

He commented on last meeting's servo testing by Steve Jensen was very informative and that digital servos seemed they were all they were cracked up to be.

Terry stated that our Website was up and running and looking great, it now had motion, sound, up to the minute weather reports, and a pilot locator section which included club members' addresses, phone numbers, and the heli's they fly. A great idea for members to find info on heli's they need help with. He told us that if we were interested in joining this list to contact Rich Erikson.

### **New Business:**

We were reminded that our June meeting would be held at the field.

Terry informed us that he would bring his digital camera to our next meeting for web site pictures of our Crash and Smash award winners.

Terry presented the March Crash and Smash Award to Vice President Steve Jensen.

Crash and Smash stories followed with Steve Krauleidis, our newest member, taking the award for piling up his Excel Y2K.

*Lifetime membership was discussed with Terry telling us that he had come up with pricing that would be \$200.00 for a 10-year membership. He asked if anyone had any suggestions on this matter. We had a group discussion on this, which was followed with a vote. The club unanimously voted it down.*

We were told that Marty had started sending our Newsletters via email. With them being emailed we would receive them 2 to 3 days earlier and save the club some money. If you were interested in this please contact Marty. This service could be canceled at anytime if you wished.

Terry brought up our fun-fly again, telling us that Rod was close to finishing our fliers. A game suggestion of balloon popping was discussed, with wind conditions being the factor if we would have this at this year's fun-fly.

**Our agenda for tonight included:**

Ron Kwilinski brought in his new electric Hornet and explained its workings. Cost was about \$450.00 which included everything minus transmitter.

A Concept 60 was brought in and shown, and members were told it was for sale for \$1000.00.

Steve Jensen explained his looping of his antenna on his Raptor. Which included a showing of his Diamond Dust airplane with this type of system installed inside, materials needed, and how it works.

Terry started a group discussion on proper fuel settings; a lot of good points were brought up.

Our monthly pizza-eating contest was held. Marty didn't participate to let somebody else have a chance to win. This month's winner was Club Treasurer Rob Rinn!

The club raffle was held.

The meeting adjourned at 9:15 PM.

**Here's to a Long-Life Clutch by Steve Jensen**

Clutches should last a long time; hundreds of flights. For many, this hasn't been true. I've finally stopped going through them (I hope), and have something rude to say; "RAY'S Complete Helicopter Manual" is WRONG. I've referred to it often and have broken clutches to prove it. The third edition, page 45, calls for a 0.015" gap per shoe, or 0.030" total. Do this only if you want to buy new clutches regularly because you like a fast idle speed.

Greg Sawyer, production specialist at Ace Hobby and experienced Raptor flyer, is one source of the correct answer. Irwin Siner at Hobbies and Heli's is the other. Neither would tell me what I should do, but both of them told me what they do.

At Toledo, Greg told me that his clutch has hundreds of flights and he calls it his "zero clearance clutch". When he first assembled it, it rubbed and would not fully release. He got the engine started and held the blades for a while (He didn't gun it to high revs) until the high areas wore off. He says he's been very happy with the performance and longevity. Greg and I also agree that the theory that relief is necessary between the hub and the moving part of the clutch shoe (to prevent breakage) is not necessarily important.

Irwin avoided the question twice before he typed me the following quote. We were discussing the fact that his heavy-duty \$40.00 clutch only lasted me 24 flights before it cracked; I had used 0.012" per shoe, a little less than RAY'S recommendation. Irwin typed: "After building at least 200 helicopters in my life the gap I like is the one that works...Keep it as tight to the clutch lining allowing the shoe to move freely..". Irwin also feels that Craptor clutch hubs (Yes, he typed Craptor several times; I guess competition brings out the worst in some people) have too much run-out and that his "super fan" is much better. I don't know whether the HD clutch is worth twice the price of a Raptor clutch and probably won't know for a long time, but I doubt it.

Last year I had a TT Raptor clutch last a LONG time. Unintentionally, I had assembled it with very little clearance. My current clutch is in good shape and going strong and was assembled with drag that took two flights to eliminate. My experience is that the higher you have to raise your engine RPM to get the clutch to engage, the earlier it will fail. Don't expect a clutch liner to last forever, either. Dig it out and replace it to get that ID back down if the rev's are increasing (maybe at about 150 flights?)

I've found that the Hobbies and Heli's Heavy Duty clutch is smaller than the standard Raptor clutch and requires a smaller liner ID. Everybody seems to have a different way to shim the liner in; I recently used two layers of .003" thick paper for a TT clutch and 3 layers for a second HHI HD clutch. Coating all surfaces with JB-weld takes up additional gap.

One other advantage of this slight-friction set-up method is that you'll have to work hard to align the engine to create the least friction. If you spin everything and adjust for least drag, you'll have created a nearly-perfectly aligned engine/clutch/clutch bell and you know what? Maybe perfect engine alignment is an important part of clutch life. If anyone has a good way to ensure engine alignment when the clutch DOESN'T drag, I'd like to hear about it. Most are already familiar with "turn the start shaft backwards and adjust engine alignment for minimum drag", but that's not as precise as what you'll get with a tight clutch.

### Raptor Maintenance

or

## How I spent all my free time in the last 6 weeks chasing problems

**The setup:** I crashed my Raptor into a pine tree. It landed tail first. After the usual parts replacement, I flew it on its shakedown flight. I hovered for about 4 minutes and landed to look things over. The left side of the heli was covered in fuzzy powder. The belt had cut the top lip off the left pulley. The fuzzy powder was the belt getting chewed up. I replaced the plastic pulleys with the new metal ones from Quick and installed a new tail rotor belt. On the next two flights I had 2 and 3 glitches respectively.

**The Investigation:** I removed the PCM receiver and installed an FM receiver. I did not want to go into “lockout” while trying to track the glitch down. I took this out for a test fly and had the max number of glitches on the BC6, 10. I did not “see” any of these glitches while I was flying.

**The Cure?** I replaced the Metal pulleys with plastic (stock) pulleys. Went out for a test fly and did not have a single glitch. The next day I went out for a flight and when I landed the left side of the heli was covered in fuzzy powder again. The lip was cut off the left pulley again. Still there were no glitches recorded on the BC6. I completely tore down the Raptor again, I checked for bent tailboom, play in maingear and shaft, belt twist direction, tail gearbox bearings and frames. I installed a new pulley (stock plastic) and reassembled everything again. Test flight produced no fuzzes or glitches, but the engine sounded like it would lean out during flight. Replaced the fuel filter, problem still there. Next I replaced the glow plug still happening. I then removed the fuel tank and header tank and replaced ALL of the fuel lines. The clunk line in the main tank had several pinholes in it, and showed some cracking of the fuel line. The pressure line around the muffler tap was cracked and brittle. I replaced all of the Thunder Tiger fuel lines with good fuel line when I built the Raptor. Let’s see, when was that? Several months ago, no it was just over a year ago. We all know you are supposed to replace your fuel line on a regular basis, so I guess that means all of us not just the “other guy”.

*To be continued next month: When I will do the UNTHINKABLE, I will put the metal pulleys back in to see if I can make the glitches reappear! Terry*

### Better Ways and Shortcuts

- 1) We recently had a member (who wishes to remain anonymous) crash because of low battery voltage. Our fellow member had gotten in the habit of fast charging his battery pack and not giving it the customary 10%, or 14 to 16 hour charge, to his flight pack. Midway through his fourth flight of the day his airborne battery pack ran out of juice and his helicopter bit the dust. This should be a lesson to all of us that maybe relying only on fast charging might not always be the answer.
- 2) While replacing the foam rubber on my 1800 mAh battery pack in my Ergo gasser I noticed a polished area on the side of the pack. Upon closer inspection I found that the plastic tray edge had cut its way through the foam rubber, shrink-wrap, and then polished the side of the nicads. In my mind that high frequency vibration can cause a lot of hidden damage. Keep a vigilant eye out.

3) If there is a breeze blowing and you crash down wind you may not be able to hear your expensive engine screaming its little lungs out. So don't do like I did and wait until you see a plume of blue gray smoke off on the horizon to remind you to turn off your governor. It's a touch too late by then!!!

*Editor: Neil, please replace all of your divots at the flying field. The whole area is becoming a tripping hazard!!!*

---

---

What to Say When Your Wife Asks, "Did You Crash Again, Bunky?"

- (1) No, Honey, I always keep my helicopter in a bushel basket when I'm cleaning it!
- (2) No, Honey, the helicopter is in the trunk of the car and I'll bring it in later!
- (3) No, Honey, you always have to get new blades after so many hours of flying!
- (4) No, Honey, this helicopter never had a tail rotor!
- (5) No, Honey, those slightly damaged parts are optional and not really needed!
- (6) No, Honey, not really, just a slight mishap and five dollars will make it as good as new!
- (7) No, Honey, but just for fun I might go to the hobby shop and look around a little!
- (8) No, Honey, but, if you want, now might be a good time to start thinking about my birthday!
- (9) No, Honey, but I might go to the hobby shop and pick up one of those new \$49 helicopters!
- (10) No, Honey, but guess what, I just won this new helicopter at our club meeting!

*New members, the above is a repeat article from last year that you should keep with you at all times!!!*

Note: All ten of the above answers have been field-tested!!!

There has been a lot of talk about problems with the DS8417 Digital servo WHEN USED AS A TAIL ROTOR SERVO. This servo had problems from the start. It seems that the torque was not up to what was advertised. JR then had to go the “upgrade” route for the servomotor. The problem seems to be when used with a gyro, the motors fail. It is a possibility that the gyros are working the servomotor to the point of overheating. The failure rate has been fairly high and relatively quick, within 2 or 3 gallons of fuel. I would suggest that if you are using this servo, keep an eye on it. If it acts strange, pirouette one way normal but slow the other. Do not use it until it has been checked out by JR.

Terry

### Good Eats by Chef Marty

Our Old Family Recipe for a *Quick Cherry Dessert* (Keep secret, for club members only)

1-can cherry pie filling

1-box “Jiffy” cake mix, yellow or white

1- stick butter

Pour cherries into 8” by 8” baking pan, cover top of cherries with “Jiffy” cake mix. Melt 1 stick of butter and pour on top of cake mix. Bake at 350 degrees for approximately 35 minutes or until golden brown. It is very, very rich and serves four. Leftovers microwave very well the next day. It doesn’t get any easier. Bon Appetite!

### Event Calendar

News Flash: The Al Fuchsen Memorial Helicopter Fun Fly will be held June 23 and 24. Cindy promises Curtis Youngblood, Jeff Rankin, Dwight Schilling, Dave Storey, Scott Caffey and our very own Ross Van Dorpe for some great demonstrations. Beginner, Intermediate and Advanced pilots are all welcome! You can participate or watch a very impressive Fun Fly. Entry fee of \$25.00 includes a succulent pig roast dinner Saturday night, which I have been told rates 4 Beer Steins\*.

Also hot food right off the grill is available at the field; I give it 3 Beer Steins\* for taste and presentation, a relaxed back yard fare, with a wide choice of condiments, grilled under a small shade tree. What more could you ask for? Great fun!!! For more info contact Jim Zagel CD at PH: 630-208-9131. Don’t forget your camera! All proceeds will be donated to Driscoll Hockey Scholarship fund in memory of our friend, Al Fuchsen. Site: Fermi Lab club field, Batavia. Sponsors: Fermi Lab Barnstormers/Al’s Hobby Shop

Experimental Aircraft Association Chapter 153 will be having a Pancake Breakfast on Father's Day, June 17, 2001, at Schaumburg Airport. The breakfast runs from 8:00am until Noon. Notice from Scott Taylor, Suburban Barnstormers Club.

The annual St. Charles Festival of the Giants is going to be held July 13<sup>th</sup> through the 15<sup>th</sup>. Just take Route 64 south past Randall Rd. to Campton Hills Rd. and then look for signs on left. The St. Charles Festival of the Giants is a must see. Literally one hundred or more of the top scale airplanes in the country will be there. Friday and Saturday are the best days with activities starting to wind down by noon on Sunday. Whatever you do, don't forget your camera. Grilled food is also available, and I give it 2 1/2 Beer Steins\* with the usual great back yard flavors we have all come to enjoy and expect from these gatherings, with hot dogs done to a turn! Marty

The Palos R/C Flying Club 2001 Calendar. Flying site: Morrill Meadow @ Rt. 45 & 107th Street, 300 ft. paved runway, spectator restraining fence and large parking lot.

June 10 - Scale Air Show	9:00 AM to 3:30 PM
17 - Giant Models	8:00 AM to 3:30 PM
July 7 - Annual Air Show	9:00 AM to 3:30 PM
8 - Annual Air Show	9:00 AM to 3:30 PM
22 - Fun Fly	9:00 AM to 1:00 PM
Aug. 4 - Jet / Military Show	9:00 AM to 3:30 PM
5 - Jet / Military Show	9:00 AM to 3:30 PM
19 - Pylon Racing	9:00 AM to 1:00 PM
Sept. 9 - Giant Scale Air Show	9:00 AM to 3:30 PM

All Events are Free to the Public. Bring your Helicopters and Airplanes; there is plenty of time and daylight

left to fly after their events are over. Reported by Ron Kwilinski

**\* 1 Beer Stein = palatable, 2 Beer Steins = interesting, 3 Beer Steins = mouth-watering, 4 Beer Steins = lip smacking**

IRCHA Confirmed 2001 Contest Calendar

Date   Event   Location

June 9-10 Roanoke Contest                      Roanoke, VA

June 14-17 NW IRCHA Jamboree	Boise, ID
July 6-10 AMA NATS	Muncie, IN
Aug. 31- Southern California R/C Heli	Encino, CA
Sept. 2 Classic Fun Fly	
Sept. 7-15 World Championships	Muncie, IN
Sept. 16-19 IRCHA World Jamboree	Muncie, IN
Sept. 29-30 Mid-Atlantic Heli Expo	Greensboro, NC
Oct. 13-14 The "Traveling" Contest	Jacksonville, AL

The World Championships and IRCHA Jamboree will be the single biggest R/C Helicopter event in the world. Anyone who can get there this year should consider going. But, make your hotel reservations early, as it will be a crowded event! Reported by Jeff Torsrud

#### Our Web Page Update and Neat Web Sites

Rich, our new Web Guy, states that: "we need fresh photos for the web site so people should bring cameras to the flying field (digital or regular) to capture any interesting events that may happen. Some examples of good photos would be someone inverted mowing grass, group shot in the pits, crazed ground hog attacking parked helis, or that spectacular \$1600 crash of Steve's that we heard about at the last meeting. Other great photos would be of the bikini clad super models that always hang around the pit area. I can't guarantee that all photos will get on the web site (except for the super model in our pits photos...those get posted...so cough em up Terry we know ya got em) but we will try to get as many up as possible.

Remember...keep the blades in the sky and the bugs out of your eye."

Rich Erikson

Club Web Address: <http://members.nbc.com/nircha>

Neil sent in this Futaba web page for FAQ. The site has lots of interesting info about Futaba equipment.

<http://www.futabarc.com/faq/product-faq.html#q102>

Jeff Torsrud came to my local runway last night and took some neat photos with his new camera. They're already on his website under "2001 photos". If you want to see his camera skills and my new "inverted Snoopy" canopy scheme, check out his website at <http://communities.msn.com/JTsHoverSite>

Jeff also brought a stack of well-done Heli Setup booklets for distribution at the next meeting.

Thanks, Jeff!

By Steve Jensen

For Sale - Lots of Good Stuff.

**For Sale:** Thunder Tiger 36 heli engine that came with the Raptor. This engine has never been run, it is brand spankin' new and includes muffler.(I, myself am an O.S. man) Price: \$75.00 or best offer contact me at 815.356.8518 or email at [richerikson@email.com](mailto:richerikson@email.com)

**For Sale:** all wood glider with 8 ft wingspan ready to fly. Glider has Cox .049 engine W/muffler and a 7 channel Challenger 720 radio. I have an extra receiver for it too. Asking \$280.00. I also have a Piper Cub that I want to sell in excellent condition O.S. 25, Brand new Futaba 4 channel radio, ready to fly, asking 325.00

Contact Jorge, Pager (708) 378-1351 or cell (708) 220-6635

**For Sale:** Raptor, 49 bearings OS .32 motor & Century Muffler, 2oz Hayes header tank. Un-run TT.36 motor and TT muffler included. X-Cell 60 landing gear, Telebee Gyro JR4721 tail servo mounted on tail boom, JR652 Radio JR4721 servos on elevator & aileron. Spare parts and manuals. Set up and ready to fly. Make offer!

Contact Terry King (815)-547-7016

**For Sale:** GWS Piezo Gyro, first 50 bucks takes it, will bring to next meeting. 630-377-1865 Marty

NORTHERN ILLINOIS RC HELICOPTER ASSOC.

AMA CHARTER NO. 2099

We are actively looking for new members to join our Radio Control Helicopter Club. All that is required is an interest in R/C helicopters, field permit, and a \$20 membership fee. Please feel free to join us at one of our meetings to become a member or just for a visit. We hope to see you at the next meeting. Our Club web page is: <http://members.nbc.com/nircha/> and is maintained by Web Guy, Rich Erikson.

*Meetings are held the 2<sup>nd</sup> Tuesday of every month, at 7:30pm, at John's Pizzeria, 100 E. Lake St., Addison, IL (1/2 block East of the intersection of Addison Rd and Lake St.). During the summer, the monthly meetings are held at the flying field, June, July, and August.*

Our Forest Preserve Flying field is located on Grace St., Addison, and one mile north of North Ave. Field permits can be obtained by calling 630-933-7200.

Club Officers

President Terry King 815-547-7016

Vice President Steve Jensen 630-553-6590

Secretary Neil Nesheim 630-351-4002

Treasurer Robb Rinn 630-906-1731

Newsletter

Editor/publisher Marty Davis 630-377-1865

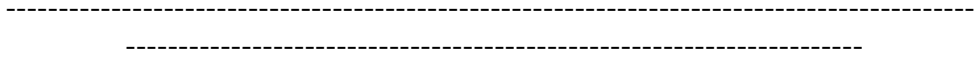
#1 Proofreader Linda Davis 630-377-1865

ChopperNews2@Juno.com

Club Web Site

Web Guy Rich Erikson 815-356-8518

Businesses Who Support Our Club



Membership Application/Renewal, Annual Dues \$20

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

○

AMA No. \_\_\_\_\_ Frequencies  
Used \_\_\_\_\_

○

○

Field Permit No. \_\_\_\_\_ For permit information call 630-933-  
720

○

Membership can be renewed at any meeting or sent directly to our club treasurer, Robb Rinn, 433 Lake Lawn, Aurora, IL 60506. Check should be made out to Northern Illinois R/C Helicopter Assoc. You are the club and the club needs your support! Please renew your membership **NOW!!!**

[back](#)