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Helicopters.



CHOPPER NEWS



All of your helicopter needs and expert help are just down the street at your
local Hobby Shop!!!

September 2005

Al's Hours

Mon 12 - 8

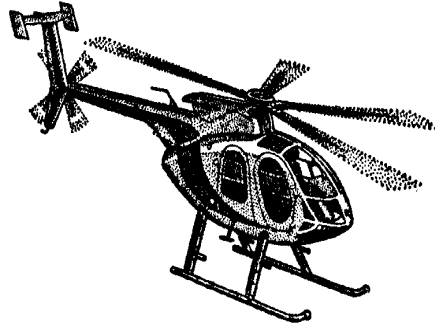
Tue 10 - 8

Wed 10 - 8

Thu 10 - 8

Fri 10 - 8

Sun 12 - 5



Sat 9 - 5:30

Northern Illinois Radio Control Helicopter Assoc.

One of

The World's Largest R/C Helicopter Club

AMA CHARTER NO.2099

Next Club Meeting, 7:00 pm, Tuesday, August 9th, 2005

Meeting is at John's Pizzeria!!!

From the Editor...

Newsletter articles get sent to: lstevens@ksbhospital.com Thanks!

Larry

NIRCHA Fall Fun Fly!!!!

Sept 10th & 11th

See back page for details

President's Message

Well another summer has passed...and I have burned all of $\frac{1}{2}$ gal. of fuel...very sad!! Between work, travel and kids...my time just does not seem to be my own. My newly finished work room is gathering dust....er...well it is supposed to do that I know...but it is the wrong kind of dust...regular old dust not saw dust! The only thing to have saved me is my Horizon CP Blade.... which I fly as much as I can in my front yard. Last time any of you saw me at the field with the Blade I was having glitching problems...well that is all gone away...and now I use my 9c to control it and all is great!!! The Blade is compatible with Futaba radios which is weird since Horizon distributes it and they are all about JR radios...but there is a Hack to use a JR receiver with the Blade and is not too hard to do...so anyone interested can email me and I will get you the needed info. Or you can search RunRyder for it cause that is where it is at. Remember our fun fly is coming up and I have a hall pass from the Mrs. for both days so maybe...just maybe I can burn the other half of gallon then!!! If you have not made it out to this field, I encourage you to make the trek.... It is a most excellent site for flying! And Terry is a wiz at putting on these events!! (Don't worry Terry...I said I would volunteer). Lots of great flying and great folks to talk heli with!! Remember the meeting is indoors this time...although I will probably hit the field with the Blade before hand if anyone wants to see one fly (weather permitting...which it has not done all 3 meetings outside). I would like you all to dig deep into your volunteer pockets and have one of you step up to be on the board and take Terry's place as Secretary...as he stated in the past...it will make you fly like Curtis!!

Keep em spinning...whether you use gas or electrons

Rich Erikson

Minutes for July Meeting

The Meeting was held at the field with 12 member's present and 0 guests

Terry King called the meeting to order at 7:00pm

Officers present were Mark Clausen, Terry King, Charlie Tittlebach

Minutes from July meeting were read left at home (sorry)

Treasurer report is \$935.00

Membership report stands at 42 members from Paul Girard (over the phone)-

Crash & Smash was won by Mark Clausen inverted bean monster attack!!

Raffle was held:

Meeting was adjourned around 7:25pm Short meeting people flew after

Terry King

Reminder:

When making a purchase at Al's, please say state you are a member of NIRCHA and your purchase is to go into the CLUB REBATE PROGRAM Thank you

Beginning 3D: Inverted

Lesson objectives:

- **Begin basics of inverted flight.**
- **Master inverted hovering tail in/nose in/side on.**
- **Become confident in handling the helicopter in forward inverted flight.**
- **Safely control the helicopter through turns in forward inverted flight.**

Flying inverted is a great party trick. Do some inverted flying in front of some spectators and they'll think you're the man. However, while inverted used to be 'the' maneuver, it has now become a fairly basic requirement in order to execute some of the harder 3D (and even F3C) maneuvers.

Some would say you can do the more basic 3D maneuvers before learning inverted. However, I counter that by saying "what happens if you find yourself inverted in a critical situation?". There's a good chance it's not going to end well, so continuing to subscribe to the 'walk before you run' theory, we'll do inverted now.

When I first learned inverted flight, I must have spent a full week of nights on the simulator before I tried for real, and I would recommend this to everyone. You'll learn much faster on a sim.

Setup

Your heli should be able to pull at least 9 degrees pitch both ways in Idle Up 2. Set your pitch curve for 0 degrees at mid stick. Ensure you don't have any binding at full pitch (both positive and negative) while adding in a little cyclic.

For the throttle curve, start off with something like 100, 70, 50, 70, 100. Remember, you're aiming to hover at points 2 and 4, so you don't want the engine screaming it's nuts off there, I wouldn't recommend anymore than 70% throttle at either of these points.

If your radio has some extra mixers (or if you've got a radio with a dedicated SWASHPLATE function that mixes in throttle with swashplate movements), then become familiar with the use of these functions. They'll become very useful when we get into more advanced aerobatics. I wouldn't recommend complicating things right now by setting them up, but become aware and familiar with their operation.

If you've got a heading hold gyro, it's a good idea to setup Idle Up 2 for heading hold. That way the tail can look after itself while you're trying to come to grips with the cyclic controls.

Orientation Tricks

Learning inverted isn't easy and takes a bit of practice. Many people can hover inverted, but can they fly circuits?

I found that inverted was easier than tail in at first. Not sure why, but it just was.

Aileron

This is exactly the same as 'upright' flying. If the heli is inverted nose in, treat the aileron the same as upright nose in and vice versa.

Elevator

This is one of the harder ones to learn. When the heli is inverted nose in, you 'push' the stick to push the heli away from you, and 'pull' the stick to pull it to you. Ofcourse this is reversed when tail in. This one here just takes time.

Rudder

Rudder isn't easy to learn either. The trick I use now is to 'steer the bit closest to me'. For example, when the heli is nose in to me, and I want the nose of the heli to turn to MY right, I

push the rudder right. If I want it to go to MY left, I push the rudder left. Same deal with tail in, if I want the tail to move to the right, I move the rudder to the right.

Pitch

I don't have any tricks for pitch! You've just got to remember that down is up and up is down!!!

Getting Started

The best and most safest way of entering your first inverted flight is by trying to hold the heli at the top of a loop.

Enter the loop at a nice comfortable height in ID2, and as the heli reaches the inverted stage, release the elevator back to neutral and increase negative pitch to 'prop it up'. Hold it there for a few seconds until it starts to drift, or you become uncomfortable, then ease back on the elevator and continue on with the loop. The aim of these first attempts is to get the hang of the cyclic controls, what does what etc.

Continue on with trying to hold it at the top of loops. Make small determined stick movements.

If the heli starts moving towards you nose in, push the elevator stick forward a little, if it's moving sideways, correct it as you would if it were nose in.

Check your inverted climbout ability by giving it a stab of negative pitch to try and gauge how quickly the heli climbs out. This will ensure that if you get in trouble, stabbing on the negative pitch to gain you some altitude is going to be effective.

Once you can stop the helicopter drifting off by itself and can maintain a stable hover at altitude, start exploring the elevator cyclic controls. Gently pull back on the elevator to start the heli in slow forward flight towards you, move it along ten meters or so, then gently push on the elevator to bring the heli back into a hover. Then try the same with aileron. Ofcourse you will need to make the appropriate pitch changes as you would if you were doing this same exercise upright. At all times, if you feel it getting a bit 'uncomfortable', bailout, take a breath and try again.

When you can maintain a stable inverted hover and can move from one place to the next confidently, start getting the helicopter lower and lower, ensuring that you have a bailout plan in your head. For me, this plan is pushing forward on the elevator and down on the pitch so that the heli is climbing and flipping to upright if I 'get lost'.

Forward Flight

Now that you can hover inverted in a controlled fashion, it's time to work on the forward flight aspect. Not surprisingly, it's much like when you take your first steps into upright forward flight. Take things slowly.

I recommend you get comfortable with hovering the heli inverted side on to you. It doesn't have to be at low level cause we'll not be going that low to start with. Initially, we're going to start flying inverted back in forth from side to side in front of us. The reason for this is we don't want to be flying at us incase of a 'brain fade' and the wrong stick is pulled and you have an upside down hedge trimmer racing at you, and that is not what we want.

Just as you practised the hovering, enter the inverted forward flight from the top of a slow loop. Do not get too much speed up, take everything slowly. As the heli comes over the top and inverted, slowly start applying some forward elevator and some negative pitch so that the heli continues straight on in forward flight. Not too much else the heli will stop and start flying backwards, and not too much negative pitch before forward elevator else the heli will pick up speed very quickly!

When I was doing this, I would let the heli 'glide' past me with as little input from me as possible, I would give little inputs so as not to 'upset' the heli. Let it continue past you until you are ready to stop. Do this by pushing forward on the elevator for a forward flip. This will gain you altitude instead of losing it. Get yourself sorted, and then do the same again, but going in the opposite direction. Continue doing this until you are comfortable controlling the helicopter in straight line forward inverted flight.

Turning

When you can confidently control the heli in forward inverted flight, it's time to start adding some turns into the mix. The issues here are timing the rudder with the aileron and elevator. The aileron works exactly the same as it does right side up. However, when you enter a left hand turn, you're adding some left aileron, some right rudder and a little forward elevator to bring the nose around. The aileron and rudder work on the 'together/apart' rule, where if aileron moves toward the center of the radio, so too does the rudder. If the aileron moves to the outside of the transmitter, so too does the rudder. This rule holds true for both Mode One and Mode Two radios.

Enter inverted forward flight in the same way as you did above, and as the heli glides past you from left to right, start executing a left hand turn by adding a little left aileron and a little right rudder, as the heli begins to turn, add in a little forward elevator to stop the heli from diving. Continue to hold this in as the heli turns, again making small movements. As the heli completes the turn and begins to head back down the track from which it came, let it continue for a while, then either forward flip, or aileron roll out to upright. Complete this maneuver again and again until you are comfortable with making banking turns. Make both left and right hand turns as well as nose in and tail in turns.

Points

- Always have a bailout plan. Most of the time, I do forward flips as they gain altitude (unless flying backward inverted).
 - Be smooth on the sticks! Sudden movements can accelerate bad situations!
- Make sure that you have a good inverted climbout. Adjust your pitch curve until you get one. I've flipped a heli over and hovered inverted quite low to the ground and gone to climb out and found the heli climbs at a snails pace. Not good if you have to bail quickly!

Bringing it all together

Once you've sorted out the 'turning' business, it'll pretty much all come together and you'll get to a stage where it doesn't matter if the helicopter is right side up, or up side down. It's when you've achieved this, that you're ready to get into some of the more demanding 3D maneuvers.

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Submitted by Rich Erikson

Up and Coming Events by Terry King
2005

This is the Big One:

NIRCHA Helicopter Fall Fun Fly

9/10/05-9/11/05 - Belvidere, IL (C) NIRCHA Helicopter Fall Fun Fly. Site: 2873 Townhall Rd. Terry King CD, 2637 Graham Rd Belvidere IL 61008 PH:815-547-7016 email: tvking@rockford.com.

Sponsor: NORTHERN IL RC HELICOPTER ASSOC

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: www.nircha.com and is maintained by Web Guys, Rich Erikson and Kevin Cashman.

Meetings are held the 2nd 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 Helicopter Forest Preserve Flying field is located on Grace St., in Addison (on the border with Lombard), and about one mile north of North Ave. Field permits can be obtained by calling 630-933-7200.

Club Officers

President	Rich Erikson	815-356-8518
Vice President	Mark Clausen	815-741-4723
Secretary	Terry King	815-547-7016
Treasurer	Charles Tittelbach	708-352-4915

Newsletter

Editor/publisher	lstevens@ksbhospital.com Larry Stevens	815-562-3190
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Web Site

The Web Guys	Rich Erikson and Kevin Cashman	www.nircha.com
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Membership

Chairman	Paul Girard	773-774-2365
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Support your local hobby shops, the people you can turn to with questions and suggestions.



Mark your calendars Now!!!

Sept. 10th and 11th

Come on and fly with us...we will have a blast.

This will be our second year at this new location which has nothing but blue sky in front of you!!!!

Pilots meeting 9:30 both days, Saturday nightfly,

If pilots want we will have drags, auto contest, bomb drops.

The field is a private ultra-light airpark.

It is at the corner of Townhall Road and Bates Road in the 61008 zip code area

GPS

N42 11.752

W88 52.837

It is about 1 hour door to door from the Fullerton field depending on traffic.

For those of you who have mapping programs the address is 2873 Townhall Road, Belvidere, IL 61008

It is at the intersection of Bates Road and Townhall Road

Taking I90 West from Chicago exit

Genoa Road (exit # 53)

Turn Right (North) onto Genoa Road

The Next stoplight is Hwy 20 (about ¼ mile)

Turn Left (West) onto Hwy 20

Go to the fourth light, Townhall Road

Turn left (South) onto Townhall Road

Take Townhall Road over the top of I90

The 2nd crossroad is Bates Road

The first house on the left after Bates Road is where the club fly will be held

OR

Taking 88 West from Chicago

Exit on Anne Glidden Road in DeKalb

Go North on Anne Glidden road until you hit Cherry Valley Road (approx. 16 miles)

Turn Left (West) on Cherry Valley road

Look for Stone Quarry Road (approx. 4.5 miles) This road only goes to the right!

Turn Right (North) onto Stone Quarry Road

Look for Bates Road (approx. 3.5 miles)

Turn Left (West) onto Bates Road

The next road is Townhall road

Turn left (South) onto Townhall road

First house on the left is where the club fly will be held

OR

Taking I90 East from the West exit Genoa Road

Turn Right (North) onto Genoa Road

The Next stoplight is Hwy 20 (about ¼ mile)

Turn Left (West) onto Hwy 20

Go to the fourth light, Townhall Road

Turn left (South) onto Townhall Road

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