



AMA Chapter 534,  
Medford, Oregon



October 2001

**THE ROGUE EAGLE**

## Learning Nose-in Without Nosing It In

by Jeffrey R. Elver

Just when you thought you had licked flying circuits and managing to hover in gusty winds, some new twist presented itself. Perhaps it came in the form of an overly sharp inbound turn, or maybe some precision hovering that went badly amiss. Whatever the case, there comes that first time when the accomplished novice pilot finds himself staring with abject terror directly at the nose of his helicopter. In that fateful instant the fluid control reflexes you've mastered are useless. In fact, they work against you. If you're lucky, you manage to get the machine turned back around.

Usually, the learning process is a continuous thing with one skill building slightly upon another. With nose-in hovering, the change in skill requirements is more abrupt. That's why it's not the type of thing you just pick up as a result of putting in a lot of air time.

For most of us, learning to nose-in hover requires some special effort. Some people regard nose-in hovering as an advanced skill to be taught to intermediate pilots as in the PPP training program. Others feel that it should be taught to beginner pilots as they learn to hover and before they launch into forward flight. I find it hard to weigh in on the matter. Nose-in was a skill I acquired after I was a pretty good novice pilot doing fast forward flight. That's not to say I wouldn't have benefited by learning it earlier on; I would have.

The reason nose-in hovering is so difficult is that the visual linking, the ability of the brain to translate what it sees into the subtle hand movements required to fly a helicopter, is confusing. Like standing in front of our image in a mirror, everything looks the same except that our movements are reversed. The trick with nose-in is to unlearn the reactions one has mastered in tail-in hovering.

In tail-in, if the helicopter tilts to the right we correct with left cyclic, away from the direction of the tilt. If the helicopter tilts forward we correct with rear cyclic. When the helicopter is pointing nose-in, the visual cues of left and right, forward and reverse are confused, so, we must learn the opposite reaction. When the helicopter appears to tilt to the right we must correct to the right, into the direction of the tilt. When the helicopter tilts towards us, we must pull back on the cyclic, and so on. Since these are all learned reactions, opposite the ones we've already worked so hard to master, it's a difficult task to learn.

There are two general ways to learn nose-in hovering. The first method involves strapping on the training gear—hard for us high-flying novices to commit to doing—and learning to hover all over again. This is how I started out learning to nose-in. After several hours of relearning hovering, I was able to really do well with nose-in.

Feeling pretty good about my accomplishment, I took off to fly a few victory laps around the field. Imagine my surprise when I discovered that I lost the ability to hover tail-in! I had concentrated so hard on learning to hover nose-in, that I had lost my hand-eye coordination for tail-in hovering. I had to fly around, work the helicopter into a nose-in position, then land. It was scary! The lesson to learn here is that if one decides to learn nose-in as a committed effort with training gear, one should be sure to practice with other hovering attitudes as well.

I decided to forego training gear from that point on, and move on to the more familiar plan B. For those who are well into forward flight, this approach involves making slow nose-in forward flight approaches to begin familiarizing oneself with the reversed visual linking, then from the forward approach one works slowly into a hover. This is best done at an altitude of 30 feet or so. Once in a high altitude hover, the plan is to increase the amount of time that a nose-in attitude can be sustained. At first, one may only be able to hold the position for a few seconds, eventually extending the exercise to a minute or so. Then, as one becomes more confident, nose-in hovering can be done at lower altitudes.

This approach has a few advantages. First, it requires a pilot to learn how to bail out of a loss of control situation. As the helicopter begins to slip out of a nose-in hover, one must learn to let it fall out of control, and then to reestablish a controlled tail-in position. This is something that everyone must eventually learn in order to progress into more demanding maneuvers. Secondly, this

Continue at Nose-In on page 3

# Teaching R/C Flying

By Mike Lynch

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**Throttle setting:** Most model airplanes are overpowered, including trainers. This means you usually won't need full throttle to keep the plane in the air. As you know, planes tend to be much more responsive at full throttle. For most of our practice flying, keep the throttle at a setting that ensures docile performance. As the beginner progresses, be sure they can handle the airplane at any throttle setting.

**Wind and turning:** Ideally, the wind will be calm during the beginners first few flights. However, do not consider the beginner competent with this first step until they have flown in wind of at least five miles per hour. They will find that wind presents its own problems to turning smoothly. It will appear that the plane will be sluggish when turning into the wind, while quite responsive when turning in a direction with the wind. This of course, means that different stick control amounts will be necessary with every turn. The best advice I can give is to tell beginners to **fly what they see**. If they give a little aileron control and the plane does not respond, they simply have to give more. Getting the student used to this idea early is very helpful. As we start slowing the airplane down for landing practice, this tendency for response to become sluggish will be compounded.

**Ballooning tendencies:** Most trainers have the tendency to climb with speed, especially trainers with flat bottom wing design. The faster they go, the more they want to climb. While some of this tendency can be overcome with engine downthrust, engine speed is only one factor that influences the plane's speed. As a beginner makes their first few turns, it is likely that the plane will lose altitude. As it loses altitude it picks up speed. When the beginner exits the turn, the plane will have the natural tendency to climb, due to the increased speed. I call this tendency ballooning, since the plane resembles a hot air balloon as it rises for no apparent reason. Be ready to explain this tendency. To avoid it, the beginner must make level turns. If the plane does not lose altitude in a turn, it will not pick up speed, and it will not climb at the completion of the turn. The beginner will also notice a tendency for ballooning whenever the airplane is turned into a high wind. To the airplane, it is just as if airspeed increased by the wind speed. The plane will tend to rise. This can be corrected (to some extent) by applying down elevator as the plane comes into the wind.

Try not to let the student get too bogged down with trying to overcome ballooning. Though it may seem like the plane is doing something wrong, it is just a natural tendency for trainer planes. I have seen students (and instructors) waste entire flying sessions adding downthrust to the engine and shims under the back of the wing in attempts to keep the plane from ballooning. While some marginal improvements may be made, in the end, the plane will still balloon when it picks up speed. It is much more important that the student concentrate on practicing to make level turns. Try to have them accept the fact that trainers tend to balloon. Tell them that their next airplane (probably a sportier plane) will not have this tendency. Demonstrate this on your own sport airplane.

**You know they're getting close when...** - One signal that the beginner is getting close to the completion of this step is that they begin to complain that the airplane always seems to climb. Be sure to praise them at this point! They have overcome their tendency to lose altitude in every turn. Now it will be a relatively simple matter of flattening out their turns. They can bank slightly more severely with the aileron or not give quite as much up elevator to hold the turn. When the plane gets too high, I simply have them cut the throttle a few notches and continue flying. Eventually the plane will descend. Once a comfortable altitude is reached, I have them increase the throttle a little and concentrate on making more level turns. By the way, I like to have beginners control the descent of the plane by themselves (instead of retaking control) since it makes an excellent time for the beginner to start manipulating the throttle.

**When are they finished with this step?** -Generally speaking, when the student can keep the airplane in the air for a whole flight with no coaching from you, they have mastered this step. Be sure, however, the beginner can turn left and right equally well. It is quite common that a beginner becomes much more comfortable with one way or the other, and ends up constantly setting up the plane to turn in the comfortable direction. Force them to practice turning in the direction they feel least comfortable with!

NEXT TIME – **How to set and hold headings.**

method of learning nose-in is also an excellent time to practice pirouettes. Finally, the tendency to “unlearn” tail-in hovering is avoided, much to my relief.

This method is not without its distinct disadvantages though. I never crashed while attempting nose-in hovering with training gear. The same cannot be said about learning it at altitude. Secondly, nose-in hovering is easier when the helicopter is closer to the ground and nearer to the pilot. Hovering at a height of 30 feet and at a distance of 50 feet away is much more difficult. So, the learning process is slower.

Whichever way you decide to go, learning nose-in hovering opens up a whole new dimension of flying and will allow you to do things previously not possible. So the frustrations and difficulty are well worth the reward. By all means, give it a try.

from *The IRCHA Bulletin*

International Radio-Controlled Helicopter Association

Richard McKenna, editor

Everett WA

### 2001 Club Officers And Coordinators

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**Air Show CD:**

Bill Grove 955-0634

## National Symbol

by Charles Evans Hughes

The flag is the symbol of our national unity, our national endeavor, our national aspiration. The flag tells of the struggle for independence, of union preserved, of liberty and union one and inseparable, of the sacrifices of brave men and women to whom the ideals and honor of this nation have been dearer than life. It means America first; it means an undivided allegiance. It means America united, strong and efficient, equal to her tasks. It means that you cannot be saved by the valor and devotion of your ancestors, that to each generation comes its patriotic duty; and that upon your willingness to sacrifice and endure as those before you have sacrificed and endured rests the national hope. It speaks of equal rights, of the inspiration of free institutions exemplified and vindicated, of liberty under law intelligently conceived and impartially administered. There is not a thread in it but scorns self-indulgence, weakness, and rapacity. It is eloquent of our community interests, outweighing all divergences of opinion, and of our common destiny.

from usflag.org via *The Talespinner*

Westminster Aero Modelers

Ed Goldman, editor, Westminster MD

### 2001 Events

April 7 – Spring Fun Fly Potluck

May 5-6 – Agate Float Fly

OMPRA Racing - May 12

May 20 – Ashland, OR EAA

June 2 – Lee Renault

June 23 – Military Fly In

July 7-8 – Big Bird Fly In

August 4 – Hawthorne Kids Day

August 11-12 – Airshow

September 8 – Fun Fly Potluck

October 13-14 – Agate Float Fly

Oct (not yet decided) **Builders contest**

Rogue Eagles R/C Club,  
P.O. Box 8332  
Medford, OR 97504

Stamp

To:

NEXT MEETING is October 9. Please bring your projects for show and tell.

## For Sale

Big Stick 40, Magnum XL 46, Prizm 7X Transmitter, 50 channel capability - \$250.00

JR Max 6 Transmitter, channel 16 - \$50.00

SIG Beachcraft Bonanza, 60 size, 64" wing span. Foam wing is 90% completed, fuselage is 50% completed - \$100.00

1 – OS Max 25 - \$25.00

1 – Enya 60, model 7033 - \$25.00

1 – Enya 40, model 6002 - \$10.00

Assorted mufflers and Big Lazy Bee plans

1 – Hangar 9 12 volt super starter - \$15.00

1 – Hobbico sealing iron - \$5.00

Contact Ron White, 2961 Crater Lake Ave., Medford, OR  
772-8029

Quad 50 with prop and spring start - \$100.00

Expert 7Ch with 3 receivers - \$100.00

Contact Richard Schwegerl, 773-5479

## A Bum Joke

A bum asked a man on the street for \$2.00.

“Will you buy booze?” the man asks, to which the bum replies, “No.”

“Will you gamble it away?” Once again the bum replies, “No.”

“Will you make bets at the golf course?” The bum replies, “No.”

“Will you spend it on model airplane things?” Once again the bum replies, “No, I don’t fly model airplanes.”

Then the man asks, “Will you come home with me so my wife can see what happens to a man who doesn’t drink, gamble, play golf, or fly model airplanes?”

from the Florida Modelers Association newsletter  
Frank R. Braden, editor  
Palm Bay FL

# Letter From the President

Dear Members

As you may recall, last March, I asked you to try out a new management plan concerning the management of our club. This plan mainly turned over the decision-making to a nine member board of directors in order that our club meetings could be used for mainly seminars, show-and-tells and guest speakers. The meetings would only have a short requirement regarding the previous minutes of the last meeting and treasure's report as required by state law regarding non-profit organizations. The only other business use of the meetings was for the approval of expenditure of clubs funds exceeding \$300.

I asked you to approve the plan for a seven-month trial period, which you agreed to by your vote. In October that trial period is up. I asked that at the October meeting that if you wanted to continue this plan that you would vote for a permanent change by voting to change the By-Laws of our club.

Our current By-Laws require that a 2/3's of our current membership vote in order to change our By-Laws. Being that 2/3's of our members have never attended a meeting at the same time a mailing [Newsletter] must be employed. It is, of course, very important to our club that you return your vote. There is no way to identify which vote came from what member. As is customary and required, a non-returned vote will count as a yes vote.

A copy of the original draft that was originally presented to you in March and in our Newsletter is included for your review.

If it is inconvenient for you to bring your vote to the October meeting please mail it to our P.O. Box 8332, Medford, 97504.

The dead-line for remitting your vote will be October 31<sup>st</sup>. The results will be posted on the Web Site, November Newsletter and announced at the November meeting.

Regards, Danny Stanton, Pres.

Having reviewed the proposed management proposal on the following page, please vote for (yes) or against (no), and return your vote as specified above:

Yes: \_\_\_\_\_(You're voting for the proposal and change of by-laws)

No: \_\_\_\_\_(You're voting against the proposal and by-laws change)

# Club Management Proposal

- 1) The Board of Directors will make all decisions for the club in order that the regular meetings will be reserved for modeling activities, show and tell's, seminars and similar activities.
- 2) The board will consist of nine members: five elected officers and four elected board members. The five elected officers will be responsible for; President, Vice President, Treasurer, Secretary and Public Relations. The four elected board members will be responsible for; Field maintenance, News letter Editor, Field Safety, video Librarian, Air show CD and Flight Instruction. These duties may also be shared with elected officers.
- 3) The Board will share in all work that is required to run the club. No member will be required to do any work running the club. The board may ask for volunteers for special projects like field improvements, and additions.
- 4) The members may make submissions to the board in writing, regarding events, club policy or any concern having to do with the club.
- 5) The members will be notified at the regular meeting what the Board will be voting on at the next board meeting which is held two weeks after the regular meeting. A list will be posted on the web site as well. All board members will have their phone numbers and e-mail address, if available, posted on the web site and the news letter so that the members will have the opportunity to impress on each board member which way they would like them to vote on a particular issue.
- 6) All decisions of the board will be final, however a member may submit to the board for a consideration of another vote on any issue that was passed or not passed as frequently as the member would like. Many conditions change on issues over time.
- 7) The board members will be elected for a two-year term and may be re-elected for additional terms. In the event that any member during his term wishes to resign for any reason, he may do so and a new member will be elected by the membership.
- 8) The dues will be waived for all Board members, except for the current year (2001) as all members have already paid.
- 9) A membership in the club will include a wonderful place to fly, \$25 annual dues, must obey the rules at meetings and at the field, no requirement to attend meetings or do any work to run the club and will have no say in the way the club is run (except as specified above). The member will have voting rights regarding electing officers and Board members and approval of funds exceeding \$300.