

# FlightLine

A Monthly Publication of Collins Model Aviators

October 1997



## Reminders:

- Thursday October 2<sup>nd</sup> is the CMA club meeting
- Nominations for CMA club officers are now open.

**October's Featured Photo:** Floyd Van Auken took the photos of the CMA Fun Fly and Picnic that appear in this issue. Looks like there was a good turnout.

I'm sorry I wasn't able to attend this year. I hear it was a lot of fun for those that made it.

See page two for more photos, and watch the web for a posting of the results of the contests.

James H. Doty, FlightLine Editor →

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# CMA Fun Fly photos by Floyd Van Auken



## President's Column

by John Michael

Well, summer and flying season is drawing to a close. For all the good flying weather we have had this summer, it seems like it just started, and now we have to squeeze out those last daylight minutes in the evening. For those of us who are still dependent on having someone at the field to help keep us out of trouble the time is even less. It generally means that whatever accomplishments that were not made this season will have to be put off till next. I hope next month I will have a few more flying times to report on.

For all of you who could not make it to the fun fly in September, and those that did, we had a great time. My thanks to all who had a part in the planning and execution of that day. You did well, and we couldn't have asked for a nicer day. The weather was some of the best we've ever had, we had a good group of people, and it looked like everything went pretty much as planned. Starting later in the day worked out well too, although as is typical of the season, flying had to end shortly after 7:00, so most of the flying time was taken up with the events. Congratulation to all who went home with a prize. For those who didn't, I hope you had fun, and we'll do it again next year.

Congratulations to Ehren Van Auken, who was signed off at the field last Thursday. Not bad for one season.

I reached a milestone myself. I landed for the first time, on the runway, with the airplane still on it's wheels. I even did it more than once. I'm excited, but it took me three years to get here.

At our next meeting we are going to take name for nominees for club officers. I say this at the risk of keeping everyone from coming to that meeting. But then, those who are not there have a better chance of being nominated. I hope everyone is considering serving the club next year as an officer. As someone who has done it three years in a row, I can say it's not so bad, and really doesn't take up that much time. We've got a great bunch of people to work with. But we do need some new ideas and a

renewed interest. Serve the club as an officer and help us move forward and have fun doing it.

See you October 2.

John Michael, CMA President →

## Congratulations

Congratulations to Ehren Van Auken on his successful solo flight on 11 Sept. Rich Dean, his flight instructor, worked with Ehren since his first flight on 22 April. Ehren had logged in 48 flights for a total time of about 6 hrs. Three minor crashes did not stop Ehren from making his goal of being able to fly solo within one season.

Thanks to Rich Dean and the support from the CMA club for allowing Ehren the opportunity to be with other R/C airplane enthusiasts and to learn more about the hobby!

Floyd Van Auken →



*The following articles are reprinted from the AMA's National Newsletter*

### Ten Rules of Model Airplane Etiquette

#10 - Always offer a woman pilot the light station without the Fire Ant mound.

#9 - Always inform the other pilots of your intentions, your intention to takeoff, your intention to land, and your intention to make a big crater in the middle of the runway (it's always hard taxiing around those fuselage tails sticking out of the ground).

# 8 - When walking up to the runway for landing, it is impolite to walk between two people using a buddy box.

# 7 - It's considered bad manners to yell at someone who's been tying up the runway, even for a substantial length of time. After all, that's what water balloon bombs are for.

# 6 - It is the ultimate in bad manners to run over someone else's plane when backing out of the parking lot, unless that plane is the only one with half a chance at beating you in the next contest.

# 5 - In Europe, it's considered the height of poor taste to groan, cry out, or make any noise at all when a fellow flier crashes a plane. In this country, an air-horn blast is just barely considered rude.

# 4 - If a fellow flier should be unfortunate enough to seriously injure himself at the field, common courtesy demands that you should lend any assistance necessary, such as helping him

Super Glue the forty-two inch long gash on his forehead together, so he can get back to the serious business of flying.

# 3 - If your aircraft goes out of control, it is polite to warn other pilots of the fact by calling out "HEADS UP!". Diving under a table and yelling "YOU'RE ON YOUR OWN, SUCKERS!" is not considered appropriate behavior.

# 2 - It is not only rude but against club rules to buzz the pits, the road, or the parking lot. On the other hand, the guy mowing the lawn is always fair game.

# 1 - Always be considerate and patient with a beginner pilot who comes to the flying field with a trainer. Someday he'll be a reckless egotistical pilot, just like you.

Excerpt from Catalina Radio Control Modelers Newsletter, Tuscon, Arizona, Courtesy of Bill Magnus via the Internet

From the November 1996 National Newsletter →

## ***A Modeler's Wife's Lament***

*Once upon a time, many years ago, I didn't know the difference Between TopFlite and Dubro.*

*I thought MidWest referred to A region of the land, And RC was my initials Before I got a wedding band. Great Planes were fields that stretched, As far as the eyes could see. Models were something little boys built While they sat and watched TV.*

*One day my husband told me, "I want to learn to fly, and I have found an airplane That I would like to buy."*

*I was thinking Cessnas. Not an airplane kit. I told him, "No way! Before you've even started. You've already quit"*

*When I found out the airplane He wanted was not real. I was so relieved. I thought "A model's not big deal."*

*Little did I know, The changes to my life, That little kit would make When I became a modeler's wife. A "model room's" required At houses we live in. If there is no workshop Then the "model room's" the den.*

*Everything about our life Revolves around the planes. And all our plans are based on If it's windy or it rains.*

*He's had Trainers, Hots and Elders, Big and Little Stiks, Chipmunks, Cubs and Gliders, He's flexible on getting his kicks.*

*He's had Four Stars, Stingers, Aerostars, Spacewalkers, Sportsters and Extras. He's also had helicopters and a few RC cars.*

*He had a 1/3 scale Fly Baby That lasted for three flights. And for about 15 minutes, He had a Christian Eagle Bipe.*

*Sometimes I kinda feel like I'm stuck in the middle. And me and the kids, well— We play second fiddle. I know that's not the way it is, He loves us more than them. And I can go up to his shop, If I really need to see him.*

*Being a modeler's widow, Could drive a girl insane. But instead of going crazy, I think I'll get my OWN plane!*

From the November 1996 National Newsletter →

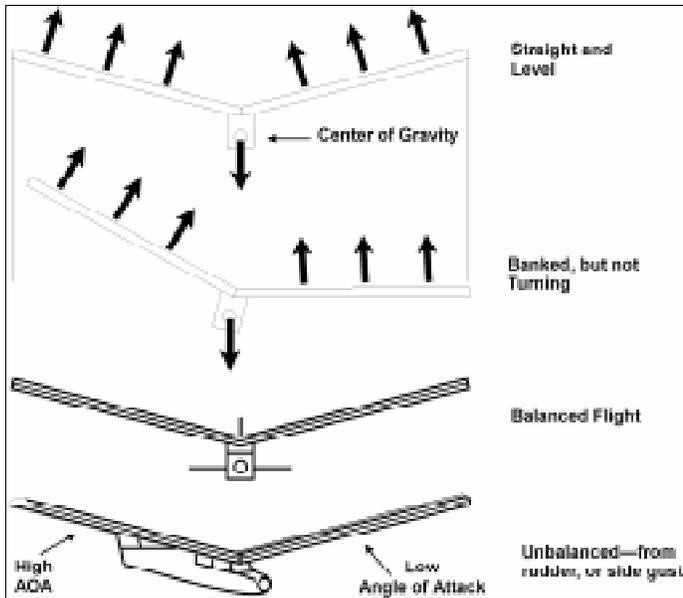
# Dihedral—How Much is Enough?

by Clay Ramskill

Like most things in the aerodynamic world, the answer to the above question is, "It depends."

It depends upon what you want from your plane; how maneuverable or how stable you wish it to be in the rolling axis, whether or not you desire the plane to roll when you deflect the rudder, whether or not you wish the plane to tend to self-right when it upsets from wings level.

In general, the more dihedral an aircraft has, the more it will tend to self-right to wings level when upset from straight and level flight. This little bit of roll stability makes the plane easier to fly because the pilot doesn't have to be constantly fighting to maintain wings level. Note the top two drawings in the figure. Once we are no longer level, the lower wing is effectively a bit longer, and the lift forces on the lower wing are pointed more straight up. Also, since the figure shows a high wing plane, the CG of the plane is offset toward the high wing. All of these situations tend to force the plane back to a wings level condition initially, before the plane begins turning or skidding sideways.



But the conditions described above won't last long. Also note that we now have the lift forces on the higher wing pushing sideways; this will cause the

plane to skid sideways, turn or both. Assuming no corrections from the pilot, what now happens is largely dependent upon the size of the rudder/fin combination! If the fin/rudder area is just right, the skid continues just enough for the dihedral effect of the wings to return us to wings level. Too much area in the fin/rudder, and we turn without skidding. Centripetal force from the turn negates all the self-righting effects, and we fly in balanced flight, but in an ever increasing nose-down spiral.

This is called spiral instability. Too little fin/rudder area, and the skid continues even as we pass wings level, resulting in over correction, and the plane rolls and skids, oscillating like a drunken sailor. This is called Dutch roll.

Although the above discussion is more important to glider and free flight pilots, it brings us to look at how dihedral effects a plane in skidding flight, and the good and bad sides of the dihedral effect. Note in the figure what happens to a plane with dihedral when in a skid or unbalanced flight.

This condition can occur with the pilot's deflection of the rudder or when a wind gust hits the plane from the side. The large discrepancy in angle of attack between the two wings causes the plane to roll away from the direction of the skid. The dihedral effect is beneficial in self righting, gives us roll coupling with rudder application, and unfortunately, also gives us roll away from a side wind gust.

Incidentally, sweeping a wing back also gives us dihedral effect, with about 5 degrees of sweep being equivalent to 1 degree of dihedral.

While roll coupling is essential to a trainer with no ailerons, it's not good for aerobatic and combat aircraft. Most aerobatic and pattern models will have no dihedral. Military planes, with swept wings for speed, often use negative dihedral to counter the dihedral effects from the wing sweep. The Harrier, A7 Corsair and C5 transport come to mind.

And while trainers usually have quite a bit of dihedral and are wonderfully stable in normal flight, we've all seen them turn vicious in a gusty crosswind, during takeoff and landing and even while taxiing on the field.

How much dihedral is enough? For most of us, then, the answer is, "Only enough to give us the roll stability we need, commensurate with our flying skills!"

From the January 1997 National Newsletter→

## **Tiny Helicopter Has Initial Flight**

Mainz, Germany (AP)—

Making its maiden flight Tuesday, an inch-long German helicopter hovered to an altitude of 5.2 inches before landing safely among a crowd of pleased scientists.

Researchers at the Institute for Microtechnology in Mainz hope their micro-motor will have practical applications in medicine, computers and toys.

Propelled by two blades that rotate at more than 100,000 times a minute, the chopped-off chopper is about the size of a toothbrush head, weighs one hundredth of an ounce and is one-third of an inch tall. It cost \$68,000.

The motor was connected to an electricity supply by copper threads. When more power was applied, the machine went up; when power was reduced, it landed.

The institute will try to secure an entry in the Guinness Book of Records, but the real challenge is to find practical applications for the mini-helicopter, backers said. The German machine manufacturer Faulhaber already has plans to produce the motor, researchers said.

From the January 1997 National Newsletter→

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## **CMA Officer Nomination Form**

President\_\_\_\_\_

Vice President\_\_\_\_\_

Secretary/Treasurer\_\_\_\_\_

FlightLine Editor\_\_\_\_\_

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President\_\_\_\_\_

Vice President\_\_\_\_\_

Secretary/Treasurer\_\_\_\_\_

FlightLine Editor\_\_\_\_\_



## Heads Up, CMA Activities

Thursday, October 2, 5:00 pm—Club Meeting

Friday, October 24, 5 pm—FlightLine Deadline

Thursday, November 6, 5:00 pm—Club Meeting

Thursday, November 13, 6-9 pm—Build Session

Friday, November 21, 5 pm—FlightLine Deadline

**Note:** Meetings and build sessions will be held in the 35th street N.E. Facility (main plant) Cafeteria building 140.



### Send your input for the CMA Web Page to:

Tom DeWulf x5-4015  
tvdewulf@cacd.rockwell.com

### 1997 CMA Staff

**President:** John Michael.... x5-2914  
**Vice President:** Bryan Wesner .. x5-3082  
**Secretary/Treasurer:** David Gillespie. x5-8512  
**FlightLine Editor:** Jim Doty..... x5-2931  
**Web Page Editor:** Tom DeWulf..... x5-4015

#### **Flight Instructors:**

Rich Dean  
Dave Decker  
Tom DeWulf  
Dave Dillman  
Mark Woytassek

#### **Flight Instructors in training:**

Irv Anderson

#### **Test Pilots for first flights of new airplanes:**

Rich Dean  
Mark Woytassek



### Send your input for FlightLine to:

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## For membership information:

Contact: David Gillespie  
CMA Secretary/Treasurer  
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djgilles@collins.rockwell.com

## For an AMA membership application:

<http://modelaircraft.org/Mem/Memapp.htm>

## AMA National Newsletter goes on-line:

<http://modelaircraft.org/News/Newsletters.htm>

For selected articles from AMA club newsletters around the country

## Flight Training

**Flight Training is given every Tuesday and Thursday night from 6:00 pm until dark weather permitting**

Tuesday night introductory flight training is given  
Most Tuesday nights at least one club trainer is available for introductory training.

Advanced flight training is held Thursday night  
Beginners with their own airplanes are welcome, but the club trainers are usually not available unless requested in advance

Check the CMA Hotline **295-8888**  
for the latest information on the training sessions

## Build Sessions

**Build sessions start in November and are held from 6 to 9 pm on the second Thursday of every month**

**Bring your current project, or just stop by and see what people are working on**

**For more information call:  
Rich Dean x5 8002,  
Build Session coordinator**

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# 1997 CMA Membership

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<u>M/S</u>	<u>NAME</u>	<u>M/S</u>	<u>NAME</u>
108-103.....	Irvin Anderson	108-136 .....	Patrick Neu
108-166.....	Geoffrey Barrance	137-136 .....	Marion Payne
124-111 .....	Alan Bechtold	108-175 .....	Elio Piccmenti
124-111 .....	Bob Buschette	137-152 .....	Steve Plantenberg
137-109.....	Brian Collins	164-100 .....	Crist Rigotti
124-111 .....	Dan Cooley	124-123 .....	Wayne Savold
124-115.....	Rich Dean	137-137 .....	Troy Simonton
153-260.....	Tom DeWulf	108-136 .....	Duane Smith
153-264.....	Dave Dillman	108-136 .....	Brian Smith
124-300.....	James Doty	124-115 .....	David Sneitzer
106-183.....	Mike Eastman	137-101 .....	Steve Timm
153-260.....	Doug Emerson	107-140 .....	Floyd Van Auken
153-163.....	David Gillespie	107-140 .....	Floyd Van Auken (for Ehren)
153-163.....	David Gillespie (for James)	139-142 .....	Charles Ward
153-163.....	David Gillespie (for Amy)	153-260 .....	Bryan Wesner
108-166.....	John Michael	153-260 .....	Bryan Wesner (for Michael)
108-166.....	John Michael (for Kevin)	107-110 .....	Victor Wolfe
108-136.....	David Neu	137-125 .....	Mark Woytassek

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