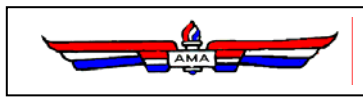


January, 2007

Issue #123



# Marc's Mish Mash

AMA Chartered Club #107

Next Meeting January 4th, 2007 Cammack Village City Hall-7:00 p.m.

## From the Editor's Desk

Holy smoke! It's the New Year already. Funny thing is, I have just gotten used to writing 2006. Here we go again, another year has passed and I will have to learn to write 2007. Oh, the trials of growing older!

I for one absolutely do not make New Years resolutions, but if I did it would have to be a resolution that is fairly benign that I wouldn't mind breaking! The closest thing I will commit to is trying to fly more than I did last year. It seems like I spent a lot of time doing other, less important things.

While preparing for this issue I got a little nostalgic. I thought maybe we should do something like the networks do like run the big stories from 2006. Then I thought who would want to reread any of mine or our President's previous ravings. No, I will spare you a walk down memory lane. So that just about does it for my nostalgic craving. If you have anything from days gone by however, please pass it along. By the way, at our website is a fantastic history of the club and I highly recommend you reading it. It is great.

Well on to my latest epic adventure! The Saturday before Christmas, I brought my Turbine Lama to the field in hopes of firing her up for the first time. After fielding a thousand questions, two phone calls to the turbine

distributor and numerous well wishers with helpful hands, no joy, the turbine would not finish programming the ECU. So I shook my head and headed home to put it away for awhile.

Man oh man, I don't know about you but when I can't figure something it will bug me until I do. So after several iterations of changing receivers, changing transmitters, scratching my head, etc., etc., I finally changed out the switch to the receiver. Low and behold the ECU completed its programming and I called my partner in crime to spread the news. Now you all know Randy Womack (our EI Presidente) and one thing he is not is shy and he won't hesitate to tell you what he thinks. He declared that we must immediately if not sooner fire the turbine up. Within 15 minutes he was at my shop with video camera in hand.

Armed with the fire extinguisher and turbine manual we went through the check list. A soft pop of the propane igniter was heard and then the turbine spooling up with it's high pitch whine. All by flipping two switches. Wow! Just as it was supposed to work and it did. The turbine spooled up to 38,000 rpm at idle speed. One more flip of a switch and over a 30 second period the turbine spun up to 98,000

rpm which is flight rpm. It was magnificent and we had ear to ear grins like two teenagers at a spin the bottle contest! It worked, it really worked. Both of us were in awe and couldn't believe we got it started without blowing us, the house or nearby neighborhood up. If fact, we were in such a state of ecstasy that we shut her down and fired her up again just to see if we could.

My wife came out to see what all the fuss was about and told us that we had set off the CO2 alarms in the house. For whatever reason she thinks Randy can do no wrong and that whatever the issue was I had to be the instigator! When she heard the turbine whining she just shook her head and said, "the difference between men and boys....." well you know the rest.

Happy New Year and Safe Flying.



### Contents

- Editor
- The Pivotal Attitude
- From the President
- Days gone by
- 2007 Event Schedule
- At the Meeting
- Show & Tell-2006



Let the editor hear from you.

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## THE PIVOTAL ALTITUDE

by  
PAUL FLEMING, JR.

When an aircraft turns at a sufficiently low altitude, the wing tip as seen from the cockpit appears to move *forward* over the ground. Increase the altitude enough, and the tip appears to move *backward* over the ground. An intermediate altitude exists at which the tip appears to stick to a point on the ground as the aircraft pivots about in its turn. This particular height is the **pivotal altitude**, and is calculated by the simple formula  $PA = 0.067V^2$  where **PA** is the altitude in feet and **V** is the speed in **mph**.

It is very surprising that this altitude is completely independent of the type or size of the aircraft and depends *only* upon its speed. It works out that at a Cub speed of 60mph, the **PA** is 241+ feet. However, the **PA** increases as the *square* of the speed so that for a some craft flying at 120mph, it is 964+ feet.

This phenomenon is the basis of the C-47 and C-130 gun ships used by the US Air Force. The 50 cal, 20mm and 75mm weapons are aligned at  $90^\circ$  to the fore and aft axis and level with the wings: the pilot aims by flying at the **PA** and dropping a wing until the tip is on the target. The aim is maintained quite accurately throughout the turn. Actually, speed can be a disadvantage here. A C-47 (or any aircraft) at 150mph pivots at 1507 feet while a C-130 at 250 needs 4187feet. The scatter of the gun fire increases with altitude so it may be necessary to slow down for better results.

The hot sticks among MARCSmen should be able to execute a pivot turn with a little practice. The typical RC craft sports a wingspan of five or six feet and flies at about 60mph. The **PA** for the RC, like for the Cub, is 240 feet. View the sketch and position yourself at Point **A** well out to the north (perhaps a hundred feet beyond the fence) so that I-40 and the oil tanks will not get in the way. Hold the extended arm out with thumb up at an angle of  $45^\circ$  (get a friend to help estimate the angle) and circle around in and out until the wing is about two-thirds the width of the thumb. For a five-foot model, the distance to the craft will be about 340 feet along the *slant* and it also will be at an altitude of 240 feet while making a turn with a radius of 240 feet. The wing tip now should be pointing straight at the eye all the way around the turn. If flying too low, the wing tip will appear to be traveling *with* the model and this would be forward if viewed from inside the cockpit. If too high, the tip will appear to be rotating backward. Note that the PA is the same for any angle of bank, but a steeper bank will reduce the radius of turn while a more shallow bank will increase the us. The angle of the arm need not be  $45^\circ$ , it can be anything, but this angle is the simplest to judge for the desired effect.

Effecting a pivot turn should not be any more difficult than a knife edge or an inverted flyby. Give it a try.

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### OFFICERS 2006

**President-** Randy Womack 372-0373

**VP & Editor-** Paul Holland 851-6063

**Secretary-** Phillip Whiting 834-0909

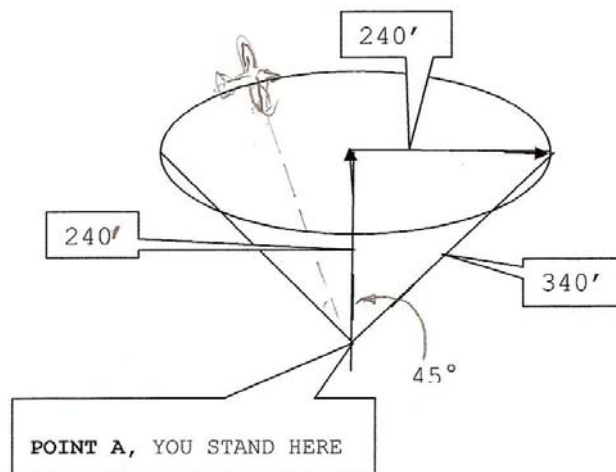
**Treasurer-** John Karolson 851-3828

**Safety Officer-** Marshall Burroughs

**Tech Officer-** Dennis Glover 835-0386

**Field Marshall-** Mark West 961-1641

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## From the President...

The New Year is upon us and this years events have been planned and our posted on the web site. I'm told by the web master that we should have a new home page by the first of the year so stay tuned for that and some other new stuff as well.

I've appointed Marshall Burroughs as this years Safety Officer and Dennis Glover will remain the Tech Officer also don't for get club dues are now due. See ya at the field!

You're President  
Randy Womack

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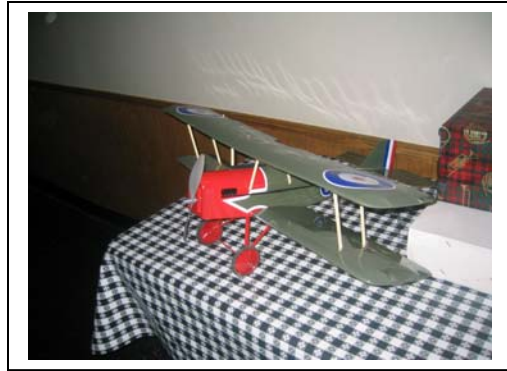
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## MARCs Club 2006 Christmas Party-Whole

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## Membership & Pilot Information

<b>Initiation Fee</b>	<b>\$10.00</b>
<b>Open Membership (19 to 64 years of age)</b>	<b>\$60.00</b>
<b>Senior Membership (65 &amp; older)</b>	<b>\$45.00</b>
<b>Junior Membership</b>	<b>\$10.00</b>
<b>Note: For Juniors, one parent/grandparent is encouraged to join as an Associate Member since the junior member, under the driving age, must be under their supervision at the field. The Junior membership fee is waived if a parent/grandparent joins as an Associate Member.</b>	
<b>Associate Membership</b>	<b>\$15.00</b>
<b>Late Fee</b>	<b>\$10.00</b>

Membership fees for those joining during the year will pay \$5.00 per month remaining in the year PLUS the \$10.00 Initiation Fee.

It is past time to renew your AMA and Club dues.

### New Pilot Ratings

- **Joe Flaherty** –Pilot Rating
- **Ryan McCon** –Advanced Pilot Rating
- **Jim Tolar** –Advanced Pilot Rating
- **Bill Engberg**-New Member

### MARCS 2007 EVENTS

1. Jan 1st Frost Fly
2. Feb 24<sup>th</sup> Chili Cook Out / Fun Fly
3. Mar Open
4. Apr 14<sup>th</sup> Pancake Breakfast
5. May 19th Family Picnic
6. Jun 1st 2nd 3rd SMALL
7. July Open
8. Aug 25th Float Fly Lake Willastein
9. Sept 3rd Labor Day BBQ
10. Oct 13<sup>th</sup> Pancake Breakfast
11. Nov 17<sup>th</sup> Hot Dog Lunch / Fun Fly
12. Dec 1st Christmas Party

### NOTAMS

**Notice to Airmen**  
 ONCE A MEMBERSHIP CARD IS CREATED IT WILL BE PLACED IN THE PIN BOARD BOTTOM SECTION WHERE THE BLANK SLOTS ARE LOCATED. THE PIN BOARD IS LOCATED IN THE FIELD HOUSE. MEMBERS WHO HAVE NOT RECEIVED THEIR MEMBERSHIP CARD SHOULD CHECK THE PIN BOARD THE NEXT TIME THEY ARE AT THE FLYING FIELD. IF NOT THERE NOTIFY OUR PRESIDENT.

## At the Meeting-December

MID ARKANSAS RADIO CONTROL SOCIETY  
(M.A.R.C.S.)  
DECEMBER 07, 2006  
MEETING MINUTES

The meeting was convened at 7:00 p.m. by our president Randy Womack at the Whole Hog Cafe. This meeting was our annual Christmas party and took the place of our regular December meeting.

**New Members:**

None

**New Pilot:**

Joe Flaherty acquired a rating of pilot.  
Ryan McCon acquired a rating of advanced.  
Jim Tolar acquired a rating of advanced.

**Announcements:**

The club is donating \$100.00 to CARTI.

**Reports:**

November 2006 meeting minutes were read and accepted.

Treasurer report was given and accepted.

**Old Business:**

The field fund had no expenditures last month. Balance remains the same

**New Business:**

None

**Show and Tell:**

Glen Meldahl showed a SE5a Bi-plane he built. The plane has had one flight.

**Raffle:**

Jim Farmer won the RTC aircraft donated by Frank Osborne.  
Ms. Jim Farmer won one of the ladies gift certificates.  
Ms. Harold Chakales won the other ladies gift certificates.  
Stan McDaniel won the grand prize of a Hanger 9 Pulse 40 ARF.

Meeting was adjourned early due to the Razorback Ball Game. A good time was had by all in attendance.

## Show & Tell from 2006



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### **MISH MASH**

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Maumelle, AR 72113

