



April 2015

Next General Meeting April 22nd

Presidents Notes

If you take a look at the calendar, we are about to embark on a busy season. First up is the Young Eagles rally on Saturday, April 18, followed two weeks later by the Ford Tri-Motor visit, followed two weeks later by the May Young Eagles rally. I am personally looking forward to each and every event. Yes it is going to be busy, but rewarding as well. Tracy reports we are receiving lots of telephone calls about the Young Eagle rallies, so we should have a good turn out. The weather looks good as well. The Ford Tri-Motor will be an experience for everyone. Aside from the aircraft itself, it should be an interesting time meeting all the people who show up, sharing in their curiosity and excitement. With rides costing only \$75 for adults (\$70 if reserved in advance), we should have lots of passengers. Let's give them a warm welcome to the airport - I'm sure the Captain will give them a ride they won't forget! Bill Bower is busy sending out messages to our previous Young Eagles to generate interest in the Air Academy. The chapter is holding a reservation for a young man between 16 and 18 years of age to attend the advanced session, which coincides with part of the air show, in late July. We have enough credits from our Young Eagles flights last year to pay for the tuition and a good portion of the air fare for the lucky candidate. If you know of anyone who might qualify, please let Bill Bower know.

We just submitted our shopping list to the airport office for items to improve the Clubhouse, taking advantage of the budget allocated by the airport for this purpose.

On the list are:

- A new stove
- A new microwave
- Light fixtures for the fireplace room
- New windows for the fireplace room
- A large white board for the big meeting room
- Four outdoor benches that can be converted to form two picnic tables

Most of these items will arrive by the end of April. The windows will take a little longer, and will require installation by several of our more talented members

Scott Achelis is organizing this effort. I am looking forward to seeing all of you during the weekends ahead!

General Meeting Notes

President Bill Reining called the meeting to order at 19:45 in the clubhouse great room. Twenty-two members plus guests Tim Albert representing CAP and Samuel Daly enjoyed Rich Bourgeois's dinner. Welcome new member Gordon Campbell a NRI member, 925.639.1543 gordon@campbell.name.

Finances – Bob Belshe

Our bank balance is \$991, plus \$167 in dues this evening. Tracy reports progress in the refund of our \$400 Wings Over Wine Country deposit.

Young Eagles – Renee Robinson

Volunteers are always needed, pilots license not needed for ground support personal. Our first event of 2015 will be Saturday April 18th, and every third Saturday thru October, except July. Tim Albert plans on having CAP cadets on hand to help. Tracy has repaired our banner on Concord Ave and Diamond. It is sun damaged but should last the year. Bill Bower has our young eagle events listed in Social Flight.

Clubhouse Updates – Bill Reining

The list of clubhouse equipment needs to finalized by our next board meeting, to meet the county's budget schedule.

Ford Tri Motor – Bill Reining

The Ford will be arriving from Fresno for its first Bay Area stop, flights will be available Friday thru Sunday May 1st, 2nd and 3rd. Purchase tickets at www.flytheford.org, advance online \$70 onsite \$75. The aircraft will arrive with two crew, a pilot and ticket sales person. All other duties need to be handled by our volunteers. It will operate from PSA's ramp and spend the night in their hanger.

Our speaker for the evening was unable to attend. Instead we viewed the EAA Tri Motor ground crew training video and the monthly EAA Chapter Newsletter.

PJM

Active Chapters Thrive

By Bret Steffen, EAA Director of Education, EAA Lifetime 870589

April 17, 2015 -I've visited a lot of chapters over the past two years, and read newsletters and spoken with leaders from many more. As I have said before, leadership is an important key to a chapter's success. Digging deeper into what a good leader brings to the table is a little bit harder, but one fairly common trait is the idea of being active.

"Active" is more than a meeting with a great guest speaker and showing the chapter video magazine once a month. The reality is that people like to do things with their hands. Chapters that are building or restoring aircraft tend to feel pretty successful. Chapters that fly Young Eagles or do frequent fly outs also feel pretty successful. I know chapters that have built pedal planes, organized food drives, and hosted a monthly breakfast or lunch - all seem to have higher than average feelings of success!

Organizing a few hands-on activities for your chapter can be a great way to build interest and positive energy in your chapter. There's an interesting thread on the EAA Forums site I hope you'll visit to get some ideas—or even share with others. We are all in this together. Let's have some fun!



Should You Climb For Rate or Gradient?

Posted on [April 21, 2015](#) by [Mac](#)



I think we all know there are two fundamental measures of climb—rate and angle. Actually I don't like the term angle of climb, but that's the normal terminology used for piston airplanes.

Rate of climb is the amount of altitude gained in a specific amount of time, usually expressed in feet per minute. For trip planning rate of climb is the most useful and using the appropriate airspeed to achieve optimum rate of climb for your weight is usually most efficient.

We are told to use the best angle of climb airspeed— V_x —when we want to climb as steeply as possible. A steep climb is one that achieves the highest altitude over the shortest distance.

Steep or angle are pretty useless terms when planning a takeoff or go-around. What you really need to know is how much altitude you will gain in a certain distance. That's because the terrain or obstruction you are trying to clear is a fixed distance away and you need to know if you can clear the obstacle.

That measure, altitude gained over distance, is called climb gradient. It's the takeoff performance requirement transport pilots must consult and be certain the airplane can achieve given weight and all other performance factors prior to any takeoff.

I think we all know there are two fundamental measures of climb—rate and angle. Actually I don't like the term angle of climb, but that's the normal terminology used for piston airplanes.

Climb gradient—also called simply grade by railroaders or highway designers—is normally expressed as a percentage. A 1% climb gradient in aviation terms is an altitude increase of 1% percent during a nautical mile flown, or about 60 feet.

So you know that hill is two miles away and 120 feet higher than the runway so a 1% positive climb gradient will just barely clear the ridge. You could do the math to work backward from a known rate of climb to find the gradient. Or you could apply math to find the altitude gained versus distance if you know the climb angle. But applying available climb gradient to the charted obstructions around an airport is so easy.

Some piston airplane POH climb charts include gradient along with rate, which is useful. But in the POH that do that, at least the ones I am familiar with, the data is presented only for climbing at V_y , best rate airspeed. For planning purposes you can assume that if the available climb gradient data clears obstructions when holding V_y you would have more clearance margin by flying V_x . But you wouldn't know how much.

So the best we can do with the available data is climb initially at V_x until above obstructions and then accelerate to V_y to continue the en route climb.

Another reason to climb at the highest gradient initially is to gain the most altitude while remaining as close as possible to the runway. Wouldn't it be wonderful if we could climb straight up to a safe altitude right over the airport. Then if an engine quit or even sputtered a return to the runway would be a piece of cake.

But we can't climb straight up, and in most cases even helicopters can't, but making our initial climb at V_x comes as close as possible.

Once clear of obstructions and at a safe altitude accelerating to V_y expands our options because it puts the most air under us in the shortest possible time.

If there are obstacles not far from your takeoff runway it's worth the time to consider the maximum climb gradient your airplane can achieve. Even if the POH doesn't have gradient data you can calculate it by factoring in the V_x airspeed and rate of climb data. Remember to correct the airspeed to groundspeed because that's what matters so wind, temperature and elevation are all variables to consider.

After you calculate available climb gradient be sure to build in a fudge factor. In transport airplanes the fudge factor is at least 0.8%. The climb gradient measured in flight test—almost always with the most critical engine failed—is reduced by the 0.8% to determine net gradient. It is only the engine-out net gradient that transport pilots are allowed to use when planning obstacle clearance for takeoff. So it seems logical to me we should fudge at least 1% when calculating climb gradient in a piston airplane takeoff.

The lighter the airplane the closer V_x and V_y indicated airspeeds are likely to be. But even in my airplane which weighs 5,400 pounds maximum for takeoff V_y is 18 knots faster than V_x , a pretty wide margin. Whatever the airspeed difference it's worth it to know when you need maximum climb gradient and how to achieve it and what percent it is likely to be.

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Pilot's Bill of Rights 2/Aeromedical Reform: Keep Pushing!

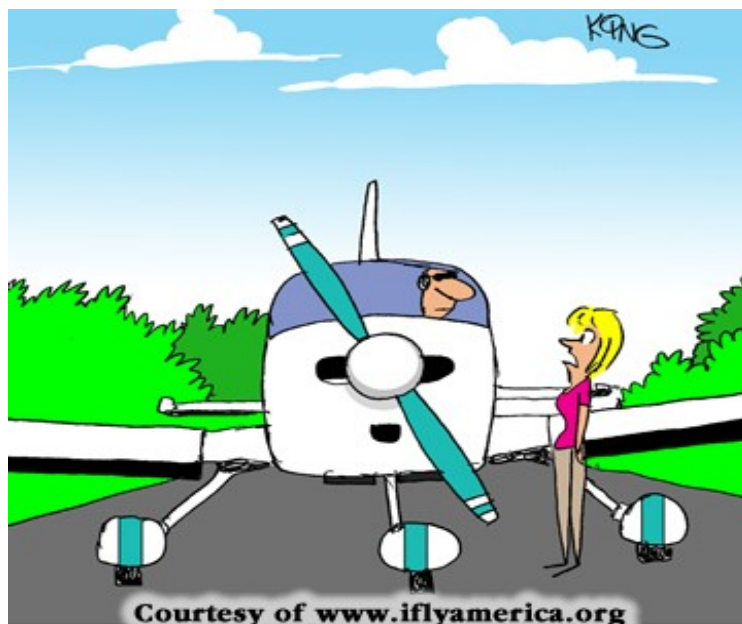
April 16, 2015 - Nearly 20,000 letters have been received in congressional offices from EAA members urging support for the bipartisan Pilot's Bill of Rights 2 that includes the vital aeromedical reform measures. That's terrific! It also helps EAA's advocacy team as we urge more lawmakers to sign as co-sponsors to the bill in the House and Senate.

There's something that works even better than thousands of e-mail messages, though – a personal call or note to your lawmaker's office. Or, chatting with your representative or senator (and their staff) during district listening sessions or public appearances. You can find contact information for your representative and senators through EAA's [Rally Congress website](#).

If your local lawmakers have already signed on as co-sponsors of the bill, be sure to thank them. If they haven't signed on yet, ask them to support their constituents who fly by backing H.R. 1062 (in the House) or S. 571 (in the Senate).

Your D.C. lawmakers will be in their home areas during the upcoming summer recesses. Many of them are at public venues, connecting with voters and constituents.

The Pilot's Bill of Rights 2 is a measure you have been demanding as an aviation community.



"What do you mean you were having so much fun flying you lost track of time? Instead of three hours, you were gone a month!"

Wednesday Fly Outs

By Harvard Holmes

To maintain proficiency, a number of pilots get together on Wednesdays and fly somewhere for lunch. Many of the aircraft owners in the chapter participate. Passengers are always welcome. Not only is it a great way to see the Bay Area, its also fun to see and ride in our members aircraft. The e-mail address is wed-flyout@eaa393.org. You may contact Harvard Holmes at harvard-holmes@comcast.net or Renee Robinson webmaster@eaa393.org to be added or removed from the list.

Generally, someone who wants to go flying will send a suggestion to the list a day or two before. Those who can go will respond, and a destination finalized. Recent destinations have include: Half Moon Bay, Petaluma. Santa Rose, Ukiah, Boonville, Shelter Cove, Willows, Auburn, Sacramento, Lodi, Stockton, Merced Watsonville, Lake Tahoe and Salinas. If the weather is poor a selection may be made as late as Wednesday morning.

Young Eagles-Next Rally scheduled for May 16, 2015. Rally schedule for 2015.

May 16

June 20

August 22

September 19

October 17

The Experimental Aircraft Association

Chapter 393 of Concord, CA

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Photographer Tom Howard

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Chapter meetings are held on the 4th Wednesday of the month at 200 Sally Ride Dr Concord Ca. Meetings are open to anyone who loves aviation and wants to learn more.

All are welcomed.

Menu for April 22nd Meeting

- Chicken
- Potato Salad
- Dinner Rolls and Dessert
- Coffee and drinks.



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We are on the Web!

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Meeting and Event Schedule

Board	Y Eagles	General	Fly-out	Other
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		General Meeting Apr 22, 2015		
		EAA Ford Tri-Motor Tour Stop Concord April30th-May 3rd		
		Board Meeting May 6, 2015		
		Young Eagles Rally May 16, 2015		
		AOPA Regional Fly in Salinas, May 16,2015		
		General Meeting May 27, 2015		
		Board Meeting June 3, 2015		
		Young Eagles Rally June 20, 2015		
		General Meeting June 24, 2015		
		July 20-26 AirVenture 2015		
		Board Meeting Aug 5, 2015		
		Young Eagles Rally Aug. 15, 2015		
		General Meeting Aug 26, 2015		
		Board Meeting Sept. 2, 2015		
		Young Eagles Rally Sept. 19, 2015		
		General Meeting Sept. 23, 2015		

Our meetings are open to the public. Join us for dinner at 6:30 pm (\$7 donation) with the general meeting at 7:30 pm on the above dates in the Club House 200 Sally Ride Dr. Chapter 393 fly-outs are open to chapter members and guests.