



Armed Forces Aero Club

February 2016 Brief

From the President:

Thank you for visiting the Armed Forces Aero Club Web site. This monthly brief sheet is intended to provide the current status of the club. Each member of the board of directors provides their individual comments pertaining to their positions. Please feel free to contact any of them if you have any questions. Members are encouraged to submit articles for inclusion to this monthly brief sheet.

Ed Christensen

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President's Comments

Hello.

I don't have whole lot to report this month. As we've touched on, flight time has been really low. But thanks to the changes we've made to slim down and save money, this has not been catastrophic. The one thing that changes that equation are things like expensive annuals or unexpected maintenance costs, which are unavoidable at times. (The new battery we just put in 216 was a \$700 dollar job after labor) But as a rule we will do much better with higher flight time income.

This Saturday 2/27 at 10 am we will be hosting our quarterly GMM at Scott Lowe's hangar. It's the first gate going west on Gibbs Drive. Walk through and you'll see our airplane. We will be hold a short meeting with Board elections and it's important that we have a quorum there to conduct this important business so please come by even if it's just for the meeting, a vote, and a coffee and snack. Two improvement items on our plate are working on corrosion spots on 215 and possibly replacing the current cowl fastener set up with an up-graded captured fastener system on 216. But we left the schedule open for anyone who wants to fly on that day, and flying availability will be the priority for that 172. It's sure to be an interesting project so please come out to support the club and get a little dirty working on our airplane!!

See you there.

Ed Christensen

(720)299-2747

Vice President's Report

Fellow members,

Exactly what is V_x , and V_y ? I'm sure you know the textbook answers (you should if you are a pilot), but what are these speeds really? They were arbitrarily defined by using lift-over-drag equations and are both maximum performance maneuvers in their own right. Definitions follow, V_x ; the best angle of climb (best climb per foot of forward travel), and V_y ; the best rate of climb (best climb per unit time). We all know this so far. I recently read an interesting Embry Riddle graduate student's capstone project (Introducing V_z : Best Efficiency of Climb Speed for Small Airplanes, Norman E. Howell) which attempted to define a new V speed for GA aircraft. Some of you may find this interesting, and hopefully you will learn a little something more about the airplanes you fly by reading my summary.

In areas like San Diego a maximum performance climb may be desirable or even necessary due to terrain features and populated areas. We all know KMYF in particular has no hospitable emergency landing area within a safe distance, and taking off in any airplane is an act in "hoping everything holds together." In these cases both V_x and/or V_y is appropriate. For the majority of the United States there is nothing but flat land and clear skies ahead, yet all we are really taught is to fly one of these speeds until they converge, or our cruising altitude is reached. I'll first explain V_x and V_y better and then introduce V_z , the speed of best climb efficiency.

V_x – best angle of climb is that point on the L/D curve where induced drag is high, and lift is high because of a large angle of attack, but the aircraft is sufficiently above stall speed. V_x is a maximum performance speed designed to give you the greatest amount of altitude in the shortest DISTANCE. Note: this measurement differs from V_y in that it is defined by distance – not time. It is to be used when you have an obstacle problem within a defined distance. A 50' building

1000' from your location cares not how much time it takes you to get there.

V_y – best rate of climb is that point on the L/D curve where both parasite drag and induced drag are at a minimum. This speed will give the greatest altitude for a given measure of time. This is the speed most of us use for a normal climb out. Some POH's give rise to a cruise climb range. This is essentially where V_z is found, and there is a formula for its derivation.

I'll save you a nearly 90 page read and summarize the key points of the paper. Neither of the two most commonly used V speeds are efficient when it comes to time vs. fuel consumption. I realize when renting aircraft "wet" we rarely give a thought to fuel efficiency, but bear with me. When computing best climb speed over a given measure of time- made good to fuel consumption, you have V_z (I'll leave you to look up the mathematical equations for this in a link below). It is defined as:

*"For all GA piston engine airplanes, V_z (best efficiency of climb) = $1.32 * V_y$, at maximum continuous rated power. When climb performance decreases to 500 feet per minute climb rate at V_z , maintain a constant 500 fpm climb until speed decreases to V_y "*

That's it! This formula as defined for our Cessna 172's:

215AF has a V_z of **96 KIAS**

216AF has a V_z of **100 KIAS**

I tried this experimentally in 216AF with 1 passenger and found it was only getting about 600 FPM at 3500'. This airplane in particular would not really benefit much from using V_z as much as 215AF would because of the extra power and pitch on its prop. As you fly higher performance singles this becomes much more pronounced. Apparently some people believe whole-heartedly in this approach to climb. I'll leave it up to you to experiment and decide for yourselves.

(Continued on next page)

Vice President's Report (continued)

This really was intended to be a quick down and dirty on what is really a much more intricate and well-thought out theory. He also includes in this study experimentation on ROP vs LOP operation scientifically. All around a good read. You can find the link to the whole work below. I hope this month finds you healthy and flying! See you out there...

Link: <http://www.openclip.net/Benchmark/IntroducingVz.pdf>

Jason Schoger

(619)565-4807

Hangar Talk

213AF	Flyer
215AF	Flyer
216AF	Flyer

Do review the dispatch sheet before each flight and let me know if there is anything that may not seem correct. Pay close attention to the TACH hours for 100-Hr AD inspection. This inspection "CANNOT" be overflowed.

Fly safe.

Scott Lowe

(619)-962-1768

Treasurer's Report

December		
Aircraft	HOBBS Hours	TACH Total
213AF	1816.0—1810.4 = 5.6 / 0.2	9770.7—9766.4 = 4.3
215AF	4618.9—4607.1 = 11.8 / 0.2	610.2—601.6 = 8.6
216AF	4186.5—4164.1 = 22.54/ 4.2	6271.3—6253.6 = 17.7
Totals	39.8 / 4.6	30.6
January		
Aircraft	HOBBS Hours	TACH Total
213AF	1826.4—1816.0 = 10.4 / 0	9778.7—9770.7 = 8.0
215AF	4627.1—4618.9 = 8.2 / 0	616.1—610.2 = 5.9
216AF	4191.0—4186.5 = 4.5 / 2.3	6274.4—6271.3 = 3.1
Totals	23.1 / 2.3	17

Welcome

Kendra Abbott

High Flight Time

Earl Wederbrook 3.3

Kendra Abbott 3.2

Farewell

Glenn Buberl

Caleb Hogg

George Brambach

P. & A. Hontang

Loren Page

Liza Porterfield

Pierrick Rondel

Notes: Hours in **red** are over-head/non-income hours (Maintenance/BMFT/Missing). There was no missing flight time for January. Current aircraft fuel rates are consistent with Sept 2015 club fuel ladder rates. Current fuel price at Gibbs average \$4.94/gal. Aircraft rates are as follows:

213AF— \$81/Hr

215AF— \$109/Hr

216AF—\$105/Hr

Plan for the worst, pray for the best!

Dave Billings

(619)670-5383

Training Day

Greetings,

As you've read, our planes have recently spent way too much time sitting on the ramp rather than airborne. Please make plans soon to exercise the privileges of your pilot certificate, improve your currency and **have some fun in the process.**

The FAA recently updated Advisory Circular AC 61-98 that deals with **Currency Requirements** and Guidance for the **Flight Review and Instrument Proficiency Check**. While this document is primarily designed as a tool for CFIs, there is a wealth of information for all pilots. Many of the recommendations were generated by the General Aviation Joint Steering Committee, a government-industry group focused on reducing GA accidents. In my opinion, this is well worth the reading time and a link is below.

http://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentID/1028650

This article is a good review of light gun signals and has a recommendation to have some tower phone numbers available on your cell phone (**MYF is 858-277-5602**)

http://www.aopa.org/News-and-Video/All-News/2016/January/11/Training-Tip?WT.mc_id=160115eftrng&WT.mc_sect=tips

This AOPA video on **collision avoidance** makes the point that the most likely midair occurrence is daytime, near an airport, below 3,000 feet.

http://www.aopa.org/AOPA-Live?watch={5F745DBE-5D2C-45EE-AE18-B2613F822FFB}&WT.mc_id=160115eftrng&WT.mc_sect=sap#oid=ptNGhveToNuzYBnvZRB-iUAtgJh4qHLd

Been to Catalina lately? Here is an excellent video on **how to escape an aircraft that has landed in the water.**

http://www.aopa.org/AOPA-Live?watch={809D9C7A-4A16-47A7-8D75-E4BF857D216C}&WT.mc_id=160115epilot&WT.mc_sect=sap#oid=43djhyNzqknG7WzpJR6Jl82jqjEPngZp

Fly safe, have fun.

Wes Weener

(619)985-1220

Ops & Safety

► MYF Runway 5/23 Construction February Update

From Matthew Schmitzer, MYF Airport Manager, on 2/5/2016: "Runway 5/23 & Taxiway G Rehabilitation continues to move forward. During these past 2 weeks all unsuitable material has been removed from the work area, the only exception at this time is Taxiway G1. Solid base material continues to be imported. The current projection is 2 weeks until the final topping, paving will commence thereafter. The paving plan is to start with the midfield exits on 10L/28R, Taxiway G1, Runway 10R/28L, and then finally the intersection of Runway 5/23 & Runway 10R/28L. We encountered an electrical line break that deactivated taxiway lights on the north side of Taxiway H. That has since been corrected. Thank you all for your continued patience with this project. The Airports Division is eager for the completion of the next stage enabling parallel operations, as well as the project overall."

► NAF El Centro Air Show

In many past years, AFAC has participated in both the MCAS Yuma and NAF El Centro air shows. This year, Yuma is not having an air show, in favor of another local event, but they expect it to resume next year. The El Centro air show is scheduled for Saturday, March 12th. AFAC will support any member who wants to take one of our planes there for static display in the show, by providing the DD forms and proof of insurance needed to land at a military facility. Please contact me as soon as possible if interested, as coordination needs to be done a few weeks in advance. Flying in is the absolute best way to see the show!

See navylifesw.com/elcentroairshow for all of the show details.

► Safety Tip of the Month

Read Ron Shipley's article on page 9 of this Brief Sheet

In case you missed it (in a room full of over 100 MYF pilots, only 3 active AFAC members took advantage of this), Ron provides his summary notes on the FFAST seminar presented by ATP's Gary Schank and Mike Jesch at the beginning of this month, tapping into over 50 years of professional aviation experience on the radios – tips well worth having in your bag of tricks!

(Continued on next page)

Ops & Safety Continued

Coming up next month:

FAAST: Around the World in a Piper Mirage

Topic: Planning and flying an around the world flight in a single-engine, general aviation aircraft.

Thursday, March 3, 2016

19:00 - 20:30

Solar Turbines, Kearny Mesa Facility

4200 Ruffin Road

Titan Conference Room

San Diego, CA 92123

Join Robert DeLaurentis as he shares inspiring—and at times terrifying—adventures and insights from his recent circumnavigation of the earth. Whether in the air at 23,000 feet and 230 miles per hour living in a neoprene survival suit or on the ground meeting people from all walks of life, Robert's discovery that we are all citizens of the world with a purpose and dream bigger than we know will forever change the way you look at life.

Qualifies toward FAA WINGS and Flight Review

www.faasafety.gov/SPANS/event_details.aspx?eid=67400

FLY OFTEN, FLY SAFE!

Dave Piontek

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Secretary Notes

Whew! It's been a long year, but thanks to all of you, we were able to accomplish a lot of improvements in our airplanes. Besides getting two brand new engines, the interiors have transformed dramatically.

But of course, there is always room for improvement and I encourage everyone to get involved this year and help to keep our social flying club operational.

I have had a great time this last year serving as your club Secretary.

As final reminder, if you have not already done so, please take some time to review your file folder in Gibbs and update any information that might be outdated. If you have had a new medical issue this year, it might be worthwhile to send a copy to a board member, or scan and send a copy so that your electronic file in schedule master can be updated as well. You never know when the FAA might come calling for information about a member pilot.

I personally received a call from the FAA about a flight that I flew with a student back in Dec. 26, 2016 on Feb. 11, 2016. The FAA asked for dates on my medical and to send proof of my flight review. So, keeping up-to-date information in your files can come in handy.

Ray Lemque

(619)395-3817

Tickler:

BOD Meeting: 6:00 pm, Feb 17, 2016 @ MYF Ops Bldg

CFI / GMM: 10:00 am, Feb 27, 2016 @ MO Hangar

Sign-ups: President turns over to Training Officer

Member Articles

By Ron Shipley

I attended an FAA safety briefing about how not to sound like a Doofus on the radio. I'd like to share my notes.

"It's always wise to ask for "Flight Following", even on local flights. This places you "in the system" and gives an extra set of eyes for traffic.

When given a heading or altitude by ATC don't say just the numerical assignment (i.e. "210"), say (example) "Heading 210" or "Altitude three thousand".

Don't say "Descending to eight point five", say "Descending to eight thousand five hundred".

If asked for your speed, always give it to ATC in knots, even if your airplane uses mph.

If given traffic don't say "I have it on TCAS" or (worse yet) "I've got it on the fish-finder"! If you don't see it with your eyes, say "Negative contact".

There are only two correct responses for traffic: "Negative Contact" and "Traffic in Sight".

In your initial call give your complete call sign, where you are, and what is your intention.

On your first call always say your complete call sign, even when you're handed off. When ATC begins using your abbreviated call sign, you may also.

ATC prefers that you always give your call sign at the beginning of the call, however there is no requirement. At the beginning or the end is okay.

Don't talk too fast. Slow down and know what you are going to say before you key the PTT button. Say it once, clearly.

Learn clearance "shorthand" or make up your own. (Re: IFR Handbook, App. A)

If part of the clearance is not understood, say "say again (altitude/squawk code/ etc.)". There is no need to have the entire clearance recited.

Before you ask for taxi instructions have the airport taxiway/runway diagram available (especially if it's a check ride with an examiner. He'll fail you if you don't)

NEVER CROSS A RUNWAY WITHOUT PRIOR CLEARANCE!!!

Before taxiing, set the heading bug on the assigned runway heading. Check it before taking off. This may prevent taking off on the wrong runway.

Arrange early frequency changes with the tower prior to taking off. Once out of the airport boundaries you do not need approval for a frequency change.

Pause momentarily after being given a frequency change before switching and pause a moment before speaking after changing frequency. This will allow ATC to correct an incorrect frequency read-back and prevents keying over a transmission.

Do not say "With you" or "Checking in". Just say your call sign and altitude.

If the frequency has been quiet for a long time, ask for a radio check from ATC or from another aircraft if ATC doesn't answer. If neither works, check your chart for the correct frequency. It's also okay to switch back to the last frequency and ask them to restate the frequency.

Monitor 121.5 Guard Frequency on the number two radio in cruise. (Adjust the volume to be slightly lower than the primary radio.) In an emergency you will already have it tuned in.

While enroute, review the taxi diagram and determine where you plan to tie-down at the destination airport. Know the current NOTAMS and runway/taxiway closures for the destination airport before you depart.

Monitor CTAF at least 20 miles from your destination airport.

At non-towered airports (Note: It is NOT non-controlled airports! All airports are controlled.):

There are no "Active Runways". There are only "preferred runways".

It's okay to talk on the radio to other pilots in the area.

It's better to identify your airplane with the type, color, and altitude along with your side number.

AIM recommends that taxi calls and departure calls be made.

Give the name of the airport at the beginning and the end of all calls.

ATC will always ask for "the number of souls and the remaining fuel aboard" on all emergency calls. Do not say the number of gallons or the pounds of fuel. Give the remaining time of fuel in hours and minutes.

Very rarely will NTSB require written reports for emergencies. However, always file an ARS report. It will not only protect you but may prevent another from making the same mistake."

Board of Directors Contact Info



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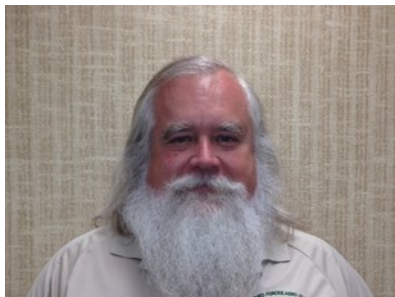
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