ISSUE 3 VOLUME 33 MARCH 2015

Photo Courtesy: Mitch Bowers

Welcome New Club Members!

Cody Adams
Tim Cuffel
Shephard Darquea
Darrell Dearman
Jason Dial
Doug Dillon
Michelle Estevez
Steffane Fijalkowski
Richard Fisher
Scott Frank
TJ Gruetzemacher
Javier J. Haggard
Javier L. Haggard
Nicholas Herald
Chris Ison
Patrick Janssen
Kris Klain
Carlos Mejia
Steve Norton
Keegan Olson
William O'Mara
Roberta Porco
Ovidio Resendez
Bob Rose
Mickey Russell
Benjamin Schamel
Chris Sihon
Gary Silence
Michael Taylor
John Tedder
Brian Theisen
Samuel Theisen
Jonathan Wickersham

Upcoming Events!

- Sport/Private Pilot Ground School Begins . . . . . March 3rd, 6PM-9PM
- Monthly WINGS Seminar . . . . . March 16th, 6PM-8PM
- Advanced G1000 Class. . . . . March 21st, 9AM-Noon
- FREE G1000 Class . . . . . April 25th, 9AM-Noon
- Monthly WINGS Seminar . . . . . April 20th, 6PM-8PM
- Sport/Private Pilot Ground School Begins . . . . . April 28th, 6PM-9PM
- Monthly WINGS Seminar . . . . . May 18th, 6PM-8PM
- Monthly WINGS Seminar . . . . . June 15th, 6PM-8PM
- FREE G1000 Class . . . . . June 20th, 9AM-Noon
- Instrument Ground School Begins . . . . . June 22nd, 6PM-9PM
- Sport/Private Pilot Ground School Begins . . . . . June 23rd, 6PM-9PM
- Advanced G1000 Class. . . . . June 27th, 9AM-Noon

New Solos, Certificates and Ratings

Congratulations to these students and their instructors!

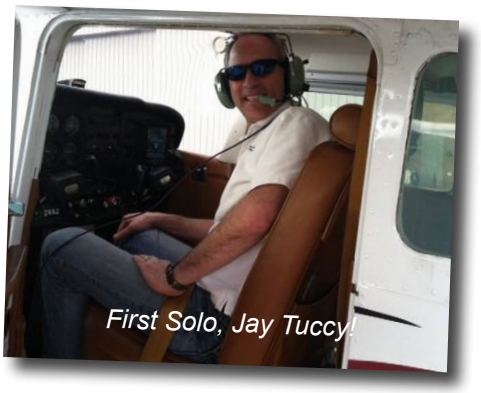
John Andrews
Solo – Brian Barnett, CFI

Brian Barnett
CFII – Matt Wichern, CFI

Jason Coley
CFII – Jon Nafie, CFI

Chris Dillis
Multi – Jeremy Peres, CFI

Chris Jones
Solo – Jon Nafie, CFI


First Solo, Jay Tuccy!


Private Pilot, Laura Withrow!

Nathan Kamins
Private – Jeremy Allen, CFI

Trevor Rzucidlo
Instrument – Matt Wichern, CFI

Kyle Tubbs
Commercial – Brian Barnett, CFI

Jay Tuccy
Solo – Barbara Marx, CFI

Laura Withrow
Private – Sean Cavan, CFI

Announcing New Staff Roles at AFC!

Steve Green - Chief Flight Instructor

Steve started flying after a ride in a Taylorcraft, followed by a Discovery Flight at Aspen Flying Club, in February of 1987. Steve still flies for the pure enjoyment of being in the air, but thinks part of that fun is in teaching others to fly.

Flying has opened a whole new world, including a wide variety of experiences such as barnstorming in open cockpit biplanes, a pair of Wacos, flying across the U.S, Canada and Mexico as a pilot in a corporate jet, and acting as the airport operations safety officer for a series of air shows. He still likes to give rides in the Citabria whenever he can and flies Citations on a contract basis. Great friendships, unique places and unimagined grand adventures have all come about through aviation.

A firefighter since 1979, scuba instructor since 2013 and a mostly part-time, sometimes full-time flight instructor with Aspen Flying Club since 1993, Steve was named the chief flight instructor for the Club in February 2015.

Contact Info for Steve:
720-480-1204
sgreen@aspenflyingclub.com

Danny Smith - Client Experience Manager

At Aspen Flying Club, we are constantly looking to improve your experiences here. Whether you are a long time member of the club or a pilot in training, we want to hear from you on how we can make your visits to Aspen more pleasant and productive.

Your feedback on your flight training, interactions with other club members and instructors is an important asset that helps us achieve our goals of being the best flying club available. We can't meet your expectations if we don't understand what they are.

In order to help improve your experience at Aspen Flying Club, we have brought on Danny Smith to help in this role. Danny's background in customer relationship management, training and development, and account management will be crucial in making Aspen a better place to fly for our members. Danny has been at Aspen since early 2013 and has been working as an instructor with primary flight students, current members and Flight Reviews, as well as aircraft checkouts.

Please feel free to contact Danny at any time via phone, email, or when you are at the club to let us know how we are doing, what you would like to see changed or improved, or any feedback you may have on our instructor core. Over the next few months, he may also reach out to some of our members as well to solicit any thoughts and ideas you may have.

Contact Info for Danny:
303-885-4824
dsmith@aspenflyingclub.com

Terry Fiala

Marketing & Events

Terry comes to us as a Flying Club Consultant with over 20 years of experience in marketing, events and strategic planning. Working for non-profits in the arts arena for most of her career, Terry made the transition to the aviation industry in 2009 as a private pilot and in 2011 to work in promoting flying clubs and general aviation. Terry said, "The transition from the arts to aviation came naturally. I've always felt fortunate to do work that's meaningful to me. It's so much better to do work you're

truly passionate about."

Terry is an active member of Aspen Flying Club, currently working on her tailwheel endorsement and instrument ratings. She is also co-owner (with her husband) of N821WW, the G1000 equipped Cessna 182 on the Aspen Fleet. She is involved in the aviation community as the Treasurer for the local chapter of the Colorado 99's and as the Founding Treasurer for the Upwind Foundation, which provides full flight training scholarships to high school students.

Contact Info for Terry:
650-307-2304
terry@aspenflyingclub.com

Next time you're in the club, make sure to congratulate Steve and Danny on their new roles and welcome Terry to our team!

TWO Stick-N-Rudder Classes in March!

Make sure you attend one of these sessions!

Back by popular demand...the Crosswind Concepts Stick-n-rudder ground school!

The class includes a review of weather and aerodynamics, and a discussion of the important elements of crosswind operations. It will also concentrate on the knowledge topics most important to stick and rudder skills including taxi, takeoff, and landing.

About Crosswind Concepts

Crosswind Concepts, Ltd. (CC) is a rare aviation training facility focused on extraordinary stick-and-rudder pilot training designed to reduce loss of control in the cockpit, a factor the FAA has declared one of the leading causes of aviation accidents. Because crosswind landings were documented factors in 98 percent of all landing accidents in a single year, a key component of CC's regimen is the highly effective Redbird Xwind flight simulator that utilizes powerful motors to produce life-like roll, yaw and drift motion in a realistic runway environment, allowing pilots to develop the skills to prevail during such landings. A Xwind student gains more crosswind landing experience in a one-hour session than a typical private pilot accrues flying over a two-year period.

AFC will be hosting two separate sessions. Just call the AFC front desk to register for the class you plan on attending.

Wednesday, March 18th from 6-9PM

OR

Saturday, March 28th from 9AM-Noon

This course is just $25.00 for AFC members and $35.00 for non-members. It also qualifies for FAA Safety WINGS credit!

How V-Speeds Change

Article by Joe Shelton taken from Plane & Pilot Magazine
-Tuesday, February 10, 2015

Your book airspeeds may vary quite a bit during different phases of flight.

Many of us may consider short-field operations in the context of an arrival or departure from a runway that we don't normally operate from. For a number of years, I was based at an airport with a 2,440x70-foot runway. I flew a single-engine retractable and, except for unusually hot days at gross, 2,440 feet was more than sufficient. But, this airport supported a variety of aircraft up to and including King Airs. There was even an early-model Citation that was based there for a while.

Most of the larger aircraft had short-field operations down pat, and they had to if for no other reason than, in addition to the relatively short runway, there was a penalty for landing long: an eight-foot-high dike only 300 feet from the departure end of the runway. And, in an irony that only a pilot can appreciate, it wasn't unusual for the windsocks at opposite ends of the runway to point in opposite directions.

Watching aircraft landing on a typical weekend was enlightening. It wasn't for nothing that there were many sets of long rubber-tire marks near the ends of the runway. So the obvious question

was: Why could larger aircraft operate with seeming impunity, while many of the Bonanza and Baron class of aircraft had problems? The answer has far-reaching implications that can affect safety in other realms of flight, as well.

A Weighty Story

While watching some pilots make max performance landings while others rolled out and turned off the runway with little fanfare, I eventually realized what the one major difference was.

The accepted procedure is to fly final approach at 1.3 times the aircraft stall speed in landing configuration. Yet, the aircraft making no-nonsense arrivals were almost always substantially slower and touched down with much less float than those that left skid marks and taxied away with flat-spotted tires.

Why the difference? Most likely, the longer-landing pilots used their aircraft's POH stall speed for their approach speed calculation. Some may even have added a couple of knots "for the winds and family." The simple fact is that their approaches were much faster than necessary; hence, the longer-landing distances.

If there's only one stall speed in the POH—which is true of most older aircraft—it's determined at the aircraft's gross weight. But, stall speed actually varies in direct proportion to the aircraft's actual weight. The lower the weight, the lower the stall speed. When an aircraft is lighter, it can safely fly at a slower approach speed and stop in a shorter distance. For example, according to my Columbia's POH, the short-field approach speed is 82 KIAS at 3,420 pounds, but it decreases a substantial nine knots to 73 KIAS at 2,700 pounds.

In addition to a shorter rollout, flying at the correct approach speed based upon actual weight means that the float before touchdown is minimized. Don't underestimate how much floating in ground effect can affect the total landing distance.

One rule of thumb states that a 1% change in approach speed will cause a 2% change in stopping distance. The nine- knot decrease in stall speed example is an 11% difference, which equates to a 22% decrease in the landing distance. For a cross-check, there's another rule of thumb that says that a 10% decrease in landing weight will cause a 10% change in stopping distance. Using the Columbia example again, the 720-pound difference in weight works out to be a 21% decrease in stopping distance. So, the two rules reinforce each other. Again, those are both ground-roll values and don't take float into account.

Reversing the analysis and examining the result of a higher-than-necessary approach speed is more indicative of real-world risks. A too-fast approach at 82 KIAS means the aircraft needs 12% more runway than if it were flown at the correct 73 KIAS. Assuming a calculated landing distance is 900 feet at 2,700 pounds, flying at the faster approach speed increases the landing distance to 1,008 feet. That's for an experienced test pilot. If you factor in the additional float resulting from a too-fast approach speed and normal piloting skills, the landing might take 1,100 to 1,200 feet more.

It's More Than Just Stalling Around

Let's examine some of the other V-speeds that are affected by aircraft weight. But before we do, it's important to identify those speeds that are sacrosanct. Simply, with two interesting semi-exceptions, no structural speed is affected by different aircraft weights. That includes maximum flap or landing gear operation or extended speeds, maximum aircraft operating speeds and any other speed that's structurally related.

As far as V-speeds that are affected by weight, the aerodynamics that affects a Boeing 787 also affects a Cessna 182. Transport category aircraft are required to calculate Vr before every takeoff. Part of the calculation includes the weight of the aircraft at takeoff. As you might expect, the lower the weight, the lower the rotation speed. I've found that simply setting the yoke to the proper pitch attitude and letting the aircraft lift off when it's ready works best for normal takeoffs. For short-field takeoffs, I use a positive rotation at the appropriate airspeed.

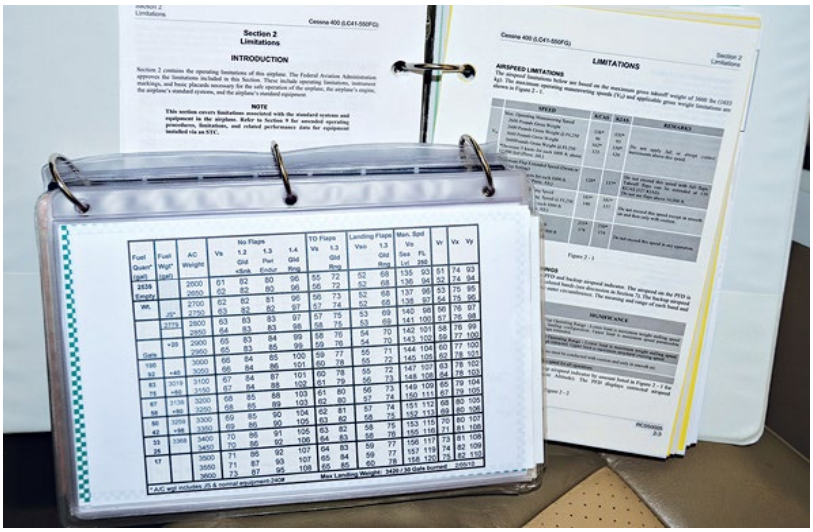
After rotation, pilots might climb at Vx or Vy depending upon the departure requirements. By this point, you undoubtedly know that Best Angle and Best Rate of Climb are both affected by aircraft weight in the same manner as stall speed. But, there's an interesting wrinkle regarding these two airspeeds. You typically won't find this information in older or sometimes even newer POHs, but both speeds also change with altitude. The rule of thumb is to add one knot per thousand feet density altitude to Vx, but counterintuitively, to subtract ½ knot per thousand feet from Vy.

Shake, Rattle and Roll

If you find those speeds interesting, the effect on maneuvering speed should give

you pause. Flying at or below maneuvering speed (Va/Vo) is intended to help prevent structural damage to the aircraft if the pilot moves a flight control rapidly from stop to stop. My Columbia is a utility category aircraft, which means it's designed to stronger structural standards than a normal category aircraft, but the placarded maneuvering speed varies from 158 KIAS at 3,600 pounds down to 135 KIAS at 2,600 pounds. That's a 23-knot difference!

However, there's another speed that's rarely discussed and is critical for flight in turbulent conditions. Contrary to what most pilots believe, maneuvering speed (Va/Vo) isn't turbulence penetration speed (Vb), although many manufacturers use Va/Vo for that purpose. Vb is the maximum airspeed at which an external gust won't overstress an aircraft's airframe. An accepted rule of thumb for calculating Vb is 1.7 times the stall speed for the actual aircraft weight. For the Columbia, the stall speed at 3,600 pounds is 72 KIAS. Calculating Vb based upon that rule of thumb works out to 122 KIAS at gross weight.
Consider being extremely conservative if your aircraft doesn't have a table containing maneuvering or gust penetration speed for the aircraft's weight range.



Best glide speed, Vg, is another important speed that's affected by aircraft weight. According to the Columbia's POH, the best glide speed at the 3,600-pound gross weight is 108 KIAS. It decreases 12 knots to 96 KIAS at 2,700 pounds. In an engine-out emergency, flying the correct airspeed could mean the difference between a safe arrival or not!

Beware if Light

We've highlighted the fact that many reference airspeeds in POHs are only accurate when the aircraft is at full gross weight. The instant the engine is started, the aircraft is burning fuel and becoming lighter. An airplane like the Columbia burns on the order of 36 gallons per hour during the departure climb. It doesn't take a calculator to recognize that not long after takeoff, no gross weight-based airspeed is accurate. At the end a long cross-country, both the maneuvering and stall speeds are substantially less than gross weight values. You can see why pilots should take aircraft weight into account during the entirety of every flight. As an added day-to-day benefit, the aircraft can land comfortably in shorter distances, saving both brakes and tires.

Interestingly, if you don't adjust some of the V-speeds, you're sometimes just being inefficient. The airplane will land longer than optimal, for example, and climbing might be less than optimal. But maneuvering/gust penetration speeds are typically used in critical situations, so you want them to be accurate. There are also times when Vx) and even Vy) might be critical, as well.

If that doesn't convince you, in an engine-out emergency, the combination of flying at the appropriate best glide and approach speeds for the actual aircraft weight may make the difference between a safe arrival or not.

Make Your Own

If your POH doesn't include a breakdown of the various V-speeds by aircraft weight, you might consider making your own chart. I've done that for two of my previous aircraft. What I discovered is that the changes in the various V-speeds aren't equally relative to aircraft weight changes. For example, the Columbia's stall speed and any v-speed related to it changes 1.25 knots per 100-pound change in aircraft weight. Maneuvering and Best Glide speeds change 2.3 knots and 1.3 knots respectively per 100 pound change.

You can use the following formula to calculate Maneuvering Speed: Va = Va √(WNew/WMax-Gross), where WNew is the current aircraft weight.

If you want to create a chart and your POH doesn't have the information you're looking for, start by contacting the manufacturer or the appropriate aircraft type club. You can also empirically determine many of the speeds by doing your own flight tests. Whatever you end up doing, make sure the results are conservative. I've found it's challenging

to fly these kinds of tests precisely, but it's a confidence-building experience and a lot of fun. Do yourself a favor, and bring someone along to watch for traffic and record the data while you fly.

A Word from the Tower

Radio Communications and Changing Frequencies

At KAPA you may encounter a time when you are asked by the tower controller to change to a new frequency. This is done to alleviate frequency congestion and workload for the controller. When this happens you will be told to "Contact Tower on <xxx.x frequency>." When advised by ATC to change frequencies, acknowledge the instruction. If you select the new frequency without acknowledgement, the controller's workload is increased because there is no way of knowing whether you have received the instruction or have had a radio failure. As the pilot, you should acknowledge the request to change by stating the issued frequency and your callsign.

At times, a controller nay be working a sector with multiple frequencies. In order to eliminate unnecessary verbiage and to allow for controller to work higher priority transmissions ATC may request that you "Change to MY frequency <xxx.x>" This is done to alert the pilot that the controller is merely requesting you change frequencies and as such your initial callup on the newly assigned frequency may be abbreviated.

Remember that when you are instructed to "Contact Tower on <xxx.x> " you are going to be talking to a new contoller and that the new conttoller has not always been informed of your position or intentions. This being the case, you should be sure that you check on with all of the pertinent information in the same way you would for an initial callup. This could include, but is not limited to: Name of facility being called (Centennial Tower), your *full* aircraft identification and aircraft type, your position in reference to KAPA airport and a short description of intentions.

If you were told to switch frequencies on your initial contact to KAPA you may be told to IDENT. Although useful, this is not a substitute for an appropriate location call.

If you were told to change frequencies while flying in the pattern then your first contact should include full callsign and type plus location in reference to which leg of the pattern you are currently flying. If the instruction "Moniter" was given with a frequency change then the appropriate action is to first acknoledge the switch, and then to switch to the new frequency. However, in this case there is no need to check in on the new frequency. The controller will have all of your pertinent information and will contact you when an instrucion needs to be issued.

As always, if you are ever uncertain or have a question, ask!

As always, fly safely! We look forward to seeing you at the club!