

U42 GA HANGARS PAINTING COMPLETE
Hangar rows A, B, C and D at South Valley Regional Airport (U42) have been painted and re-occupied.

Airport paint crews have also painted bollards, building trim, and street light poles at the airport.

The Airport Sign Shop has replaced the old Airport II signage with new South Valley Regional Airport signs.

ABS CONVENTION AT U42

The American Bonanza Society will hold its 2009 ABS Convention and Trade Show at the Salt Palace September 2-6. Society members from all over the country will be flying in to South Valley Regional Airport to tie-down and enjoy activities at the airport and all over the valley.

Visit the www.bonanza.org website for additional convention information and event schedule.

ANNUAL GA BBQ DATE SET

Saturday, October 10th, has been selected for the annual SLCDA General Aviation barbeque at South Valley Regional Airport (U42) in West Jordan, UT. It will be held beginning at 1:00 p.m. with location to be announced.

Fire extinguisher servicing will be available for a reasonable fee starting at 11:00 a.m.

CANYON FLYING TIPS

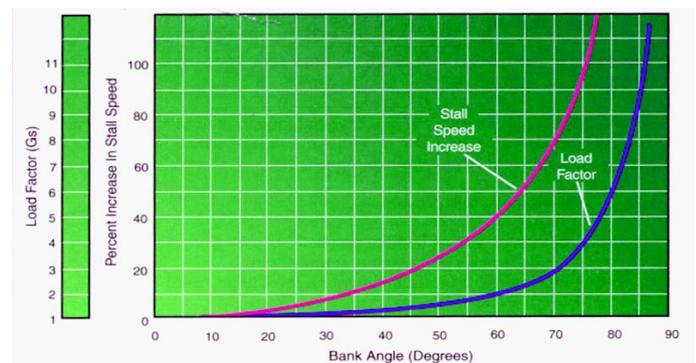
By Amy L. Hoover

Airspeed and Bank: Slow down and use medium bank turns. Flying slowly in a canyon is critical to safe operations because it gives the pilot more time to react and is the best way to decrease turn radius while maneuvering. Pilots need to keep their heads out of the cockpit when flying in canyons and confined spaces, thus it is critical to know the correct power settings needed to achieve a desired airspeed, such as maneuvering speed (VA), or maximum flap extended speed (VFE). Flying in a narrow canyon is not the time to be distracted by hunting for power settings, so pilots should prepare by determining the correct "target" power settings and airspeeds ahead of time. The power required to maintain a given airspeed in level flight depends on weight and position of the center of gravity

(CG); more power is required as the airplane gets heavier and the CG moves forward.

To determine the correct power settings, load the aircraft to the desired weight and CG position and go flying out in the open (not in a canyon). Maintain altitude while reducing power until the desired airspeed is obtained, and record the power required. Make some medium bank turns at your chosen airspeeds while holding altitude to determine whether additional power is needed in the turns. Keep in mind that the pitch attitude might also have to decrease slightly in a turn to maintain airspeed. By determining target power settings in advance, pilots can slow down to a desired airspeed smoothly and with confidence while maintaining situational awareness in a canyon.

At a given airspeed, the steeper the bank angle, the tighter the turn. Tighter turns are needed in confined areas, but steep turns in canyons can lead to many problems, including visual disorientation. In a canyon there may be no horizon to reference airplane attitude, so shallow to medium bank angles greatly decrease the risk of becoming disoriented. Another risk factor of steep turns is that bank angles beyond 30° rapidly increase the load factor and stall speed. For example, the load factor in a 30° bank is only 1.15 G with a 7.5% increase in stall speed. However, a 60° bank imparts a 2G load factor and a 41% increase in stall speed.



The best way to avoid disorientation and pulling G's that could stress the airframe and increase your stall speed is to limit bank angles to 30°.

By slowing down and using medium turns a pilot can maneuver or turn around in a relatively narrow space. But how much should the airplane be slowed down? For example, suppose a pilot is flying in a canyon and needs to turn around safely to avoid weather, hazards, or to circle over an airstrip to check out the conditions. For operations in canyons more than 3/4 mile wide, VA is generally a good target airspeed in most general aviation

aircraft. However, in narrow canyons a good technique is to slow to VFE and extend flaps to stabilize the airplane. Reference the Pilots Operating Handbook to determine the flap setting recommended for a maximum performance takeoff. That flap setting generally gives the maximum lift to drag ratio for the wing, and is the best flap setting to use for slow flight in a canyon. For most general aviation airplanes, a power setting somewhere around the bottom of the green arc on the manifold pressure gauge will yield a speed between 70 and 90 knots at takeoff flap setting. Use of full flaps is not recommended as it creates a lot of drag and requires more power (power that may not be available at higher density altitudes).

Turn radius.....= $\frac{1.26 \times \text{velocity in kts}^2}{11.26 \times \text{tangent (bank angle)}}$

Here's an example: At a given bank angle, turn radius varies directly with the square of the airspeed. For an airplane with a cruise speed of 140 kts, in a 30° bank, turn radius will be 3,000 ft.

Turn radius.....= $\frac{(140)^2}{11.26 \tan 30^\circ}$ = 3000 feet

That is equal to a turn radius greater than half a mile, so it would require twice that distance, more than a mile, to execute a 180° turn at a cruise speed of 140 kts in a 30° bank.

In a narrow canyon, the pilot would have to make a steeper bank turn to execute the maneuver and be subjected to the aforementioned hazards of steep banks. However, at a little over half that speed, or 75kts, the new turn radius would be 865 ft.

Turn radius.....= $\frac{(75)^2}{11.26 \tan 30^\circ}$ = 865 feet

Now the 180° turn can be executed comfortably and safely, while still maintaining a 30° medium bank, in about 1700 feet, or 1/3 of a mile.

Turn radius calculations are mathematically correct, but will vary depending on pilot technique (maintaining a constant bank angle and airspeed). Wind and varying groundspeed will affect turn radius with reference to the ground (or canyon wall), leading to the next rule:

Winds and Turbulence: Fly in smooth air. When there is a lot of wind or turbulence in canyons, professional and mountain seasoned pilots are usually back at the hangar. Canyon winds can be unpredictable, and it is prudent to avoid flying in high winds or turbulence. Another, possibly not so intuitive, reason is that when flaps are lowered as suggested to slow and stabilize the airplane, the limit load factor of the wing may be drastically decreased. For example, an airplane that is normally certified for 3.8 positive G's may only be certificated for 2.4 G's with flaps down. Thus, slowing down and using flaps to maximize safety could compromise the structural integrity of the airframe in turbulence.

Position Relative to Terrain: Remain in a position to turn toward lower terrain. This means flying along the side, not in the middle, of a canyon and being aware of the escape route at all times. In general, try and fly downstream (downhill) in canyons and follow drainages that have large rivers or streams in them; the canyons will be wider and gradients shallower, and the terrain less likely to rise more steeply than the climb performance of the aircraft. The "old and not so bold" bush pilots say, "Always have a back door".

By increasing your safety margin and options, these simple rules will help you to keep your hand on the proverbial doorknob and escape entirely possible.

HELPFUL POINTS OF CONTACT

For GA operational, facilities maintenance, aviation newsletter, airfield, and SLC Title 16 questions call: Steve Jackson, SLCDCA General Aviation Manager, 647-5532 or e-mail at steve.jackson@slcgov.com.

For hangar lease and repair questions call: Mike Rawson, Properties Management Specialist, at 575-2894 or e-mail at mike.rawson@slcgov.com.

For aviation security questions call: Connie Proctor at 575-2401.

For gate access problems call: Airport Control Center at 575-2401.

For emergencies call: at SLCIA, 575-2405
at TVY or U42, 911 then 801-575-2405

For common General Aviation information call the GA Hotline: 575-2443

ELECTRONIC GA NEWS

If you would like to receive the Salt Lake City Department of Airports' monthly general aviation newsletter by e-mail, send your e-mail address to: steve.jackson@slcgov.com.

UPCOMING EVENTS

Leading Edge Aviation Logan (LGU) - Leading Edge Aviation has a free breakfast in their hangar on the 2nd Saturday of each month from 8:00 am to 10:00 am. They'd enjoy seeing you there. For more information about Leading Edge events, visit www.leaviation.com.

Wendover Air Show and Fly-in (ENV) – Scheduled for Saturday, September 26... more information to follow.

September Local FAA Seminars The FAA Safety Team is sponsoring the 4th of 8 quarterly Flight Instructor Workshops at the following locations and times. Non-instructors are also invited to attend.

Sep 2, USU, 8:00 A.M. Logan Airport, USU Flight Ops Building
Sep 2, USU, 6:00 P.M. Main Campus, Business Building, Room 214
Sep 8, UVU, 6:00 P.M. Student Center, Room 213B
Sep 15, Salt Lake City International Airport, 6:00 P.M. Kibbie Executive Terminal (Helicopter Emphasis)
Sep 16, Pocatello Airport, 6:00 P.M. Audio Visual Center
Sep 17, South Valley Regional Airport, 6:00 P.M. Air Center FBO
Sep 22, Cedar City, 6:00 P.M. Iron County Tourism & Convention Bureau
Sep 23, St. George Airport, 6:00 P.M. Dixie College Hangar
Sep 25, Westminster College, 8:00 A.M. SLC Kibbie Executive Terminal

The subjects this quarter include TSA record keeping, training, citizenship requirements and security related airspace issues. At some locations there will be a demonstration of an online program that can simulate the whole air traffic system within the U.S. and has potential to train pilots in the use of the air traffic system.

Sep 24, Spanish Fork Airport, Monthly Airport Safety Meeting. Additional seminar and related information may be found at www.faasafety.gov under events/seminars or one may contact Dennis Seals FAA Safety Program Manager, at 801-257-5056.

Wright Brothers Master Pilot Award Michael Falgoust, Provo, Utah was awarded the Wright Brothers Master Pilot Award by the FAA at a ceremony at Utah Valley University (UVU) on August 21. The award is given to those pilots who have exhibited professionalism, skill, and aviation expertise for 50 consecutive years or more as an active pilot. Mr. Falgoust received his Private Pilot certificate in November, 1956. He spent a career in the U.S. Air Force which included the award of the Distinguished Flying Cross. Since then he has been involved in teaching both mathematics and aviation at the college level and was instrumental in starting the aviation program at UVU.