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Welcome to the first edition of **The Mooney Flyer.** There have been VMG fly-ins all over the USA this past year, but this newsletter will focus on the original chapter of the VMG, here in the west.

This month, Paul & Shery Loewen made the news by announcing that they have placed LASAR for sale. We just celebrated their 35th Anniversary this past summer and all of this has happened so quickly. Fear not, LASAR isn't going anywhere. They are committed to the business and are hoping for a sale to a worthy new owner. Paul will commit to consulting for the new owner if that is desired. Personally I think that is a huge selling point as Paul probably knows as much about the M20s as anyone on earth. The Loewens are hoping that any buyer will agree to keep the business in Clear Lake and also to keep their phenomenal staff of 14 employees.

Separately, but also related to LASAR, Robert Brown is retiring after 12 ½ years. To me, Robert has been synonymous with LASAR as he has been at LASAR longer than I have owned my 2 Mooneys. Several VMG members flew up to Clear Lake on a beautiful Sunday afternoon and took Robert and his beautiful wife Victoria to lunch at TNT's on the Lake. We'll miss you Robert, but never forget you!

Upcoming Fly-Ins

We will be revisiting **Columbia CA in May** for a typical Saturday VMG fly-in. We'll park over by the picnic/camping area on the grass runway which is easily taxied to from the main runway. We will have plenty of hanging out talking time followed by a BBQ lunch in the campground. For those of you that want to extend, several of us will be camping on Friday and/or Saturday night. Join us for some good old fashioned Mooney ghost stories.

Landing at Catalina

In August we will be revisiting two favorites. First up will be a day long fly-in to the island of **Catalina, CA** off the coast of Los Angeles. It's a short 26 mile over water flight to a mountain top landing. The runway will be freshly resurfaced. Bring your camera. It's pretty beautiful. We will have lunch right at the airport.

Landing at Friday Harbor 1

Also in August we will be revisiting the **San Juan Islands up in Puget Sound northwest of Seattle**. This is a weekend fly-in but if you are local, we will have our usual ramp time together on Saturday morning followed by seafood and burgers lunch at the airport.

Pilot Logbook – Leave it Home - During the summer of 2011 in Idaho, a pilot, plus his wife and kids were killed in an aircraft crash. The pilot had appointed his close friend as the executor of his will. When the friend contacted the pilot's aviation insurance company, he was told that the insurance company would be happy cover the cost of the destroyed aircraft and funeral expenses. All he needed to produce was the pilot's logbook to prove currency and verify the date of his last flight review.
That created a big problem and subsequent law suits because the pilot's logbook was burned in the crash. According to Greg Sterling, senior vice president at Chartis Aerospace, pilots **should not** carry their logbook in the airplane, because they could be destroyed or stolen. However, if a logbook is destroyed or lost, photocopies are an acceptable means of proving currency and logged flight time.

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Slipping Mooneys

by Bob Kromer

During development and certification on the M20K 252 at the factory, I encountered the aerodynamic buffeting while slipping on approach as described by Dan Eldridge in his posting on slips in his M20K 231. Obviously, this gets a test pilot's attention and we began an investigation.

Thought you might be interested in what we found. For our slip tests, we flew the M20K, the M20J and the Mooney/Porsche engineering prototypes that were at the factory at the time. This gave us a good cross section of different aircraft configurations (short/long fuselage, different pitch trim requirements on approach, etc.)

What we found was 1) All airplanes were fine above 85 KIAS in full rudder deflection forward slips, flaps up and flaps down. 2) But somewhere between 80-85 KIAS and lower, AERODYNAMIC BUFFETING FROM THE HORIZONTAL TAIL/ELEVATOR occurred in the M20K and the Mooney/Porsche airframes ALONG WITH A SLIGHT LOSS OF ELEVATOR EFFECTIVENESS AND A SLIGHT NOSE DOWN PITCHING MOMENT.

These conditions were worsened with flaps down compared to the flaps up. Aerodynamic tufting of the horizontal tail revealed what was happening. In the M20K and the Mooney/Porsche with their more forward CGs, almost full nose up pitch trim is required for a "hands off" approach at the target approach airspeed. This puts the horizontal stabilizer of the Mooney tail at a high negative angle of attack (to keep the nose up). With the horizontal tail at this high negative angle of attack and especially with flaps full down, the local airflow over the horizontal tail is getting pretty close to max alpha, the angle of attack where the tail will stall.

I want to emphasize that IN NORMAL FLYING, THERE IS PLENTY OF MARGIN - no need to worry about the tail stalling in your M20K or long body Mooney. But start slipping the airplane at 85 KIAS and below or have a little ice on that stabilizer leading edge and those margins can get mighty thin.

Combine a slip maneuver with some pretty good yanking on the control wheel in turbulence and you might get a partial tail stall. We did in flight test - in the M20K the result was buffeting felt in the control wheel and the slight nose down pitching moment. So my advice from the test pilot's seat is don't go there - especially if you fly a Mooney model that requires lots of nose up pitch trim on the approach. An aggressive forward slip in those airplanes with the speed low and the flaps down puts the tail in an extreme airflow condition. The airplane will warn you with buffeting and a slight pitch down, but who knows - add some ice and look out. This is not the way to fly your Mooney.

My bottom line opinion -- keep the ball near center on the approach and you're flying the Mooney design correctly and safely with the safety margins it was meant to have.

A cool way to descend in a Mooney while maintaining cruise speed is as follows. Ensure your Mooney is trimmed for level flight at cruise settings. Reduce the manifold pressure (approximately 5”) to initiate a 500fpm descent at cruise speed. Your airspeed and rate of descent will oscillate slightly. Don’t correct for this effect unless you want to override it.

Don't Try This at Home

An Amazing Panel Upgrade - M20K N231MW

Member Kevin Smith already owned one of the prettiest and certainly one of the fastest M20Ks in the fleet. Kevin routinely flies to Oklahoma and Texas and other points east. He probably puts 500 hours on his Mooney, just a little more than most of us. He pulled an old MX-20 out of his panel and here is the result after adding some impressive glass to his panel.

Panel Before Upgrade (MX-20 in center)

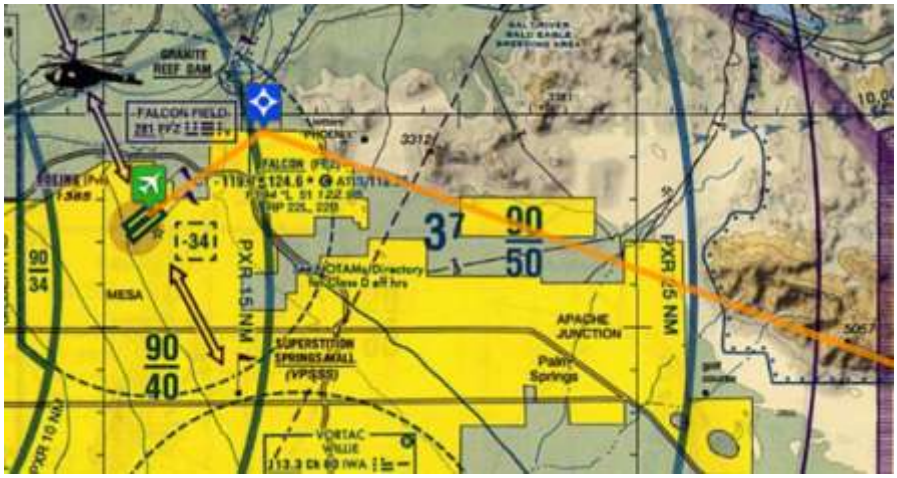
Here on the left side of the panel is a Garmin G500

And on the right hand side is a GTN-750, EI MVP-50 along with his original Garmin 430W

Night Flying Deserves Extra Care

By Jim Price

The night crash of an Aero Commander on November 23rd, 2011 was such a tragedy. Six died, including three children, when they crashed into the Superstition Mountains. They had planned to fly from Mesa's Falcon Field (FFZ) to Safford, AZ (SAD).



According to the NTSB, a review of the recorded communications between the airplane and FFZ Tower revealed that when the pilot requested taxi clearance, he advised the ground controller that he was planning an "eastbound departure". The flight was cleared for takeoff from Runway 4R, and was instructed to maintain runway heading until advised, due to inbound traffic. About 90 seconds later, the tower controller issued a "right turn approved" clearance to the flight.

Review of the preliminary radar data shows that the takeoff roll began about 1826 MST. The airplane began its right turn towards SAD when it was about two miles east of FFZ and climbing through 2,600 feet MSL. At about 1828, the airplane reached an altitude of 4,500 feet msl, where it remained, below the Phoenix Class B airspace, (5,000 to 9,000 feet), and tracked in an essentially straight line until it impacted terrain.

The last radar return was received at 1830:56 at the impact location. The NTSB report indicated that "The impact site was located on steep rocky terrain, at an elevation of about 4,650 feet, approximately 150 feet below the top of the local peak," said the report.

The 1976 Turbo Commander 690A, N690SM, was equipped with a Bendix/King KGP 560 terrain awareness and warning system (TAWS), according to owner records. Turbine-powered airplanes with six or more passenger seats are required to carry such safety gear, meaning the accident airplane by regulation should have had a functioning TAWS on board.

Night flying requires some Serious Flight Planning

Know where you're going. Draw a line on a map, and then certainly maintain situational awareness throughout your flight. This is not the time to relax or become complacent.

Terrain Warning is relatively cheap, compared to loss of life. Install a GPS with Terrain Warning, such as a Garmin 396, 496 or Aera. Hook it up to your audio system, so in addition to the visual warnings on the GPS, you'll be able to hear the aural warnings: "Too low terrain . . . Pull up, pull up!"

Other Ways to Stay Safe at Night

Pilot Controlled Lighting (PCL) – Do you know how to activate it?

While the CTAF is commonly used to activate pilot-controlled lighting, the proper frequency, if different from the CTAF, can be found in the Airport/Facility Directory (A/FD) and on standard instrument approach procedure charts. Sample A/FD information: **"When twr clsd ACTIVATE HIRL Rwy 10-26 – CTAF".**

There are Two Types of PCL

- Single Intensity, non adjustable PCL, where pilots key the microphone three or five times (as specified), within five seconds.
- HIRL or MIRL PCL, where pilots key the microphone within five seconds either:
  - 3 times (HIRL or MIRL – for lowest intensity; Lower REIL or REIL off)
  - 5 times (HIRL or MIRL – for medium or lower intensity; Lower REIL or REIL off)
  - 7 times (HIRL – for highest intensity and REIL on).

When either type of system is activated, a 15-minute countdown starts, after which the lights turn off unless someone makes the appropriate amount of clicks on the appropriate frequency.

Always initially key the mike 7 times to assure that all controlled lights are turned on to the maximum available intensity. If desired, an intensity adjustment can then be made, (where the capability is provided). REIL can be turned off by keying 5 or 3 times. Even when the lights are on, always key the mike as directed when overflying an airport of intended landing, or just prior to entering the final segment of an approach. This will make sure that the aircraft is close enough to activate the system and a full 15 minutes of lighting duration will be available.

Avoid Bright Lights

AIM 8-1-6 recommends avoiding bright sources of light such as headlights, strobe lights, or flashlights for at least 30 minutes prior to a flight at night. After 30 minutes the rods in our eyes adjust and become 100,000 times more sensitive to the darkness.

Use Oxygen

Supplemental oxygen can help prevent hypoxia symptoms when flying at or above 5,000 feet MSL at night. (AIM 8-1-2) A lack of oxygen causes visual impairment because the rod cells which give us night vision require a boat load of oxygen.

Stay Night Current

If you'll be carrying passengers at night in a particular aircraft, you'll need, within the past 90 days, Night Currency: From one hour after sunset to one hour before sunrise, three takeoffs and three landings to a full stop.

Know the Night Fuel Requirements (FAR 91.151. & 167)

VFR Day: Fuel to destination + 30 minutes.

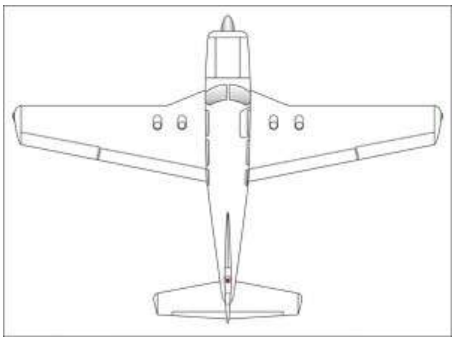
VFR Night: Fuel to destination + 45 minutes (similar to that required for an IFR flight

Ensure that your aircraft is equipped for night flight

- Anti-collision light system, if certified after August 11, 1971.
- In the event of failure, you may continue to a location where repairs or replacement can be made.
- Position lights must be ON from sunset to sunrise. (Ref. FAR 91.209).
- Landing light, (if flown for hire).
- A power source.
- Spare fuses; 3 of each kind required, and accessible in flight.

Piper & Mooney - 1954

In 1954, Bill Piper was looking for a design to compete with the Bonanza. The engineers at Piper were busy with other projects at the time, so Bill Piper asked his friend Al Mooney if Piper could buy the new Mooney MK-20 design that Mooney had not yet started producing. Al wouldn't sell the design, so Bill Piper asked Al Mooney to come up with a totally new design. Al submitted a design to Piper that was an all metal 4 place monocoque construction with retractable gear, a 180 HP Lycoming, and a stabilator in place of an elevator. The stabilator was a new design, an all flying horizontal tail.



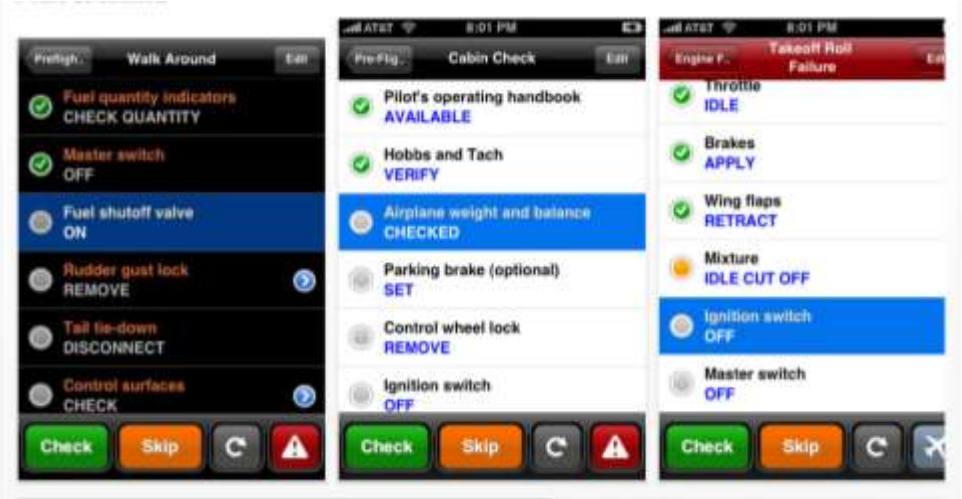
The cabin size of Al Mooney's design was a bit small, so the engineers at Piper increased the cabin size and the first Prototype PA-24, N2024P, was created in 1956.

As you can see in this photo, the trailing link landing gear on the prototype is not what we have on our Comanches. It is suspected that Bill Piper decided that the trailing link landing gear would be too complex and expensive, and in an effort to undercut the cost of the Bonanza, he decided on the straight tube oleo strut landing gear that all Comanches are equipped with. Although it is much more difficult to make a good landing with the straight oleo strut landing gear than with the trailing link gear, that decision by Bill Piper is why Comanche Pilots have skills much more superior and a highly qualified group of Pilots than the Bonanza and Mooney bunch!!

The second prototype PA-24-180 flew in 1957. The first production 180 was delivered in January of 1958. It cost $14,500. The 250 HP Lycoming was meanwhile being tested in the original prototype PA-24, and the first production 250 Comanche was delivered in April of 1958.

iPhone/iPad App Review – ForeFlight Checklist

Not to be confused with ForeFlight Mobile, ForeFlight Checklist is a nice little app if you want to create personalized checklists for any/all situations ranging from a pre-flight, pre-runup, engine out on cruise, landing, etc.



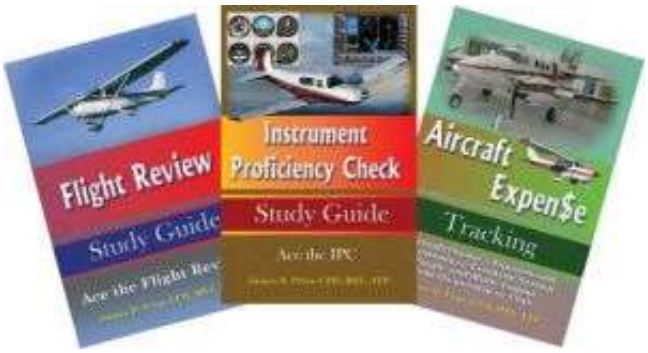
You can create your checklist on a PC (maybe a Mac as well) and then transfer your checklists to your iPhone and/or iPad. In keeping with the times, you can easily share your checklists with other pilots or get a copy of their checklists and then tailor it for yourself. In using this product, I found it very easy to customize a checklist. I started each checklist by copying it from the POH. Then I would add items and reorder them to suit my style. You can ask, well if I have a POH, why do I need this. A couple of advantages are that all of your checklists are in your phone. If you want to pull up your customer briefing, it's there, and that's not in your POH. If you have an engine issue, the checklist is at your fingertips. And if you are performing a checklist, such as a pre-flight, and are interrupted for any reason, it keeps track of where you were, so you are less likely to forget something. You simply tap each item as it is accomplished. ForeFlight even paid attention to the details as there is a day & night mode. As of this writing they had templates for a number of airplanes, but I think for us Mooniacs, there is only a template for the M20K. But remember, if another Mooney owner has made a checklist for the same model as yours, they can send it to you. There are two versions of the program, Lite (Free) & Pro. So you can test drive the Free version and if you want some of the advanced features, you can purchase the Pro version later… Enjoy

I Feel the Need for Speed

Want to increase your speed in a C or E. Try this: Get all setup with level flight and your cruise settings. Then crank in about 3d of flaps. Could be an OWT, but can't hurt to try.

The Foul Deed

If you're flying a E or C model, immediately after start, aggressively lean the fuel's mixture to save the plugs from fouling. During the runup, if you discover that the "foul deed" has already occurred, un-foul your plugs by applying at least 2,000 RPM for about 30 seconds. Then repeat the runup.



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