The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

March 2019

Editors

Phil Corman & Jim Price

Contributors

Bruce Jaeger | Bob Kromer | Tom Rouch | Paul Loewen | Geoff Lee | Linda Corman

Departments

Features

If you love ***The Mooney Flyer*** and want to keep it healthy, just click on **the "Donate" button**.

Subscribe and we'll email you when a new issue is published.

Find all the back issues (starting in 2012), or use our powerful search engine to find a past article.

From the Editor

Phil Corman

In The Beginning

Reader Albert Dyer sent us 3 historical documents from the very early days of Mooney. These documents are compiled from the archives of Mooney Aircraft, Inc. In this issue, we cover a bit of the initial days, including the design of the M-18. It's fascinating stuff and as study the documents, we will publish additional articles in a series we will call, "In the Beginning".

Two things struck us as interesting, but not surprising. We found that Mooney did not really do much to market and sell their early models. Secondly, Mooney dabbled with military contracts during the Korean war, and proposed modified M-18s to carry weapons and small rockets for tactical operations. We didn't know that, but are not surprised.

What is Your Pilot License, Really!

I had an interesting conversation about what your Pilot License (or Certificate) really means? Of course it means that you can now be the sole manipulator of airplane controls, acting as PIC. But what does it really mean?

My USMC brother recalls that upon passing his Private Pilot check ride, his primary instructor said, "Congratulations Don, you now have a license to learn how to fly". That was pretty easy to say… but this comment had a great impact in the future of his flying life.

A FAASTeam representative told me many years ago, that pilots who attend Safety Seminars have remarkably fewer incidents and accidents. Back when I led the Vintage Mooney Group, we had fly-ins almost every month. After the fly-in, some pilots would linger in the lounge and share flying "experiences". There was a lot to learn from each other and these gatherings were both fun and informative. I usually get my Mooney ferried to/from service by a long time Mooney pilot. I cannot remember the last time that I failed to learn something from these pilots.

Anyway, back to my brother… he sent me a variation of the learning stages as he interprets them.

5 Stages Of Learning

1.) UNCONSCIOUSLY INCOMPETENT (I don't know what I don't know)

2.) CONSCIOUSLY INCOMPETENT (I am aware of my lack of knowledge and I'm studying and practicing to learn the skills)

3.) CONSCIOUSLY COMPETENT (I've developed the knowledge and skills and work hard to apply them)

4.) UNCONSCIOUSLY COMPETENT (I have internalized the knowledge and skills; they are second nature to me now.)

5.) UNCONSCIOUSLY INCOMPETENT (My over-confidence in my ability and my subsequent failure to consistently review and reinforce my knowledge and skills have made me as incompetent as I was before I began)

Anyone can Fly an Airplane… You'll learn how well when Your Mooney and/or Mother Nature throw you a curve

What do I mean by this? With a perfectly performing Mooney and stellar VFR conditions, we are expected to perform our PIC skills to a "T", i.e., darn near flawlessly. However, you will really learn how good you are if your Mooney throws you a curve or mother nature surprises you.

When I bought my first Mooney, an M20C, my most recent experience had been in Cessnas and Pipers and I was a little rusty. As I was approaching my home airport, Reid-Hillview (KRHV) in San Jose, the throttle cable became INOP. It's a relatively short field with a big fat Shopping Mall on short final. My heart was beating fast, my adrenaline level was high and my power was at full throttle. My primary training kicked in and I remembered my instructor saying, "Your brain works best when it's not in panic mode". I had to "will" myself not to panic. I pulled the mixture and the landing was uneventful. My point is that to perform PIC responsibilities, it's imperative to not panic when confronted with undesirable surprises. We've all encountered them. Several of my fellow Mooniacs have had partial or complete engine failures, stuck landing gear issues, flying into IMC under VFR flight, etc.

Remembering to "Not let yourself PANIC", can save your life and maybe your Mooney too!

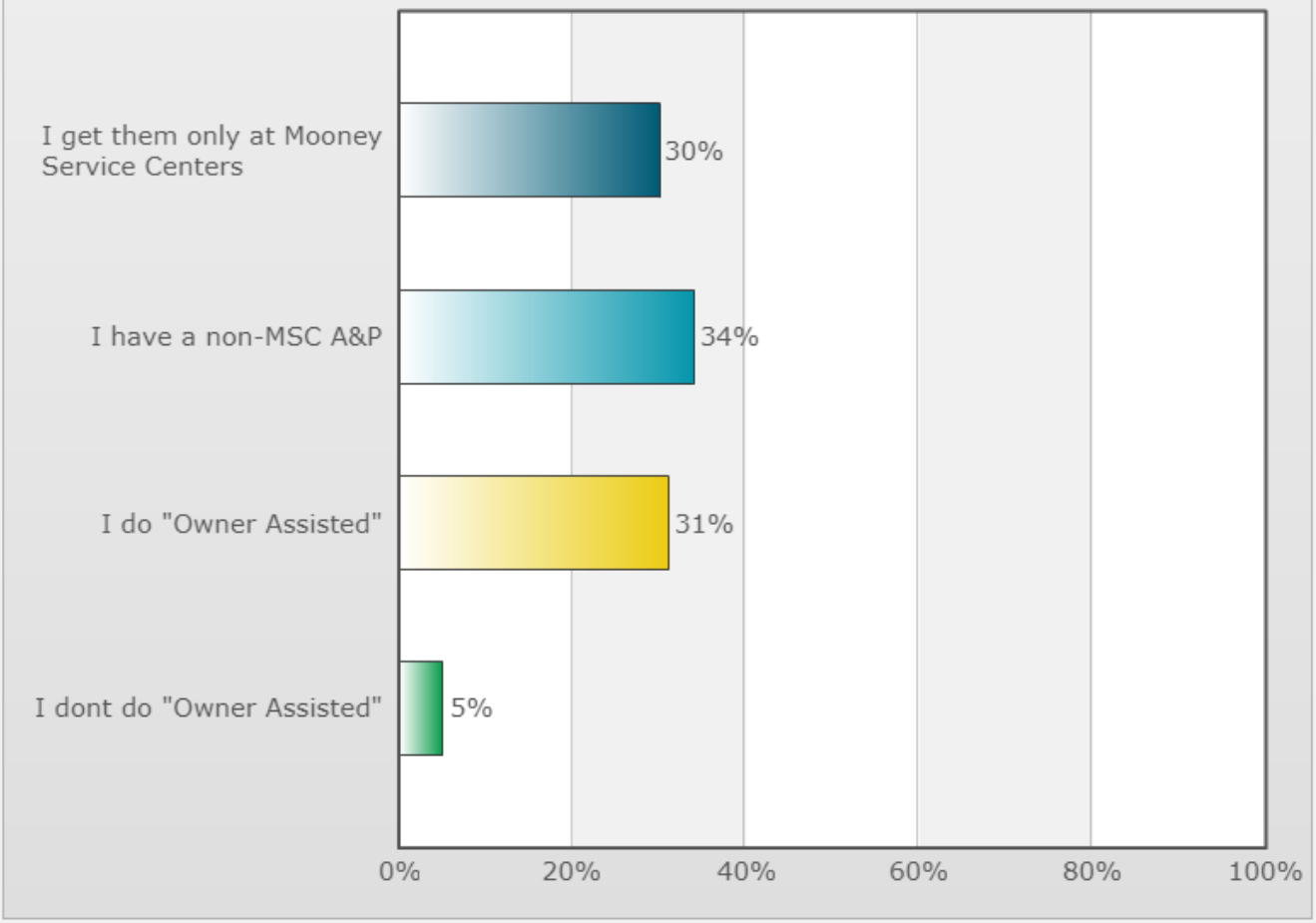
If you pass the test(s) when your Mooney or Mother Nature challenges you, you will learn more about just how good you really are!

*One rule of thumb to help avoid unnecessary risk is what I call the **Rule of 2**. If one thing happens that is "not good", you can make a judgement call whether to continue a flight. If a second surprise pops up, even if it's very minor, it's probably time to abort the flight.*

Regarding my Annual

Poll created by Phil Corman on 01/04/2019

Poll Results



Next month's poll:"As a Mooney Flyer Reader, I am a:" **CLICK HERE** to vote.

I LOVE your work and look forward to it every month- I've been a huge fan of The Mooney Flyer since it started!

One thing did catch my attention this month, though - and it seems to be out of line with what I've experienced, seen and read over the years... the time of useful consciousness chart. The chart you have in the flyer this month seems to be vastly optimistic at higher altitudes and perhaps a little pessimistic at lower altitudes from what I've trained to as a military jet pilot, and also what I've seen in other publications. Here's something that seems to be more in line with what I'm used to seeing..., that's also a scholarly published resource. Anyway - just thought I'd throw this out there.

Also- the jet pilot you have displayed on the page before is Turkish... not American... based on his lapel rank and shoulder flag.

Cheers! **Jon "Job" V**

Editor's Note: A Google search for Time of Useful Consciousness (TUC) charts reveals over 30 of 'em. The sites in which they are used are by CFIs, Aeromedical Examiners, EMTs, etc. The majority of these charts use the same TUC times. While writing this article, I conferred with my friend Ron Diedrichs, a former USAF Physiological Officer, who now manages the Altitude Chamber for Arizona State University. Ron agreed with the data displayed in the chart that I used in my article.

What's the point that I was trying to make? Hopefully we will somehow understand that TUC decreases dramatically above FL180 and that we take physiological risks when flying an unpressurized aircraft above FL250.

RE: Changes to GA in 2018 - I am not sure of your source for the right of way statement in this month's issue. Please review 91.113(b)(g) regarding aircraft on final; especially those on an IFR approach in IMC or IFR flight plan.

UNCONTROLLED FIELD - In your example of a 2,000' ceiling VFR traffic must maintain 500' below ceiling and 3 miles visibility in class E airspace (assumed because your airport is serviced by an approach). IFR traffic does not have the ability to exercise 91.113(a) until VMC. 2,000 OVC is

minimum for VFR, unless otherwise noted for turbojet/prop aircraft. Class G, no problem 1sm clear of cloud no IFR conflicts, no approaches.

This is the most dangerous time for dissimilar airplanes to be in competition for the same space. If I'm in the jet outside the Final Approach Fix, I have already been monitoring CTAF from 50-25 miles out. When ATC Clearance for the procedure is given no other IFR aircraft is allowed in the terminal E until arriving traffic cancels.

Yes, you can stay local and practice pattern work in Marginal VFR in D, C or E airspace; been there; done that, and helicopters do it all the time.

THE RULE STATES YOU MAY NOT USE IT TO GAIN ADVANTAGE WITHOUT ADEQUATE SEPARATION.

In VFR, Class D,E and C 3,000 and 3 sm visability or better, is the operative player in the A/C. Boca, before the tower with approaches is a great example. There should be ample time for arriving aircraft to transition and sequence from an approach to terminal 91.113(a) especially if the approach is not aligned.

Your magazine example, however, is in MVFR conditions, 2,000' OVC, 3 miles vis (I am assuming Class E non-towered airports with an approach where most of us operate) D,C&B tower makes the call based on separation. Your correct illustration of the traffic patterns for dissimilar airplanes puts a jet at a mile and half final breaking out into VFR just seconds above pattern altitude for a strait in approach ILS, LPV, LNAV/VNAV or lower on Non-precision VOR, LNAV or NDB. Under 91.113 (b) marginal conditions prevailing should a complaint arise from someone turning final in front of that arriving traffic, this visual base to final offender may wind up in front of the administrative law judge explaining that action. Two similar aircraft with similar speed could easily work a base to final turn and touch n go before the others arrival in marginal conditions. Of course it would take a radio call or two to work it out. That's another subject altogether.

Constructive deconfliction happens with good visibility, accurate position reports, situational awareness, good aeronautical decision making and common courtesy. In your wonderful description of what's here today versus 15 years ago, ADS-B is recorded data. FlightAware and other private enterprises are installing receivers that contribute and monitor the National Airspace System. Lest you think a non-towered airport is free of surveillance, don't be so sure.

Under no circumstances will the 8900.1, 8900.2, AC, or Info preempt the regulations. There have been multiple circumstances where policy and regs have differed.

This particular AC was published after several Mid Air and Near Mid Air Collisions during VFR AND MVFR conditions. Even with a tower, it can happen; College Station for example. They no longer allow circling to the opposing runway. The design was to bring conflict to a halt at high density training airports, where on a normal day primary, commercial and instrument training were all being conducted.

Thanks for the pilot feedback section to The Flyer, James. It's a great addition. Very happy with the February edition.

Matthew W

Editor's Note: Matthew, FAR 91.113(b) states that "*the aircraft at the lower altitude has the right-of-way, but it shall not take advantage of this rule to cut in front of another which is on final approach to land or to overtake that aircraft.*"

Advisory Circulars like **AC-90-66B**, dated 3/13/18, do not override FAR 91.113(b). Instead, the ACs are aimed at providing the best methods and recommended practices to help pilots comply with the FARs. February's article, "2018 Changes", specifically the paragraph regarding "IFR vs. VFR Traffic Priority", referenced **AC-90-66B**, which states in paragraph 9.6, ***"Instrument Flight Rules (IFR) Traffic. Pilots conducting instrument approaches should be particularly alert for other aircraft in the pattern so as to avoid interrupting the flow of traffic and should bear in mind they do not have priority over other VFR traffic.*** *Pilots are reminded that circling approaches require left-hand turns unless the approach procedure explicitly states otherwise. This has been upheld by prior FAA legal interpretations of § 91.126(b)."*

While preparing my response, I conferred with the Scottsdale FSDO. You are correct, Matthew, the FARs reign supreme. However, the Advisory Circulars help us remember that we can fly safely and courteously.

The Scottsdale FSDO office recently investigated an issue where IFR traffic was approaching Marana Airport (KAVQ) and entered downwind at about the same time that VFR traffic was entering downwind. The IFR traffic was convinced that they took priority and told the VFR traffic that they must fall in line behind them (I'm paraphrasing here). When the Inspectors talked to the IFR aircraft pilot, they explained the sentence that is provided in AC 90-66B. They explained that coordination between the two aircraft must be accomplished as early as possible. Pilots should try to call the CTAF frequency at least 10 miles out, and start getting a picture of who else is operating in the pattern. Then, the aircraft can coordinate.

The IFR traffic could have then politely asked for priority for their training purposes, and the VFR traffic would have known to widen out their pattern, etc. There are innumerable scenarios possible, as you can imagine, so that's why the AC states that "pilots conducting instrument approaches should be particularly alert for other aircraft in the pattern so as to avoid interrupting the flow of traffic". Thus, the IFR traffic can avoid noncompliance with 91.113 (b) . . . "When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft…" and 91.113 (g).

RE: Flying the 252 TSE - I liked the write up on the 252. I have a 201, but had my eye on a 252. Unfortunately my bank account had other ideas. Anyway, I would like to discuss engine management. It does not matter if it is normally aspirated (NA) or turbo, these settings work and are far better for the health of the engine. What I am talking about is lean of peak operations. Much has been learned by Lycoming and TCM with GAMI leading the way. John Deakin and Mike Busch also have done a lot here.

So, how old is the info in the POH? Much too old. The 50 rich of peak you speak of, like the POH says, is the worst place to run any engine. It is where you get the highest internal cylinder pressure and put the most stress on your engine. I would bet money that is why you had to top OH. Even Lyc and TCM have changed their engine ops manuals to reflect this. Check out the most recent updates from them. They now recommend being at least 100 ROP (150 would be better) and that LOP ops are acceptable with proper full engine monitors.

Lean of peak ops are far cooler and less stressful on your engine. Yes, you lose a few knots of speed, but you burn up to 20% less fuel doing it. I get 168 knots at 11.2 gph at 100 ROP. Running

LOP, I get 163 knots at 9.8 gph. Take a look at John Deakin's AvWeb article, Pelican's Perch #18. He does a great job explaining this.
Andrew C

RE: How your Non-Aviation Folks Sell Your Mooney – I am a Mooney owner and a lawyer. I read your article in The Mooney Flyer and am sending you a template of a "Letter of Instruction" which is useful in settling estates and may help here.
Jeff M

Dear Family:

Because we all know that any of us could become disabled or die at any time of our lives, I feel it is important to provide you with information you may need in the event you get an unexpected call telling you there has been a medical emergency or death. I am trying to keep this letter simple and easy to update, while also giving you a roadmap of how to get further information when it is needed.

My full legal name: _____ Date of birth: _____
Mailing address: _____ Phone: _____
City: _____ State: _____ Zip: _____ SS #: _____
Place of birth: _____ Date of birth: _____
Citizenship: _____ Military Service: _____
Military discharge papers location: _____
Spouse: _____ Spouse SS#: _____
Former spouses and years of marriage: _____
Location of paperwork regarding marriage dissolution or estate of former spouse: _____
Health Insurance Co.: _____ Policy No. _____
Medicare Claim No.: _____ Primary Doctor: _____
Address of doctor: _____
Doctor's Phone: _____
Life insurance company: _____ Policy no.: _____
Other insurance: _____
Attorney: Name: _____
Address: _____
Phone: _____ I ____ have/ ____ have not/ executed a will dated: _____. The original of this will is located: _____. A copy is at: _____.
The person named as **Personal Representative** in the will is: _____

Bank: Name: _____
Address: _____
Phone: _____
Types of accounts: _____
Safe deposit box? ___ yes/ ___no. Contents: _____
Accountant:Name: _____
Address: _____
Phone: _____
Location of tax returns & records: _____
Investment Advisor: Name: _____
Address: _____
Phone: _____
Location of investment records: _____
Real Estate Owned: Description: _____
Address: _____
Contact Person: _____ Phone: _____
Location of records: _____

Disability: I _____ have/ _____have not/ executed a **Durable Power of Attorney for Healthcare**. I have named _____ (Ph: _____) to be my healthcare decision-maker and selected _____ (Ph: _____) as the alternate. A copy of this document can be found: _____
I ____ have/ ____ have not/ executed an **Advance Directive** (Living Will). A copy of this document is located: _____. I ___ have/ ____ have not/ executed a **General and Durable Power of Attorney** naming _____ to act on my behalf regarding my personal and financial affairs. A copy of this document can be found: _____.In the event of death, have my body picked up by: _____. Phone _____ to make these arrangements. Instructions regarding my wishes for mortuary arrangements have been provided to: _____
In general, my wishes are for ____ cremation; ____ burial; or _____ entombment. My remains should be: _____ disposed of at sea; _____ placed in a veterans' cemetery; _____ buried or entombed at:_____ or _____
I have pre-paid for the following services: _____
The documents regarding this prepayment are located: _____
I ____ am/ ____ am not/ an **organ donor** and would like appropriate arrangements made at my death.

Signed: _____ Date:_____

SUBSCRIBED AND SWORN to before me this _____ day of _____, 201__.

_____
Name:
NOTARY PUBLIC in and for the
State of Washington residing
at _____
My commission expires _____

Maybe it's legal, but . . . is it smart?

by Jim Price

How many times have you planned a flight in your Mooney, only to be faced with an overcast sky? You know in your heart that it's a thin layer. Heck, you can penetrate it before you can say "Al Mooney", and you'll be in the clear well before reaching Class E controlled airspace. Shucks, no one will be the wiser. That reminds me of the case of FAA versus George M. Murphy; when he appealed his first hearing with the FAA.

On April 16, 1990, at 6:30am, George arrived at the Robinson Municipal Airport (KRSV), near Robinson, Illinois. Robinson is an uncontrolled airport and the weather that morning was ¼ mile to 1 mile, with a ceiling of 100 – 200 feet AGL. He called Flight Service and filed an IFR flight plan for his flight to Indianapolis, Indiana. Just before 8:00am, George and his two passengers strapped into his PA28 Cherokee, started the engine and began his taxi.

George called Terre Haute (IN) Approach Control and requested his IFR clearance. His request was denied because Indianapolis was below IFR minimums and they were not accepting any additional traffic.

He replied to Terre Haute approach, "I guess I'll have to go VFR."
After all, George reasoned that ¼ to 1-mile visibility and a 100' to 200' ceiling was "*Borderline VFR*". NOTE: In case you're wondering, the Robinson weather wasn't even close to *Marginal VFR*, which is defined as ceilings of 1,000 to 3,000 feet and 3 to 5 miles visibility.

Since Indianapolis was below IFR minimums, it's anyone's guess where George was going to land after departing Robinson.

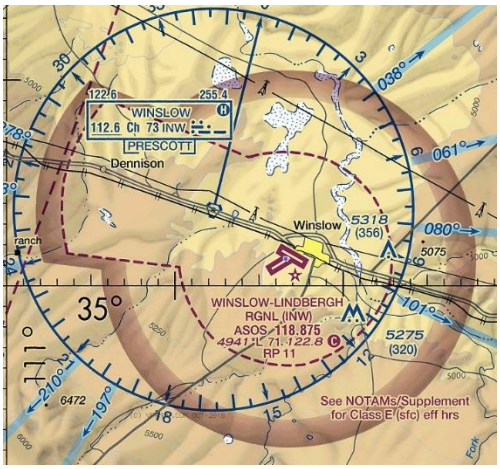
Let's Review FAR 91.155 Basic VFR weather minimums.

(a) . . . no person may operate an aircraft under VFR when the flight visibility is less, or at a distance from clouds that is less, than that prescribed for the corresponding altitude and class of airspace in the following table:

Airspace	Vis	Cloud Clearance
Class E	3 sm	500 feet below, 1000 feet above and 2000 feet horizontally (when below 10,000' MSL)
Class G, Day	1 sm	Clear of clouds (when below 1,200' AGL)
Class G, Night	3 sm	500 feet below, 1000 feet above and 2000 feet horizontally (when below 1,200' AGL)

KRSV, Robinson Municipal Airport (now named Crawford County), is in Class G, (uncontrolled airspace), from the surface to 699' AGL. To remain VFR in Class G airspace (below 10,000' MSL), pilots must have **1 statute mile visibility and remain clear of clouds.**

The magenta highlighting around KRSV indicates that at 700' AGL, Class E, or controlled airspace starts. To remain VFR in Class E, pilots must have 3 statute miles visibility, with cloud clearance requirements of 500 feet below, 1000 feet above and 2000 feet horizontally.



At some uncontrolled airports, such as (KINW) Winslow, AZ, the Class E airspace starts at the ground. This is designated by the dashed magenta line.

Questionable Decision

George convinced himself, that if he took prudent precautions, he could safely depart. Here's what he did:

- Broadcast his departure intentions on the Unicom Frequency.
- Monitored the ATC frequency for other traffic.
- Departed immediately after another aircraft which had just received an ATC release and clearance.

At George's appeal, FAA Inspector Michael Lynch, characterized George's operation as "playing Russian Roulette", and that his takeoff created "the hazard of a collision with other aircraft."
Lynch explained that when George took off, he had no assurance that VFR conditions would prevail when he reached controlled (E) airspace and he endangered other lives by penetrating clouds without knowing whether there were other aircraft in the vicinity.

It was Legal

If the visibility was indeed 1 mile or greater, George was perfectly legal when he took off in Robinson's Class G airspace, George maintained that he was "clear of the clouds well before he entered Class E airspace [700' AGL]".

But, was it smart?

No one could dispute George's assertion that he was "clear of the clouds" and had 1 mile visibility, so at the appeal, the violation of **FAR 91.13 (a),** Basic VFR weather minimums, was dismissed. However, the Administrative Law Judge found that George was guilty of violating **FAR *91.13 (a),*** wherein ***no* person may operate an aircraft in a careless or reckless manner, so as to endanger the life or property of another.**

At his appeal, George acknowledged that he had put others in danger and stated, "The threat of collision [with the other departing aircraft from Robinson] never really entered my mind. I would have been more apt to hit a VFR aircraft on top of those clouds that had one-mile visibility in clear clouds as you come out of clouds . . . Terre Haute approach -- radar can't pick you up at Robinson until you are about five to 600 feet above the ground. So, they would have had no way of knowing if there had been another VFR aircraft there. That's what I consider a calculated risk."

> *Calculated risks* are risks with a plan.

I think that George felt that he had a solid plan, except of course, where he would land if Indianapolis was still below IFR minimums. At the time, it never occurred to him that he might be putting other airmen in harm's way. What about George's passengers? Weren't they at risk, too?

On July 5, 1993, George lost his appeal and the Administrative Law Judge found him guilty of being reckless. His airman certificate was suspended for 90 days.

Got Wisdom? Every time I fly my Mooney, even thought I might follow all the thousands of FARs, I'm still taking a risk. I don't need to put myself in unnecessary danger by modifying the regulations to suit the situation of the day. So, unless your Super Power is *Radar Vision*, the safe and wise thing to do is wait for an IFR clearance to penetrate the clouds. Everyone will hold you in the highest esteem for your prudent judgement.

Jim

LET'S TALK ABOUT THAT CRASH

There was yet another Mooney crash a few days ago, this time on Mount Diablo just north of Livermore, CA. The pilot crashed into the side of Mt Diablo at night in questionable weather. He was a student pilot and had owned the Mooney for approximately 2 months. MooneySpace and BeechTalk have amply commented on the likely cause(s). There have been a lot of "flaming each other" on the speculation of a fellow Mooniac's demise. Our question in this article is this:

Is it Valuable or Productive to speculate on crashes?

The first school of thought is "No". Let the professionals do their work and report on the crash. They are pros and will take weeks to accurately determine the cause(s) and deliver a professional report. This thinking says the NTSB report will provide facts that are much more valuable than hours of speculation on Facebook or Aviation Forums.

The second school of thought is "Yes, but with one caveat". Posting thoughts on the possible causes of each accident can be a great learning process. Here are a few examples:

Example 1: This pilot was a student pilot with 2 month experience in the Mooney. Learning discussion might include 1) Did he have a discussion with his instructor before departing at night in bad weather? Good question and it's not judgmental. What can we learn from asking? Simple: We should consult with our CFI before embarking on a difficult flight.

Example 2: Was the pilot aware of an extremely tall mountain, near his departing airport, KHWD? This mountain is a black hole at night. Another good and non judgmental question? What can we learn from asking? Simple: We should perform a thorough pre-flight that includes terrain, especially at night.

Example 3: Is the weather enroute VFR, MVFR, or IFR and what are his personal minimums? What can we learn from asking? Simple: Have we established personal minimums for a flight in our Mooney when it is VFR, MVFR, IFR, day or night?

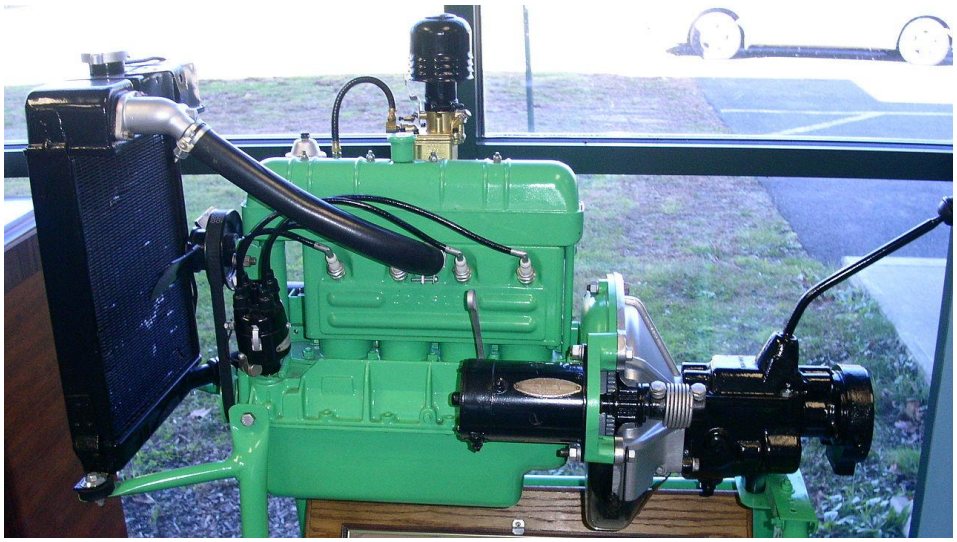
My partner, Jim Price, writes about "Maybe its Legal, but is it Safe?" This article is based on some speculation, but Jim raises some thought provoking and useful considerations to help us avoid unsafe situations.

Fly Safe!

IN THE BEGINNING

MOONEY IS BORN

Mooney Aircraft, Inc. was formed on June 18, 1948, under the laws of the state of Kansas. This corporation took over from a Mooney Aircraft Company, which had been around since early 1946, and became active on June 21, 1946. The original partners, C.G. Yankey, Al W Mooney, Arthur B Mooney, and W.L. McMahon got together to design, develop and prepare for production of an ultra-light single-place airplane with an advanced design from a safety and performance standpoint. Their original concept was to modify an automotive engine which would help drive lower costs, because it was produced in relative mass production.



The *Crosley Cobra*, which was being used in the small Crosley car, was selected as the powerplant. They designated the aircraft, the M-18. Believe it or not, the design was based on the development of a radio-controlled target drone designed during World War II by Al Mooney through the former Culver Aircraft Corporation. A Culver PQ-14 is pictured to the left.

The M-18 was initially flown in May 1947. It was a time consuming process to get the plane and power plant approved. Many design changes were required before it was considered "airworthy". In the end, when compared to other lower priced aircraft, the performance and economy were phenomenal, with over 60 mpg at 85 mph cruise speed. The airplane was approved by the Civil Aeronautics Authority, CAA, on July 30, 1948.

A plant site and flying field of 80 acres were acquired near Wichita and a small factory was erected.

Modest production commenced, but it became apparent that the Crosley Cobra engine was not reliable. With all of the redesign and re-engineering with a 65hp aircraft engine, the costs getting out of hand. Then there was a crankshaft failure after 11 airplanes had been delivered. Mooney

could see that pilots wanted performance over economy. So speed and higher load carrying capacity trumped economy, even though the M-18 was still more economical than other airplanes in the same class.

Between December 1948 and March 1949, the M-18L was designed and it included a Lycoming 65hp engine. The M-18L met Mooney's goals of exceptional performance and "exceedingly safe flight characteristics". The original M-18s that had been delivered were retrofitted. In 1949, 73 M-18Ls were delivered, even though there was no concerted sales effort. Over the winter of 1949-50, the M-18C was developed, and it included a Continental 65hp engine. Deliveries tailed off to 51 aircraft the following year, due in part to the onset of the Korean War.

Prototype Specifications and Performance
MOONEY SERIES TWENTY

(Factory Data)

Type: Four-place, low-wing, internally-braced cabin monoplane with laminar-flow wing and flush retractable tricycle landing gear.

WEIGHTS

Normal empty weight with radio equipment, lbs.	1,049
Useful load (pilot 170, fuel 180, oil 11, 3 passengers 510, baggage 80), lbs.	951
Gross weight, lbs.	2,000

DIMENSIONS

Wing span, ft.	35
Length, ft./ins.	23/2
Height, ft./ins.	8/3
Total wing area, sq. ft.	166.9

LOADINGS

Wing loading, lbs./sq. ft.	12
Power loading, lbs./hp.	13.8
Span loading, lbs./ft.	57.1

POWER PLANT

Continental C145-2H engine, rated at 145 hp. at 2,700 rpm. at sea level; propeller (standard) Sensenich CS-3F with either selective pitch or constant-speed control.

PERFORMANCE

	Standard Propeller	Metal Propeller
Maximum speed, sea level	173 mph. at 2,700 rpm. at 28.3" Hg.	176.5 mph. at 2,700 rpm. at 28.3" Hg.
Maximum speed at 4,000 ft.	170 mph. at 2,700 rpm. at 24.7" Hg.	173 mph. at 2,700 rpm. at 24.7" Hg.
Maximum speed at 8,000 ft.	165 mph. at 2,700 rpm. at 21.4" Hg.	168 mph. at 2,700 rpm. at 21.4" Hg.
Recommended cruise at sea level	143 mph. at 2,400 rpm. at 21.3" Hg. (62.5% hp.)	143 mph. at 2,400 rpm. at 20.5" Hg. (59.4% hp.)
Recommended cruise at 4,000 ft.	152 mph. at 2,400 rpm. at 21.5" Hg. (65.5% hp.)	152 mph. at 2,400 rpm. at 20.7" Hg. (61.2% hp.)
Recommended optimum cruise	160 mph. at 7,500 ft. at 2,400 rpm. at 22" Hg. (69.3% hp.)	161 mph. at 8,000 ft. at 2,400 rpm. at 20.9" Hg. (65.7% hp.)
Economy cruise at 8,000 ft.	140 mph. at 2,100 rpm. at 19" Hg. (50% hp.)	140 mph. at 2,100 rpm. at 18" Hg. (47.5% hp.)
Range at optimum cruise	533 miles in 3.33 hrs.	575 miles in 3.57 hrs.
Range at economy cruise	683 miles in 4.87 hrs.	718 miles in 5.12 hrs.
Miles per gal., at optimum cruise	17.8	19.2
Miles per gal., at economy cruise	22.8	23.9
Rate of climb at sea level, 95 mph., fpm.	1,175	1,260
Absolute ceiling, ft.	23,000	23,800
Service ceiling, ft.	21,000	21,900
Time to climb to 10,000 ft., mins.	11.13	10.26
Landing speed, 50-deg. flaps, mph.	45	45

Standard equipment (included in normal empty weight): 12-volt electrical system with battery, generator and starter, landing light, position lights and cabin and instrument lighting; ammeter, circuit breakers and switches, landing gear warning system, either a quality modern radio installation or weight and space provisions for one; compass; air speed indicator; turn-and-bank indicator; vertical speed indicator; sensitive altimeter; tachometer; oil pressure gauge; oil temperature gauge; fuel pressure gauge; fuel quantity gauges (2); manifold pressure gauge; outside air temperature indicator; cabin heating system and ventilating system.

The Army Field Forces suggested that an aircraft based on the M-18, that could carry machine guns and small rockets and fly at treetop level, would be valuable. Mooney designed the M-19 to accommodate these requirements. The first M-19 flew on March 17, 1951. Initial tests by the military were very successful, but it was never procured.

In October 1952, design efforts were started on the M-20, with seating for 4, but incorporating all the virtues of the M-18. Mooney felt that there was no competition for a 4-place, high performance, medium price range airplane. It was clear that Mooney would need more production space and after extensive investigation, Mooney selected Louis Schreiner Field in Kerrville, Texas and made the move in February of 1953. A prototype M-20 was flown in October 1953.

The move to Kerrville proved to be an excellent idea. There was 23,000 sq ft of plant and office space with a 20 year lease for $200 per month, with room for almost

Labor rates at Kerrville were initially in the $1/hr range.

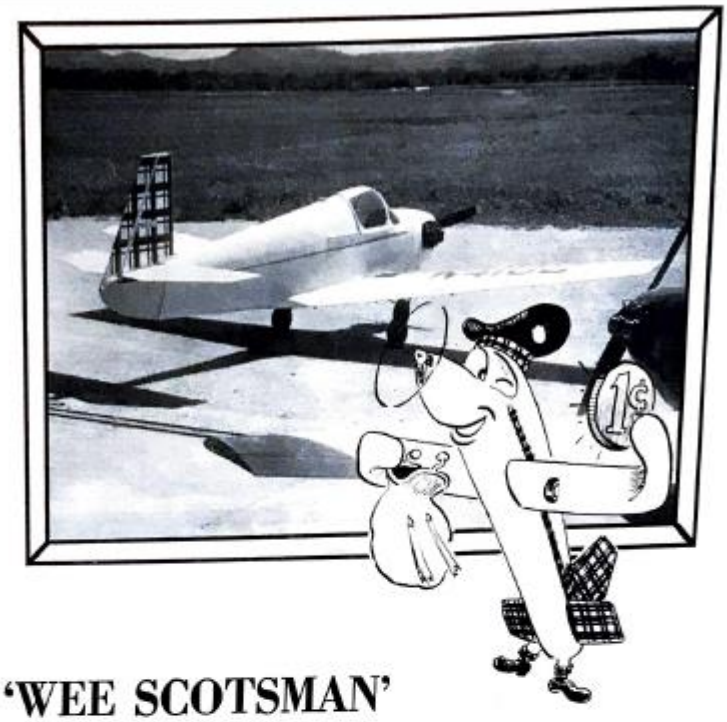
unlimited expansion. There were 40 production workers who handled the M-18, M-20 and XM-27 military prototype. ***The initial success of the M-20 resulted in Piper Aircraft Company offering $150,000 to buy the design***! Twenty eight distributors placed firm orders for 126 M-20s to be delivered in 1954. That, and the demand for M-18s, created a $2,000,000 backlog for Mooney. The backlog for M20s quickly grew to 170 and $2,500,000. The selling price for the M-20 was set at $9,995, compared to the competition at $18,500 and up. It was already a performance dream and Mooney was the envy of GA manufacturers that year.

Key Personnel of Mooney Aircraft Inc.

Al W. Mooney	Vice President, Engineering
Arthur B. Mooney	Vice President, Production
W.L. McMahon	Vice President, Tooling
W.W. Taylor	Sales Manager and Test Pilot

Key Products of Mooney Aircraft, Inc. 1954

M-18	A single-place, single-engine, low wing monoplane with retractable gear, designated the **Wee Scotsman** in acknowledgement of its low operating cost of less than a penny per mile. Nearly 250 of these planes have been produced and sold, and presently, there are orders for 100 or more
M-19	A slightly larger, more powerful, higher performance airplane scaled up from the M-18 to meet the requirements of the Armed Forces for a tactical airplane for close-in ground support. Only one of these has been produced so far
XM-27	A conversion of the M-18 to meet certain secret requirements of the Army Ordnances Department. One of these has been delivered and 3 more are scheduled for delivery later in 1954
M-20	A 4-place, single engine, low-wing monoplane with retractable gear and laminar flow wing, designated the **Scotsman** because of its low operating cost of less than 2 cents per mile. It is ready for CAA Type Certification final procedures. One has been built with orders for 123.



I'm the 'WEE SCOTSMAN'

MOONEY Model Eighteen for 1953

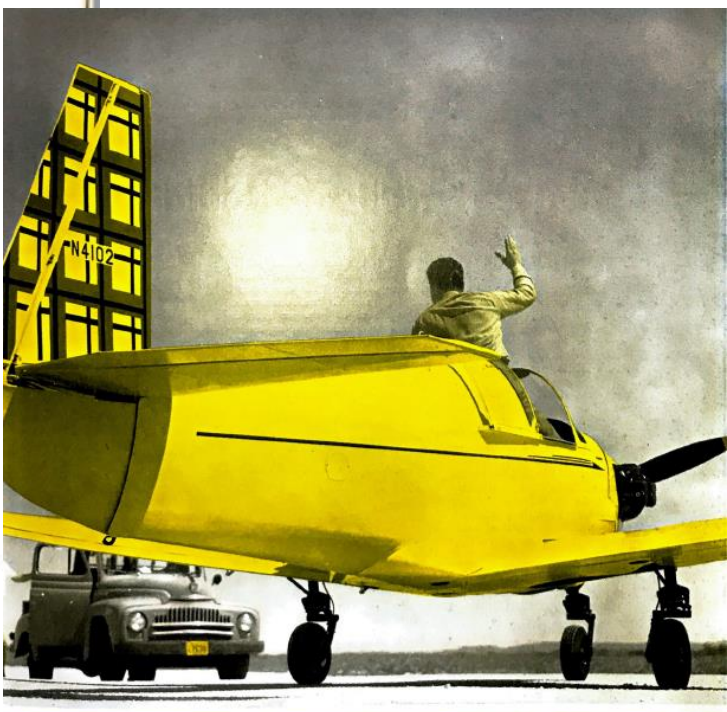
"I'll make your pennies go further, for I'll take you farther for your pennies. I'll take you a FULL MILE for every penny you spend for gas and oil.

"And for 1953 all of us 'Wee Scotsmen' are better than ever. We're finished with 'Tex-hyde' flame-resistant plastic butyrate, we have 25% more range with our new 16-gallon main fuel tank, we're more rugged and smoother handling with new tail attachment bearings and nose gear bushings, we're more convenient with a glove compartment designed to take an optional radio installation, and a peephole for convenience in locking the gear down.

"We're MOONEY for '53, and we live up to our new name 'Wee Scotsman' by giving you greater economy than any other form of personal transportation."

MOONEY AIRCRAFT, INC.

Bill Taylor, general manager of Mooney Aircraft, says a backlog of 78 single-seaters will be produced through August 1 with 20 a month thereafter, as compared with 59 deliveries last year.



MOONEY M-18 WEE SCOTSMAN

The Philosophy Behind My New 4-Place Design

Private flying's newest high-performer will soon be in the air—here's a preview of its features

By AL W. MOONEY

FLIGHT MAGAZINE some months ago revealed our development of a new 4-place airplane for the commercial market. Since then I have been asked many questions by friends. My answers generally launch an all-night gab-fest. New designs are that interesting. But I'll try to spare the reader all the excess stuff and get down to essentials. What people are interested in is the philosophy behind my new design. If those interested in 4-place progress will pull up a chair, let's discuss our new design.

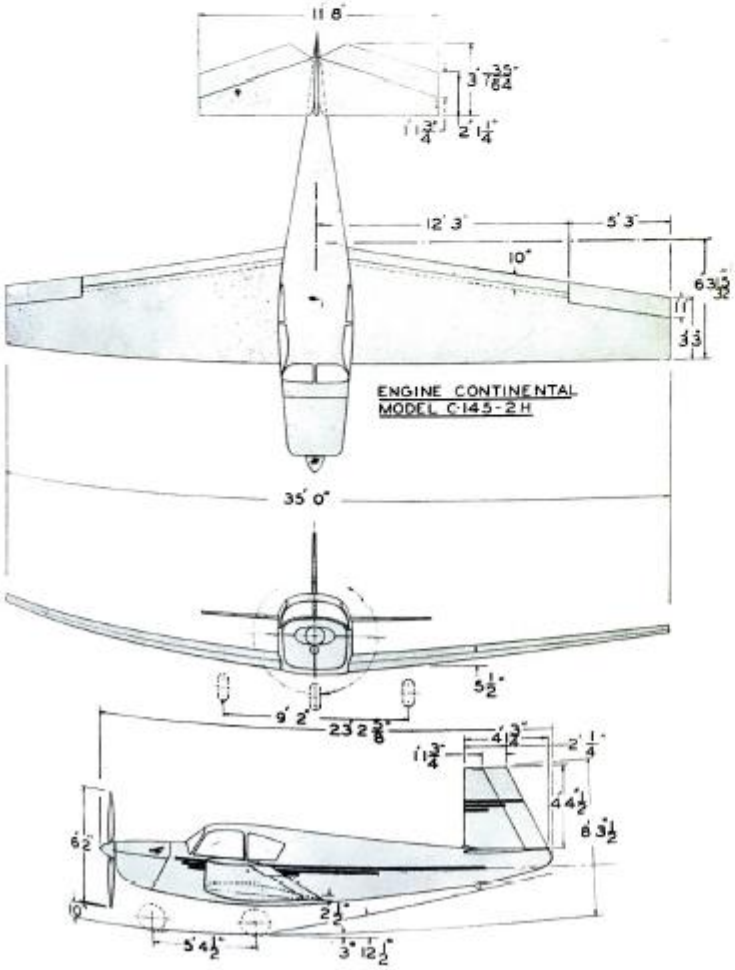
First, I believe this is a good time to bring out a new 4-place design despite the so-called low volume and high-pitched competition in the market. In fact, I am convinced there was never a better opportunity than now to offer private plane users something really new and really useful in their flying. If commercial aviation is ever to get anywhere, it must keep new ideas and designs constantly in motion. We are still an engineering industry—we are NOT a production industry which can afford to "freeze" an airplane design and grind it out like sausages. This was tried in the 2-place field and look what happened.

However, there must be more than mere desire to justify a new airplane design. To win acceptance, it must be a better airplane. My own design goal is to offer more in a 4-place than anybody else has offered. "More" in this case is determined from my 28 years in the industry plus a thorough study of this industry's ups and downs. From such things I came up with 17 basic requirements for my new design. They are as follows:

1. The aircraft must be as far into the high performance field as technically possible, while remaining in the medium-to-medium-high-price bracket in its prototype form.

2. To accomplish Point 1, its aerodynamic cleanness must be a definite advance, while its structural efficiency must be such that its loaded weight be held to a value consistent with the ability of engines in the medium-priced field to supply the desired high performance.

3. It must be a full 4-place air-



Three-view shows Model 20's resemblance to famous Mooney Mite single-seater. It is nearing completion in Wichita factory.

DRIPPING FUEL DRAIN

Many of us have been confronted with a seeping/leaking Fuel Drain on one or both wings at some point. It always occurs at the wrong time, when you are pre-flighting your Mooney for departure. You just sampled your fuel for water contamination, and Voila!, your fuel drain is leaking.

What causes this? First, your drain might be getting very old, in which case you need to replace it.

Second, there might be some dirt contamination around the seal. This can sometimes be fixed by rapidly inserting your fuel tester and letting the drain pop closed. Many times this will clear the obstruction and you are good to go.

Sometimes this will not work. You could temporarily seal it up using a soap bar.

Finally, if it needs replacing, this is how you can replace it.

- Get a big bucket and place it under the drain
- Place the new/replacement fuel drain near you and lube it with some Fuel Lube.
- Get an appropriate wrench and loosen the fuel drain
- Put the new fuel drain in one hand and with your other hand, rapidly unscrew the faulty drain.
- Be ready to slip the new one into place – 100LL will be running freely
- Hand tighten the new drain, and then snug it slightly
- Tighten with your wrench, following the torque specified in your Service Manual (Over-torqueing is bad)

Remember that this is best done by an A&P, because 100LL is flammable and contains TEL (lead). But, if you are away from home, instead of canceling your flight, now you have a few things to check and try.

Three Different Altitudes

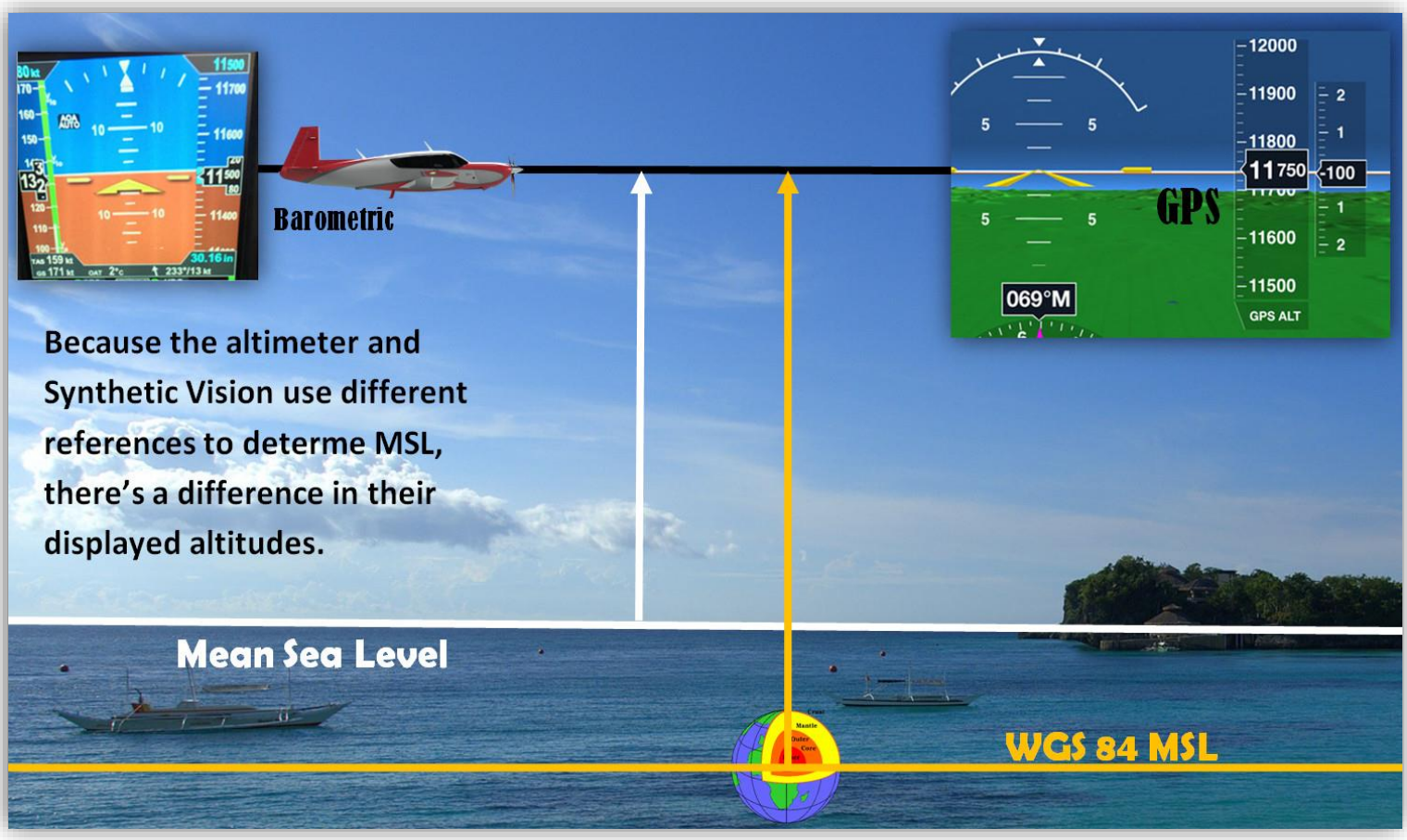
Measuring Mean Sea Level (MSL)

MSL is a measure of the average height of the ocean's surface, such as the halfway point between the **mean** high tide and the **mean** low tide.

WGS 84 World Geodetic System 1984

Altitude #2: GPS MSL, (calculated from the Center Mass)

GPS uses a mathematical model of the earth that was developed in 1984. It's known as the **World Geodetic System ellipsoid,** also known as **WGS 84.**



WGS 84 is estimated through a massive collection of surface measurements. It's comprised of a reference ellipsoid, a standard coordinate system, altitude data and a ***geoid.*** From Earth's center mass, it provides a hypothetical measurement of MSL. The error of WGS 84 is believed to be **less than 2 centimeters** to the center mass.

Altitude #3: Mode C Transponder altitude (29.92)

Your Mode C transmits an altitude that is independent of the barometric altimeter. **Your Mooney's transponder gets its *Pressure Altitude* information from one of two sources:**

1. An **Encoding Altimeter,** (popular on early model Mooneys, but rarely found today).
2. A **Blind Altitude Encoder,** which is most likely on your Mooney. This is an altimeter without needles or an adjustment knob, and it's **permanently set to 29.92** (pressure altitude).

ACK
Blind Alt Encoder

ATC's computers apply the current altimeter setting to the pressure altitude received, and that process converts the reading to Mean Sea Level. The transponder transmits pressure altitude to ATC in 100-foot increments.

Transponder Certification – About $120

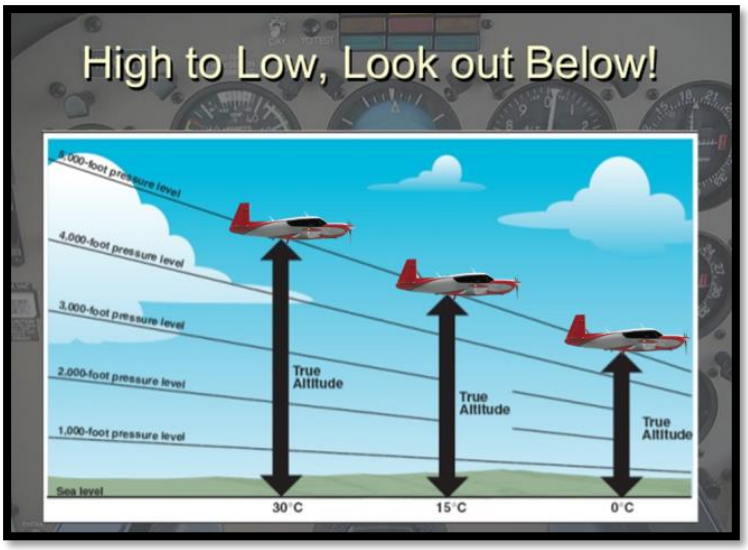
Transponder systems that are out-of-alignment can cause significant problems with ATC radar systems, including incorrect altitude readout, duplicate targets or no target at all. That's why transponders need to be inspected **every two calendar years**, whether you fly the aircraft VFR or IFR.

Full IFR Certification – About $300

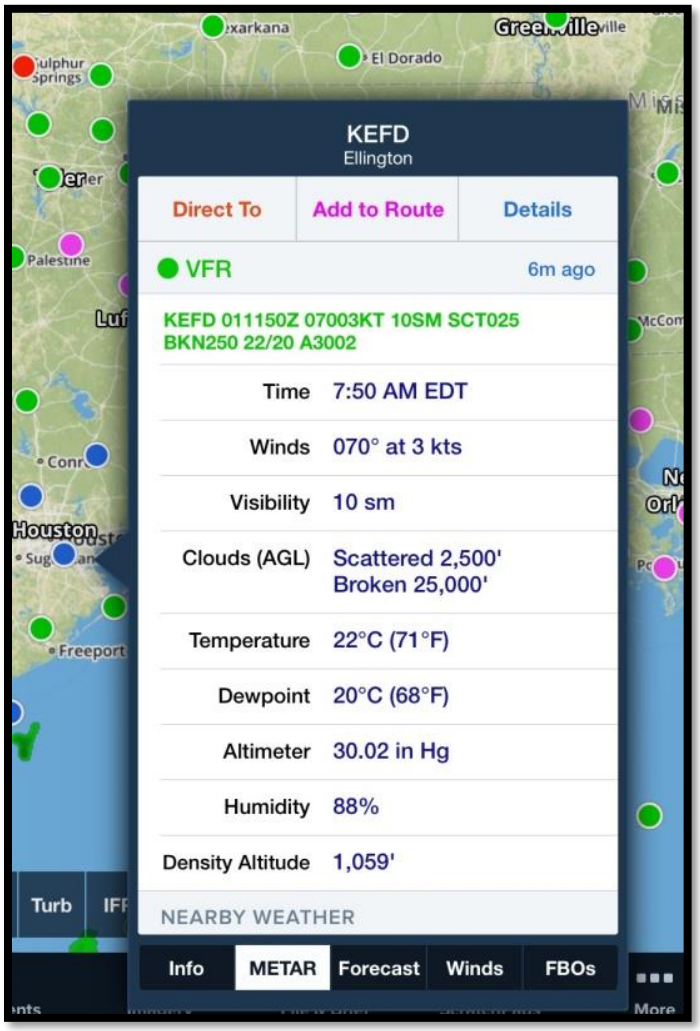
You cannot file an IFR flight plan with your airplane unless, **every two calendar years**, the aircraft has a full IFR Certification. I recommend that you have the full certification, even if you don't plan on flying IFR. It's worth every penny! In addition to checking your transponder, the avionics technician will test your altimeter at various altitudes to make sure it's working properly. Plus, the altitude encoder will be checked against your altimeter and adjusted as necessary. They will also check your static system for leaks.

Check the Altimeter before each IFR flight (Great idea for VFR flight)

1. Set the current reported altimeter setting.
2. The Altimeter should now read field elevation (if you are located on the same reference level used to establish the field elevation).
3. The allowable altimeter error is +/-*75 feet*.



If you are flying from an area of high pressure into an area of low pressure, and do not reset your altimeter, when you arrive at the low pressure area, your aircraft will be closer to the surface than your altimeter indicates.



Altimeter Settings

With apps like *ForeFlight* and ADS-B receivers like *the Stratus*, it's easy to find the closest altimeter setting. If you are flying from an area of high pressure into an area of low pressure, and do not reset your altimeter, when you arrive at the low pressure area, your aircraft will be closer to the surface than your altimeter indicates.

I love my Mooney and I'm sure you do, too. Mooneys are great treasures and whether you are an IFR or VFR pilot, when it comes to flight instruments, you should never settle for less than perfect. If your altimeter, transponder or altitude encoder is operating improperly, for crying out loud, get it fixed! You'll thank me later.

Save the Birds and design your own Cowl Plugs

I took my Mooney to our local Mooney Service Center (Chandler Aviation) to have the oil changed, and to my surprise, when the mechanic removed the cowling, he found a bird's nest resting on my engine (top rear). I didn't want this to happen again, not only for my sake, but for the sake of the mama bird and her eggs.

I found cowl plugs online that would cost me from $40 to as much as $150. I love a challenge, so I decided to make my own "Jim Price Custom Cut Cowl Plugs". Here's how I did it.

First, you'll need some foam. I found 22" x 22" x 2" pillow foam at Hobby Lobby. You can also find foam online at Home Depot for $6.

Next, you'll need a template. Paper won't do the job because it's too flimsy. You should use card stock or cardboard – something rigid. Trace a template for the cowl opening and if you have two openings, unless the cowl was manufactured really bad, these should be identical twins. Therefore, you'll just need one template (either the left or right opening).

After you're sure the template is the right size, place the template on the foam and trace the outline. Flip the template over and trace another outline on the foam.

Using a kitchen knife, cut the two plugs from the foam square.

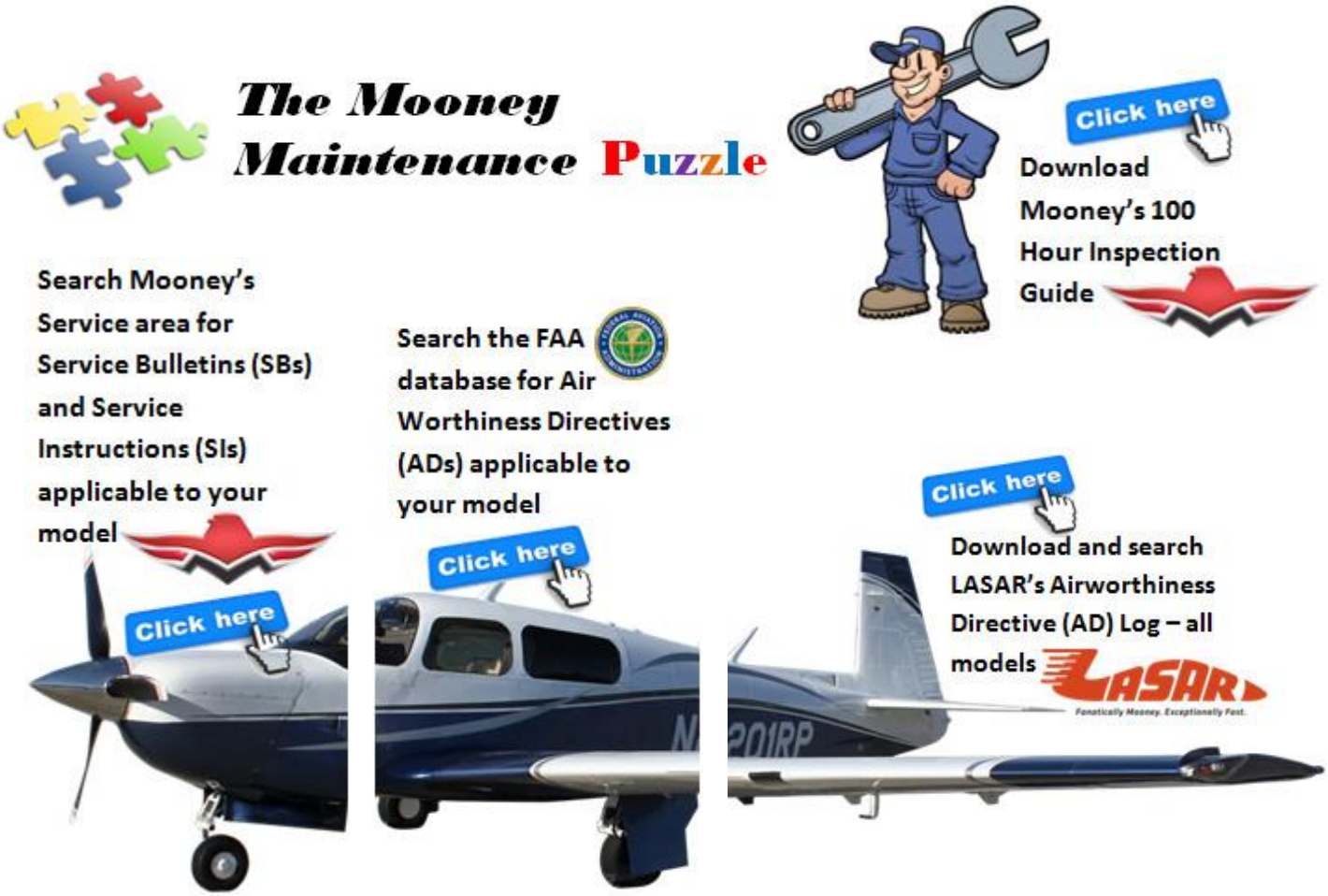
Using a Sharpie, label them L & R and indicate which side is "UP". The results will exceed your expectations. They are easy to insert and remove and will cost you less than $10, plus a little labor.

Make sure that your preflight is thorough. You don't want to start up and fly with the cowl plugs "in".

Your engine will be happy. I know that mine is ecstatic. I also have the satisfaction of knowing that I won't be cooking bird eggs.

There is a big inventory of serviceable airframe parts, including wings for M20C, E, F, G, J, K & R models, empennage assemblies, fuselages, rebuilt controls, rudders, elevators, ailerons, flaps, cowls, engine mounts, landing gear and small parts.

Paul Loewen is offering them online, or by phone. The website is www.LoewensMooneySalvage.com , and he can be contacted in Lakeport, California at **707 263-0462** or by cell at **707 272-8638.** Email is PaulLoewen98@gmail.com. The used inventory is also still available through LASAR Parts at 707. 263-0581



Ask the Top Gun

Tom Rouch

Founder of Top Gun Aviation, Stockton, CA

Send your questions for Tom to TheMooneyFlyer@gmail.com

Question: I will be stationed out of the country for 2 years. What steps should I take to preserve my Mooney?

Answer: Long time storage of an aircraft is very important to the life of the aircraft.

I am going to assume the aircraft will be in a hanger and also that it will be in a high humidity area, as location is most important. Note that when the Air Force's want's to store aircraft for an extended period of time, they send them to their largest storage area in very dry Tucson, Arizona.
PICKLINIG: Rust can really destroy engine cylinders, so the most important thing to do is store the engine. We in the maintenance world call it "pickling". Both TCM and Lycoming have service bulletins on how to store an engine and I recommend you follow their guidance. A special oil is used for storage, plus desiccators are used in place of the spark plugs. As an added precaution, you should get several desiccator bags to put inside the plane and in the cowling.
PRESERVING THE TIRES AND BATTERY: The plane should be placed on jacks to help preserve the tires. Remove the battery and fully charge it. Store it on a bench or something made of wood.
PROTECTING THE METAL: Get some Tri-Flow oil and spray everything you can see around the landing gear and flight controls.
PROTECTION FROM DUST & THIEVES: I would prefer storage using a canopy cover. It's not really necessary, but it is amazing how much dust settles on a plane in storage. If security is a question, you might remove all the avionics and store them in a secure place. You will spend most of a day doing all these chores.
SAVING THE FUEL TANKS: Keep the tanks full of fuel. The sealant can deteriorate if it sits for a long time with dry tanks. Although not in the manuals, you might consider the fuel additive commonly used for fuel in the tanks for long periods of time, or just plan ahead to replace the fuel after storage. There's not a lot of guidance on this issue.
We once stored an M20K for a naval officer who was going to sea on a Nuclear sub for a two year deployment and everything was fine when we ended storage. Actually, we just charged and re-installed the battery, put the spark plugs back in and the engine started on the first try.
DON'T FORGET THE ANNUAL: Keep in mind that the plane will be out of Annual, so plan on that. Also, if your storage area is at a location where you don't have Annual Inspection capability, that's not a problem if the plane is flyable because you can get a ferry permit to fly it to the Annual site.
I hope I have covered the major items. Remember that all aircraft manufacturers have information available on this subject.

FAA Issues InFo on Portable Fire Extinguisher Inspection Requirements

Last December, the FAA issued an Information for Operators (InFO) bulletin that reminds aircraft owners, operators, air agencies, suppliers, distributors, and maintenance technicians that handheld/portable fire extinguishers have the potential to leak and should be inspected per the proper prescribing guidance. The FAA also recommends operators be familiar with any recordkeeping requirements for handheld/portable fire extinguishers. For more details, see InFO 18013 at: https://go.usa.gov/xE8V6.

A List that is Written in Blood

Noticeably missing from the 2019 NTSB Most Wanted List was loss of control in flight. Christopher T. O'Neill, the NTSB's chief of media relations, cautioned that we should not "read too much into the fact that LOCI is not on the list. When something comes off the list it doesn't mean the NTSB is claiming success." He explained the NTSB has spent an enormous amount of time raising awareness of LOCI the past few years. Right now, the Board is focusing on topics "it believes will better move the safety needle [forward] over the next 24 months." LOCI will remain a topic of concern for the industry, even though it's not on the Most Wanted this year he said. O'Neill said the Board wants to increase industry focus on the recommendations themselves. "Rather than using the list to just raise awareness, we want to tell people there's a real opportunity to move these issues across the finish line.".

The new list calls for Part 135 operators to implement safety management systems that include a flight data monitoring program. These operators should mandate controlled flight-into-terrain-avoidance training that addresses current terrain-avoidance warning system technologies.

Other aviation-related recommendations include:

- Reducing fatigue-related accidents
- Strengthening occupant protection
- Eliminating distractions
- Ending alcohol and drug impairment
    - The NTSB is calling for the FAA to require pilots to report their status as an active pilot and provide their flight hours. That proposed requirement would apply only to pilots operating under BasicMed as well as sport, glider, and balloon pilots.

NTSB Vice Chairman and former head of the AOPA Air Safety Institute, Bruce Landsberg, said recent improvements in GA safety should not be attributed to any single factor. Landsberg laid out a number of reasons he believes GA is safer than ever, including technological advancements, pilots becoming more safety conscious, and improved weather forecasting.

ForeFlight Version 11 has Airport 3D Views

ForeFlght's new 3D feature allows you to explore airport imagery in a new and exciting way. You can zoom in and out and rotate around the airport in various planes, from 3 degrees to 89 degrees, providing views from the final approach segment, directly from above and everything in between. The pictures, enhanced by high-resolution terrain imagery from Jeppesen, allow you to explore the landscapes and structures you will see as you approach the runway.

Airport 3D View is available for all airports in the ForeFlight database, as long as that database is updated and the software runs on version 11.

The feature is included in **ForeFlight's Performance Plus** subscription, which costs $299.99. Special pricing is available until February 18 with the promo code AIRPORT3D, increasing the subscription period from the standard 12 months to 15 months.

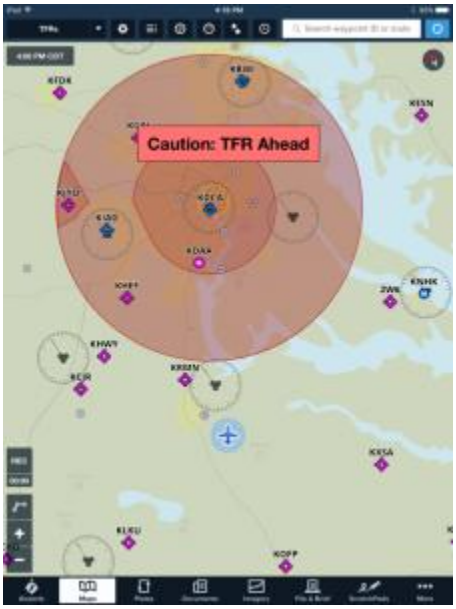
ANR Control Holder ($40)

Whether it's a Bose, Lightspeed or David Clark, the control box can be easily placed in this convenient mount, which is custom-designed for each brand of ANR headset.

The control holder mounts with the included Dual Lock fastener. This device makes the control box easy to find so you can activate it and adjust your headset. The holder can be mounted on any smooth interior surface near the headset jacks. SHOP HERE

The ANR Control Holder was invented and designed – and is now being marketed – by 16-year old Ryan O'Toole, who observed his father struggling to find the control box in flight. When Ryan found nothing available online, he designed his own solution for his father. Word spread, and Ryan is using the profits from his invention for his own flight training.

Using iPad Audio to Increase Flying Safety



The iPad is an engaging visual tool, but many pilots forget about its many audio uses. Especially for those pilots who worry about spending too much "heads-down" time with the iPad, it's worth understanding how apps use audio to make flying more efficient and safe. Let's look at some of the options, and how to set up an audio connection to your headset.

ForeFlight is able to display a number of pop-up alerts to provide you with time-sensitive, location-based information. These alerts include runway proximity, traffic, cabin altitude, destination weather, terrain, TFRs, final approach runway and low altitude – learn how to customize the alerts here. There's even an alert for weight and balance when your center of gravity is out of limits. Many pilots may not realize that ForeFlight also provides audio alerts with these notifications. Garmin Pilot doesn't have quite as many audio notifications, but there is an option for helpful traffic alerts when connected to one of their ADS-B Receivers. WingX provides helpful runway advisories via audio, as well.

Besides the big EFB apps, there is another audio app worth trying. The Stratus Horizon app offers a variety of features, including Stratus ADS-B receiver configuration and backup AHRS display. When connected to your iPad using the Stratus audio cable, it can also record all your cockpit and ATC audio, allowing quick internal playback of ATC instructions. This is great during flight training to debrief your lesson and radio calls, or to quickly review an ATC clearance without having to say "say again".

Fortunately, most modern aviation headsets have audio inputs allowing you to route audio alerts directly into them to help get your attention. If you have a headset that offers Bluetooth audio compatibility, like the updated Bose A20, all Lightspeed headsets, the David Clark Pro-X, or a an adapter like the BlueLink, you can wirelessly connect it to your iPad. Passengers love this feature for music, but it's valuable for pilots too.

To do this, first activate the Bluetooth pairing function on the control module (usually using the button with the Bluetooth "B" symbol on it), and you'll see a status light flash on the headset control module. Next, go to the Settings app on your iPad, select Bluetooth from the list at the top left, and set the switch to on. You'll soon see the name of your headset in the devices list–tap it, and your headset will "pair" with your iPad and establish the wireless connection. The term ***pair*** here is important because you can only connect one headset to your iPad at a time. Now all the audio that you would normally hear through the iPad speaker will play through your headset.

Not all Bluetooth is created equal. You will see some headsets (like older Bose A20 and X models) advertise a Bluetooth cell phone interface, but unfortunately, this is only designed for voice cell phone calls and will not pass through music or other audio effects from the iPad.

Lightspeed's FlightLink 3.0 released (FREE)

Lightspeed Aviation has released FlightLink 3.0, a free app that allows for inflight recording and adds enhanced functionality to all Lightspeed headsets.

FlightLink 3.0 is completely rewritten for iOS 12 (but still works with older versions) and includes an improved user experience, faster scrolling, and improved file management and sharing.

Using iPhone X/S, XR, XS Max, and all iPad Pro models, pilots can now save notes for future reference, visualize recordings using a new recording details screen, access recordings through the iOS Files app, transfer files via AirDrop, and share recordings and notes using iOS sharing services.

Additionally, FlightLink 3.0 now allows users to create a permanent archive of all flight communications for post-flight briefing and training, store a recording library on an iPhone or iPad, and access them with the iOS Files app or iTunes on a Mac or PC.

Using Apple Pencil or Pencil 2 the user can also take handwritten notes on supported iPads.

FlightLink 3.0 works seamlessly with newer Lightspeed headsets to record and play back incoming and outgoing communications.

Using FlightLink 3.0, pilots can record all activity over the intercom, including inbound and outbound transmissions, and in-cabin conversation and instantly play back ATC calls or other communications from any point within the last two minutes of recording.

uAvionix launches nationwide GA installer network

uAvionix, designer and manufacturer of the skyBeacon and tailBeacon line of ADS-B Out products, has launched its Qualified Installer Mobile Installation Network for General Aviation products.

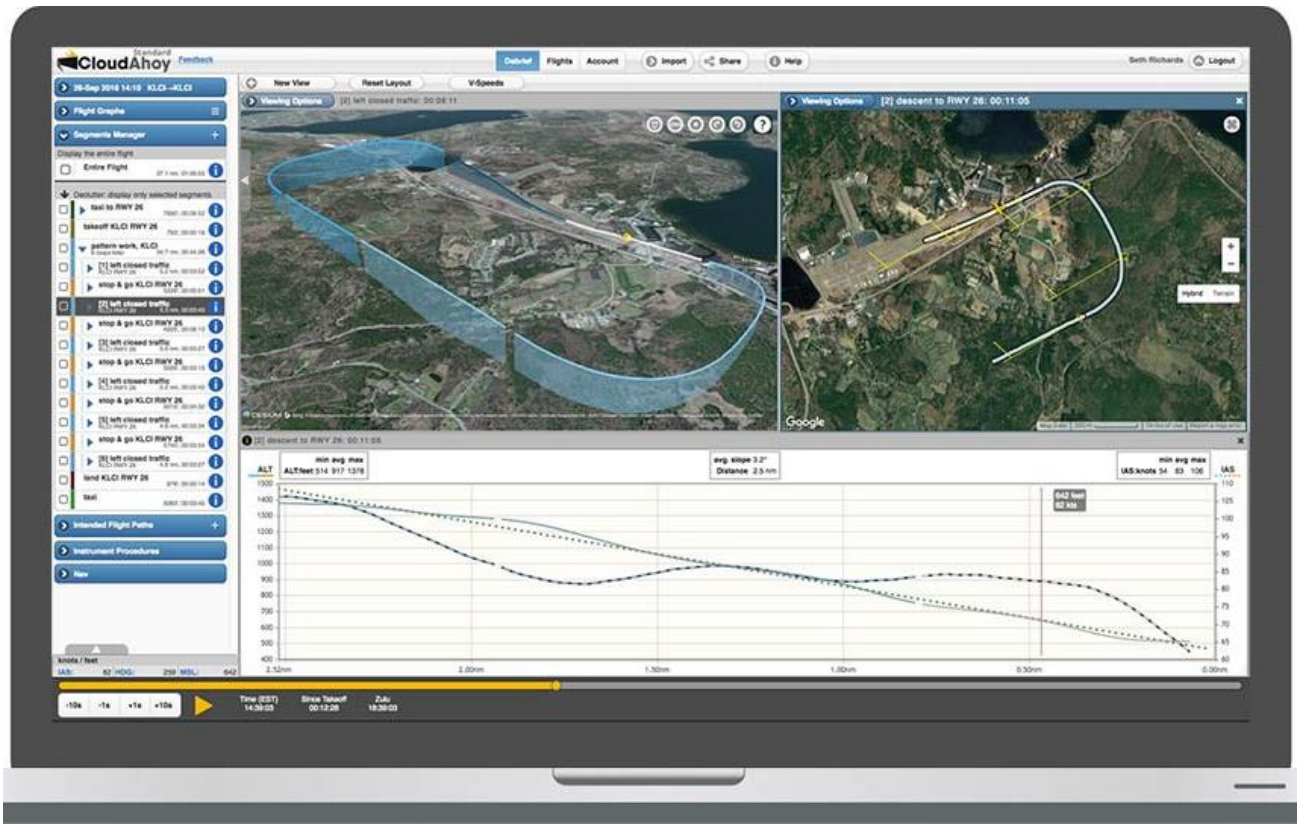
Those in the nationwide mobile installer network are known as Qualified Installers (QIs).

The company has also extended an invitation to avionics repair shops and mechanics to join the network of uAvionix service professionals.

Florida Mooney Lunch Group	***Contact Dave at daveanruth@aol.com or (352) 343-3196, before coming to the restaurant, so we can have an accurate count. Events begin at 11:30*** March 9: Winter Haven (GIF) April 13: Flagler (FIN) May 11: Sebring (SEB)
MOONEY CARAVAN	April 5-7: San Marcos, TX (KHYI) May 3 – 5: Newton, KS (KEWK) May 31- June 2: Northern Flights Formation Clinic (KBJI) June 14 – 16: Hickory, NC (KHKY) July (TBD): Chino, CA (KCNO) July 20, 2019: AirVenture Caravan (KMSN)
MAPA Safety Foundation MooneySafety.com Mooney Pilot Proficiency Program	April 5-7: Santa Maria, CA June 7-9: Oklahoma City, OK September 6-8: Atlantic City, NJ October 4-6: Ogden, UT
Mooney Summit	September 27-29, 2019: Mooney Summit VII, Panama City www.mooneysummit.com
Australian Mooney Pilots Association	March 28-April 1, 2019: 2019 AGM in Ararat, Victoria, Australia
European Mooney Pilots & Owners Association	
Other Mooney Fly-Ins	June 7-9: Walla Walla, WA (ALW) – Wine, Parties, Hangin' Out Contact: Henry Hochberg, aeroncadoc@comcast.net

CLOUDAHOY

CloudAhoy is a product designed for post-flight debriefing. It is cloud-based, and the debrief is done via a web service on a desktop or laptop and in any browser or device, including an iPad, or iPhone.



CloudAhoy is used by pilots around the world, integrating flight data with information from a comprehensive suite of aviation resources. It analyzes the flight using a rule-based knowledge engine, and presents the analysis via a detail-rich interactive display. It brings technology to the post-flight debriefing, adding value to flight training, and enhancing the learning experience.

Debriefing with CloudAhoy is suitable for pilots at all levels and for a variety of scenarios. CloudAhoy debriefs are suitable for VFR and for IFR, and are perfect for Flight Reviews, IPCs and currency flights. In the cockpit, things happen fast and the pilot can be overloaded with tasks and information. CloudAhoy provides an objective look in a calm environment, and reviews on the ground what happened. This significant value to the lesson or review flight.

CloudAhoy also maintains a flights list, with detailed information about each flight. Some of the information is generated automatically by the analyzer, such as the exact times of wheels up, wheels down, and a list of maneuvers performed during the flight.

Flight data can be logged with the CloudAhoy app (iOS or Android), or imported from many products and devices including ForeFlight, Garmin, and more.

The user interface is rich and friendly. The sharing feature makes it easy to share a flight between pilots and post on social media.

Features

- Auto-segment your flight maneuvers
- View your flights in 2D or 3D
- Overlay aviation charts, terrain maps, or satellite images
- Cockpit view: relive your flight in 3D animation
- Display the wind along your route. Check your wind corrections
- IFR? Compare your instrument approaches vs. 3D or 2D published IAPs
- Plot altitude, airspeed and VS graphs of your approaches
- CFI mode for marking the flight in real-time
- Logbook-like listing of any flight you have flown with CloudAhoy
- Use the internal iPhone/iPad GPS, or an external GPS
- Flight sharing between CloudAhoy pilots, and with people without an account
- Integrated with ForeFlight Mobile, Bad Elf, Dual SkyPro, LogTen Pro, X-Plane

Parts for Sale

I have several Mooney parts for sale from a 1969 G model. Brand new voltage regulator (never used). Instrument light rheostat controller, cowling plugs and like new fuselage/cockpit and tail feather covers. G model POH. Contact me at Wilson Brown, located in Georgia, 678-469-6182

Wanted

Time on your Mooney. Hangar available. I only need 20-30 hours yearly. I have an empty hangar in Cartersville, GA for your Mooney or Cirrus @KVPC. 3500 hours, 3000 Mooney INST CML no accidents. Please email to: mooney201@gmail.com


Whether you're a Rusty pilot, dreaming of becoming active again . . .
. . . or you're a proficient, veteran
Master of
The Flight Review
J D PRICE
Prepare online
Free!
Master of
The Instrument Proficiency Check
J D PRICE
N257KW
JDPriceCFI.com