



On Approach

Avemco® Policyholder News

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FIVE REASONS TO COMPLETE AN AVIONICS UPGRADE

By Jason Blair, ATP, CFI-I, MEI-I, FAA Designated Pilot Examiner

Upgrading the avionics in your aircraft is something that many pilots want to do, but the question of whether it is really necessary is an entirely different one. We would all love to have the latest, coolest, and most capable equipment, but that comes at a cost. Many times at a very high cost. In reality, many times, we don't really "need" an avionics upgrade, we just "want" to upgrade. As I think about all of the technological advances in the cockpit, I can offer my five different reasons to complete an avionics upgrade.

> TO REPLACE BROKEN EQUIPMENT

As planes get older, no matter how well we try to take care of them, things break. Or perhaps we buy aircraft with avionics devices that are broken. In either case, the question of replacing the equipment or upgrading it becomes one that an owner must address. Replacing broken equipment with newer, more capable equipment can be the right time to make upgrades, even though it may cost more money than a simple replacement. The cost of buying replacement equipment and then at a later date purchasing upgraded equipment can result in a greater long term cost than taking the opportunity to make upgrades when something does break.



> TO INCREASE CAPABILITY

Have an old stack of avionics that doesn't allow you to fly all the approaches you might need? Well, then it might be time for an upgrade. An aircraft with two VORs, no DME, and an ADF is hard to even call IFR capable anymore. The modern IFR system relies heavily on GPS navigation systems and less on VORs and DME data than ever before and NDB approaches are almost gone in most areas. Upgrading an old panel to allow the aircraft to be capable of flying more modern approaches increases the capability of the aircraft (and a properly trained pilot) to fly to more destinations and in a broader range of conditions. A WAAS-capable GPS can take a pilot even further with enhanced aircraft capabilities. Justifying an avionics upgrade to increase aircraft capability can lead to increased overall utility of the aircraft for a pilot. This can be extremely valuable to a business traveler.

> TO HELP TO ENHANCE SAFETY

Avionics upgrades may lead to enhanced safety. Adding a quality autopilot may help the workload management for someone flying in single pilot IFR conditions. Adding onboard weather data (satellite or ADS-B based) can increase a pilot's awareness of weather conditions



ahead of them and allow earlier decisions to be made to avoid potentially dangerous or un-forecast weather. Adding digital fuel or engine monitoring gauges can significantly increase a pilot's awareness of engine parameters and fuel consumption compared with older analog gauges. While I would be remiss not to mention the potential for distraction that new "gadgets" in the cockpit can cause, when properly used by a trained pilot, instruments such as this can enhance safety in flight operations through awareness and providing much more detailed information or aircraft control.

> BECAUSE OF DESIRE - "NEEDS VS. WANTS"

Sometimes, there really isn't a "need" to upgrade, but you just want to. There is nothing wrong with this. If everything we did in life had to be completely justified by practical application, chasing a golf ball around a course after hitting it with a stick probably never would have become a sport. We do it because we choose to. The same can be our reason for upgrading avionics. Perhaps our old round gauge ILS will get us to the same point a new digital GPS unit will on the same ILS, but we would like to have the newer unit that looks much prettier in our panel. It's ok. You may want to give yourself permission to make the upgrade if your budget allows. But be honest with yourself when you make an upgrade under these conditions. Are you doing it because you are trying to justify a "need" or just because you would prefer to have the newer equipment in your aircraft's panel?

> DOWNGRADING AS AN UPGRADE?

A less commonly considered option is to downgrade the instruments in your aircraft. This may sound counter intuitive at first, but if you have an

older aircraft with multiple pieces of equipment that no longer work and you don't have the budget to upgrade or replace the equipment, it might be time to remove the non-working equipment entirely. The next time you bring your aircraft in for an annual, ask the IA Mechanic to go ahead and remove that old ADF that hasn't worked for a decade and the rotary DME that locked up 5 years ago. If you still have a LORAN in the panel, it can probably go away also. The reality is that if you have multiple instruments in your panel that are no longer working you may be tempted to fly IFR on less equipment than you should be utilizing to be safe. Removing this equipment may "downgrade" your aircraft to a strictly VFR machine, but it also may take away the temptation to work your way through marginally IFR conditions when your aircraft really has no business flying in IFR conditions anymore. If you don't really fly IFR, you may not even miss this old, defunct equipment. Removing non-functional equipment may also reduce electrical loads on older alternators, remove the potential for any electrical shorts caused by unused equipment, and as an added bonus, give you a little back on the useful load for your aircraft. You would be surprised how many pounds an ADF, a LORAN, a dead NAV/COM and the associated wiring can add up to and when removed, allowing you to increase your useful load.

No matter what reason you have to consider upgrading instruments in your aircraft, it is always worth considering why you are doing it. I have had this discussion with many fellow pilots and clients of mine and the result has been that no upgrade is really needed. If the upgrade you are considering isn't going to enhance your safety or increase the capability of your aircraft to allow it to fly new or more complex procedures, or replace broken equipment, perhaps there really isn't a need to do the upgrade. That is, unless you just want to. And that's ok too. As long as you are honest with yourself about the real motivation to make the changes.

Jason Blair is an active single and multi-engine instructor and FAA Designated Pilot Examiner with 4,900 hours total time and 2,850 hours instruction given. In his role as Examiner, over 800 pilot certificates have been issued. He serves on several FAA/Industry aviation committees and is the past Executive Director of the National Association of Flight Instructors. He also consults on aviation training and regulatory efforts for the general aviation industry.



Readback is your chance to tell us what you think about everything we have to say and do - including our PIREPs, articles, emails and previous issues of the On Approach newsletter.

RESPONSES TO JASON BLAIR'S "7 TIPS FOR FLYING AT NIGHT"

Having flown for the airlines and other entities since the 60's and 70's, I have found that a green light is much more useful in the cockpit/flight deck at night than a red lens. I bought a Coleman light on a lanyard from Walmart that has selectable white/red/green, because there are times when you also need a white light.

With regard to flashlights (and other necessary items in life), I learned a long time ago that one is none, two is one and three is better.

With some flights lasting 10 hours, I have found Five Hour Energy to be a real plus over coffee when trying to remain alert. The benefit of FHE was also confirmed and encouraged by a physiologist during an altitude chamber recurrent session as being healthier than coffee, Red Bull, Coke, etc. FHE also has the benefit of being more practical for the General Aviation pilot than the other mentioned caffeine drinks with regard to potty stops.

Good article, BTW.

--Manny Puerta ATP, CFI AIM

That is all good stuff, common sense, no BS, and many thanks.

-- John Kilbourne

You missed one more very important Tip: Use oxygen.

-- Dave Yoder

RESPONSES TO MARCI VERONIE'S "DO I TELL AVEMCO ABOUT THIS OR NOT?"

We received an overwhelming response to this piece and are printing some of the responses that we received permission to publish from the responder.

And because of the responses we have republished the article in this newsletter and have addressed one of the primary questions we received regarding the content.

The article makes very good points. It is silent on how it may affect future rates. Would you care to comment?

-- Tony

I appreciate the advice in the November PIREP, and of course I expected that you would want a policy holder to notify you of any incident. You chose some good examples of why a report is recommended. However, you did not address one of the main concerns of customers and a major reason why incidents may not be reported. What will happen to my premium if I report a minor event that I can pay for myself? I think that if Avemco had a written policy that

limits (or eliminates) premium increases after an initial claim, then you would see many more customers willing to report the type of incidents that you talked about in your PIREP.

-- Jim Green

I liked the PIREP, but what you didn't cover is how this affects our premiums. This seems to be the main reason for not calling the insurance company for fear that this will cause our premiums to go up or worse our insurance will be cancelled.

A PIREP on this would be great. It is always a mystery how rates are calculated and what influences these rates, including reporting losses or accidents even if no loss, etc.

A loyal customer,

-- Roland Comeau

I liked the article on whether to make a small claim or not. I so much like living my life honestly and openly. That you encourage openness, makes my loyalty component rise for Avemco.

Thanks for these articles.

-- Jim DuVander

Good PIREP - you've likely been asked that many times - very good write on this for those of us who wondered but were too shy to ask.

--James Kleen, N988NB

When one makes a hard landing, perhaps even bouncing with some 'ballooning' taking place, do you really want all policy holders to report