

CORBEN COURIER

Chapter Meeting February 16 at the Jet Room



Our speaker for our *February 16, 2017* meeting will be Dave Upham. Dave is an EAA Chapter 93 member.

Dave will present on “My Wisconsin Aviation Flight Training Experiences,” which as a new flight instructor working with students, promises to be interesting and informative.

Dave grew up in a house near Timmerman Field (KMWC) in Milwaukee and his earliest airplane memories are of a particular swallow-tail Bonanza flying overhead. He first learned to fly at Palwaukee (KPWK, now known as Chicago Executive Airport) while he was working for a bank in Chicago. After having lived in North Carolina, Dave moved home to Wisconsin and now lives in Madison. In the last few years, he worked hard on earning his advanced and instructor ratings and now works full time as a flight instructor for Wisconsin Aviation.

Dave has approximately 1200 hours PIC time, with approximately 500 hours dual instruction given. He keeps his 1980 Cessna 172N at KMSN.

He also says that “when he grows up, he still wants to fly a swallow-tail Bonanza.”

For more information about the Wisconsin Aviation Flight Training program, please visit their website:

<http://www.wisconsinaviation.com/index.php/General-Pages/Complete-Flight-Training.html>

Next up for our March 16, 2017 meeting

“The New FAA Compliance Policy”

Our March 16, 2017 meeting will feature a presentation by Jurg Grossenbacher, FAA FFAST Program Manager with the Milwaukee FSDO.

The FAA changed its approach to enforcement actions in July 2015 and began implementation after that date.

Pilots and owners should be aware, and take advantage, of what appears to be an increased opportunity to resolve alleged infractions early in the FAA investigation process—before the matter is referred to an FAA lawyer for legal enforcement action such as certificate suspension or revocation, including an indelible black mark on one’s record at the FAA that could have serious consequences. Pilots are now able to argue for the new “compliance action” (short of

administrative, legal, and criminal enforcement action).

(i.e., the “kinder, gentler FAA”) and how it works.

Please plan on attending this important presentation to learn more about the change

- Dean Zakos

The WIIFM

Back in the 1990’s, in my days as a plant manager for a manufacturing company producing medical packaging, I often wondered who was more demanding, our customers or the managers I reported to at headquarters. It seemed that, without fail, management would force some new business strategy upon us faster than Culver’s changes its frozen custard flavor of the month. Many of these initiatives originated in Japan with roots in their highly efficient automotive manufacturing and quality processes. Terms such as JIT (Just in Time inventory control), SMED (Single Minute Exchange of Dies), Poka-Yoke (process mistake proofing), Kaizen events (short term improvement projects), Lean Manufacturing, Six Sigma (statistical analysis for process improvement), etc. came and went like the wind. My head was constantly swimming with these new “management flavor of the month” initiatives and it was very challenging to get our employees to see the value of the new strategies.

It was around this time that one of the trainers from headquarters who was helping us implement these programs suggested that we show our employees a WIIFM. Oh great, another acronym I thought to myself. “What is a WIIFM?,” I asked. “What’s In It For Me” was his response. I was somewhat puzzled with this at first but then it made sense. The objective of a WIIFM is to find something positive about the new strategy that could improve the employees’ life at work. Maybe that Kaizen event resulted in implementing a new hoist that greatly reduced the manual labor required to do the job. Perhaps Six Sigma implementation prevented the loss of a key customer due to quality issues, thereby protecting numerous employee positions in the process. When people learned how these new strategies could help them personally through a WIIFM, their support of the initiative grew.

As previously highlighted we are now in the process of exploring the merits of merging Chapter 93 and Chapter 1389. Yes, this is a big change for all of us. You might be asking, “Where’s my WIIFM?”, a fair question to be sure. The board of directors from both chapters has identified a number of WIIFMs associated with the proposed merger. Here are a few:

- A larger member base will provide the chapter a larger number of volunteers to pursue its initiatives more effectively.
- New standing committees focused on strategic direction and other key areas can now be created from the additional resources and this is key for chapter sustainability.
- Combined membership from both chapters will yield more diversity, additional connections, increased opportunities to meet people and pursue member aviation interests.

- Combined financial assets of both chapters will facilitate the pursuit of new major initiatives identified by the chapter membership.
- Recruiting of new members will be enhanced from all of the points cited above.

I look forward to keeping you posted as we continue our merger planning discussions with Chapter 1389 leadership. Look for an upcoming survey that we are requesting all members to complete. The survey will arrive via Email for those of you receiving your newsletters via Email. Those members without Email will receive the survey via U.S. Mail. This information will help guide our efforts as we move forward. Thank you for your assistance.



Chapter 93 has a truly exciting, groundbreaking year ahead of us. There will be many great programs at the meetings and lots of opportunities to socialize, have fun and pursue your aviation passion. Climb aboard, strap in and let's push those throttles up!

- Rob Tweed

Membership Dues Reminder

As part of the implementation of our merger with Chapter 1389, each active member of the current chapters will be sent a survey. This is your opportunity to tell the merger committee what you want from the merged chapter. To get this survey, your 2017 dues must have been paid. If you have not paid your dues, please either give your dues to me at the February chapter meeting or mail it to me at 6321 Shoreham Drive, Madison, WI 53711-2427. The dues are \$20 if paid by the end of February and increase to \$24 at the beginning of March. We want your merger input so please pay your dues before the end of February. Thank you.

- Jim Lins

TO ADS-B OR NOT TO ADS-B, THAT IS THE QUESTION

By Dean Zakos



I recently had my ADS-B In and Out solution installed. Many of my pilot friends are also taking this step, but others are still sitting on the fence as I was, waiting to decide if they want to incur the cost. I thought it might be timely to write about this subject.

Also, as a reminder, the presenter at *EAA Chapter 93's April 20, 2017 meeting* will be Mr. Joe Schmidt, Aviation Instructor at Fox Valley Technical College, whose topic will be "The Out and In of ADS-B."

The deadline for installing ADS-B Out is now less than three years away (January 1, 2020). Apparently, the FAA is adamant that the date will not be extended. From what I understand, not even the airlines will be 100% compliant by then. Stay tuned.

There are several threshold questions you need to ask to get started:

Do I Even Need ADS-B Out?

The answer likely is "yes," but it depends on the kinds of flying you do. The ADS-B regs mandate that you be compliant with ADS-B Out by the compliance date if you will be flying in airspace where a Mode C transponder is required today. That airspace includes:

- Class A, Class B and Class C airspace;
- Operations within 30 nautical miles of the primary airport within Class B airspace from the surface to 10,000 feet msl;
- Operations above the ceiling and within the lateral boundaries of Class B and C airspace; and
- Operations above 10,000 feet msl in the contiguous 48 states, excluding the airspace at and below 2,500 feet agl.

Depending on the flying you do, and your willingness to accept some limitations, i.e., you will need to fly around or under certain airspace and simply avoid other airspace, you may be

able to fly without ADS-B Out. However, I suspect most of us will want the freedom and flexibility that comes with operating in more airspace, not less, and will opt to comply.

The FAA does not care if you install ADS-B In. That is up to you and there is no mandate that applies to it. Many of the ADS-B solutions offered today have both ADS-B Out and In capability. Having subscription-free weather and traffic in your cockpit is a huge benefit, in safety and convenience, to your flying. On the other hand, weather and traffic are nice, but not necessary, as pilots have been looking out the window since Wilbur and Orville got started, and we have done just fine, thank you.

What is the Budget?

A couple of immutable truths about buying avionics: If you want the biggest, best, and most capable equipment and displays, they're available and you can get them, but most of us will have to take out a second mortgage or give up a leg or arm to do so. And, once you make your purchase, in six months those seemingly impressive boxes you bought will be rendered obsolete by the next iteration, which will be cheaper and have more features. Damn. So it goes.

The good news is that there are more solutions on the market now than in the past and there will likely be more in the future (see above). So, you will have options for your budget. Unless you have an unlimited budget, one thing you need to look at is the hull value of your aircraft versus what you want to spend on ADS-B. If you are thinking of putting a significant percentage of your hull value (20-30% or more) into your solution, you will want to make sure you can justify it. If you know you are going to be flying that airplane for a long time, it may make sense. It is seldom a good idea to put big dollars in new avionics and then try to sell your aircraft soon thereafter. It is difficult to recover your cost near term, and potential buyers may or may not be as pleased with your chosen ADS-B solution as you were, which could affect resale value.

Also, keep in mind that the cost of the product is only part of the total cost. If you are flying a production aircraft, you will need TSO'd equipment. You will also need a certified avionics technician to install so there will be labor charges and miscellaneous antennas, parts and supplies as well. The labor costs for the ADS-B portion of my installation were roughly 30-35% of the total costs (I also did some other panel updates).

If you are a builder/owner of an experimental/amateur built aircraft, you may have some more cost effective options, as you can purchase non-TSO'd equipment and you may be able to do the install yourself if the manufacturer permits that.

Silver lining – no Wisconsin sales tax on avionics and labor purchased in Wisconsin.

What ADS-B Solutions are on the Market Now?

There are some relatively inexpensive solutions available now, such as the Stratus ESG from *Appareo*. The Stratus ESG unit is an “all in one black box,” a system design that is becoming very popular since it integrates a transponder, WAAS GPS, ADS-B In (if connected to

a separate Stratus portable ADS-B In receiver) and ADS-B Out that fits in the traditional transponder space in your panel. It also works with *Foreflight*. It sells for about \$3,000.

Pricier solutions are the L3 *LYNX* series transponders and the *Garmin* GTX 345/335 series transponders. These are also “all in one black boxes.” I looked closely at the *LYNX*, as it is the first system transponder on the market that also has a built-in display screen. It is a full color screen, capable of displaying ADS-B In weather and traffic, as well as normal transponder functions, and can be configured as a split screen to allow viewing more images or data, and still fit in the traditional transponder panel space. In the end, I chose not to go with the *LYNX* option, primarily because in my *Piper* the panel space nearest to me was occupied and the transponder goes into space further from my direct line of sight.

I am told many pilots are moving the *LYNX* transponder to a position in their panels previously considered prime panel real estate that seldom saw a transponder. The *LYNX* display is necessarily small and, unless you can locate it close to your direct line of sight, you may have trouble seeing what is on the screen. I believe the *LYNX* can also support a phone or tablet running the *Foreflight* app by wirelessly streaming data via Bluetooth technology.

I have a couple of pilot friends who have installed the *LYNX* unit and are very happy with it. I am told a lot of the *LYNX* boxes are being sold right now. The *LYNX* NGT 9000 sells for about \$5,400, depending on the model.

The *Garmin* GTX 345/335 units are very capable boxes. The 335 is ADS-B Out only; the 345 adds ADS-B In capability. The only feature the 345 lacks, unlike the *LYNX*, is its own display. However, the *Garmin* 345 communicates with many *Garmin* panel mount displays, such as the GTN 750/650, the GNS 480, the new *Garmin* Aera 660 portable GPS, or with a tablet or phone. The *Garmin* transponder can operate with *Garmin Connex* or *Foreflight* applications to wirelessly stream data via Bluetooth technology. The *Garmin* 345 transponder sells for about \$5,500, depending on the model.

There are more expensive solutions out there than those discussed here, but I passed on the second mortgage opportunity and determined I would rather have all my limbs available to me when I fly my airplane.

There may also be less expensive solutions available. I limited this article to the units I looked at. Less expensive solutions would be units that are ADS-B Out compliant only. My preference has always been to have panel mounted avionics instead of the portables, handhelds, tablets, wires, and antennas that you can hold in your lap, stick on the window, arrange on the right seat or set on the glare shield in front of you. That’s just a personal preference.

Do I Need or Want a Display?

If you are interested only in minimal compliance and reduced cost, you do not need a display, as ADS-B Out requires only that your aircraft data be sent from your unit. The least expensive solutions will lack a display.

However, if you are taking the time and trouble to look at ADS-B Out compliance, it is an incremental step to also consider adding ADS-B In capability. If you want to see weather and traffic for free, you will need a display.

You may already have a display in your cockpit that is panel mounted (such as the *Garmin* GPS/Nav/Comm/MFD units, or have access to a handheld, such as a portable GPS, or a mobile device such as a tablet or phone, that can run applications like *Foreflight*. You will need to match the ADS-B In solution you have chosen with a compatible display (except for the *LYNX* unit that has its own display) and, if you intend to use *Foreflight*, determine if the ADS-B In solution will wirelessly transmit data to your portable, tablet or phone app. Generally, the larger and more sophisticated the display, the higher the cost.

My Decision

In the end, I chose the *Garmin* GTX 345 transponder with the *Garmin* Aera 660 portable GPS as my display (almost 4.5" screen), mounted in the panel with an *AirGizmo* docking station. I looked at panel mounting an *iPad Mini* in an *AirGizmo* docking station and pairing with *Foreflight*, but the *iPad Mini* simply took up too much panel space. I had the work done at Wisconsin Aviation at KMSN. They were on budget, on time, and helpful throughout the process.

FAA Rebate

The FAA is currently running an ADS-B Rebate Program. If you participate, you are eligible to receive a \$500 cash rebate from the FAA for equipping early to meet the January 1, 2020 ADS-B Out mandate. The FAA has reserved funds in its budget for up to 20,000 rebates. Rules for the rebate can be found at the FAA website. I understand that over 3,000 rebates have been applied for to date.

There are a series of steps that must be complied with to receive the rebate. I applied online prior to taking my airplane in for the install work. I just started one of the last steps which is to taxi and fly in Class C controlled airspace for a specified period of time with the installed equipment. A report is generated and made available to me online, certifying that my aircraft is ADS-B Out compliant. Then I am supposed to send the personal codes they provide to me verifying my report into the website and the FAA mails me my check (I hope).

Final Thoughts

If you are still sitting on the fence regarding ADS-B, one advantage is that there probably will be more ADS-B products and options and more price points to choose from in the next year or two. It is uncertain if the price of the TSO'd ADS-B products will come down much more but that remains to be seen. Also, EAA has been working with the FAA to allow more non-TSO'd products (read "less expensive") into production aircraft, such as the *Avidyne* flight displays. Eventually, there may be alternatives for lower cost ADS-B equipment for production aircraft.

The big disadvantage in procrastinating is, as I understand it, the inability of the avionics shops to service the expected crush of customers as we get closer to January, 2020 and pilots start hopping off the fence in prodigious numbers. There are only so many shops, technicians and hours available.

Who knows, perhaps the FAA will offer \$1,000 rebates next year. Damn. So it goes.

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Chapter Resource List

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Thank You

Thanks to Rob Tweed, Dean Zakos and Jim Lins for contributing to this month's newsletter. Please send articles for future newsletters to a.kurth@sbcglobal.net.

- Al Kurth

Calendar

Thursday, February 16, 2017, 6:30 p.m.,
Chapter Meeting at Pat O'Malley's Jet
Room. Topic: My Wisconsin Aviation
Flight Training Experiences. Speaker: Dave
Upham, CFI

Saturday, February 18, 2017, 11:00 a.m. –
2:00 p.m., Tom Rebholz Memorial Chili
Fly-In at Morey Field, Middleton

Thursday, March 16, 2017, 6:30 p.m.,
Chapter Meeting at Pat O'Malley's Jet
Room. Topic: New FAA Compliance
Policy. Speaker: Jurg Grossenbacher,
FAAST Program Manager, Milwaukee
FSDO.

Thursday, April 20, 2017, 6:30 p.m.,
Chapter Meeting at Pat O'Malley's Jet

Room. Topic: The Out and the In of ADS-
B. Speaker: Joe Schmidt, Aviation
Instructor, Fox Valley Technical College

Thursday, May 18, 2017, 6:30 p.m.,
Chapter Meeting. Topic: Airplane Themed
Movie Night; details to be announced.

Thursday, June 15, 2017, 6:30 p.m.,
Chapter Meeting – Hangar Hangout hosted
by Frank Smidler

July 21-23, 2017 – Heavy Bombers
Weekend

July 24–30, 2017 – EAA AirVenture
Oshkosh 2017