



BOT Meeting  
5/11/23 @ 7 PM  
Club House  
**(THURSDAY)**

Membership  
5/21/23 @ 9 AM  
CAP Building  
**(SUNDAY)**

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**McGuire Open House!!**

Joint Base McGuire, Dix-Lakehurst will host its first air and space open house in five years. The 2023 Power in the Pines Air and Space Open House is scheduled for May 20-21.

The theme of this year's event is "On the Wings of Community." We are excited to open our doors and offer the community a glimpse of what Team JB MDL is all about.

2023 Power in the Pines will include performances by the F-16 Viper Demonstration Team, USA Golden Knights, C-17, P51 Heritage Flight and many organic assets such as the KC-10, C-17, KC-46, KC-135, Marine helicopters and more.

**Featured Performers**

- US Army Golden Knights
- USAF F-16 Fighting Falcon Demo
- USAF Heritage Flight [F-16 Fighting Falcon and P-51 Mustang]
- USAF C-17 Globemaster III Demo
- USAF C-17 Globemaster III Flybys
- USAF KC-10 Extender Flybys
- USAF KC-46 Pegasus Flybys
- USAF KC-135 Stratotanker Flybys
- USMC AH-1Z Viper/UH-1Y Venom Joint Demo
- USCG MH-65 Dolphin Search and Rescue Demo
- 404th Civil Affairs Battalion, Airborne Paraprop
- Patrick McAlee [Pitts S1S]
- Steven Covington [Pitts S2S "Raptor"] \*Tentative\*
- B-25 Mitchell "Panchito"
- C-47 Skytrain "That's All, Brother"
- SB2C Helldiver



The open house is scheduled for May 20-21 and is free and open to the public. It is scheduled for 10:30 a.m- 5:30 p.m. both days.

**WE WILL BE ATTEMPTING TO SET UP CAR POOLING.**



For more information see:  
[www.facebook.com/events/joint-base-mcguire-dix-lakehurst/the-2023-power-in-the-pines-air-space-open-house/1271198993430307/](https://www.facebook.com/events/joint-base-mcguire-dix-lakehurst/the-2023-power-in-the-pines-air-space-open-house/1271198993430307/)

**The Wright Answers**

See page 6 for answer

In what year did they develop their first successful aircraft?

- a. 1899 b. 1903 c. 1900 d. 1905



**Spotlight on Bill Stephenson**

It all began when at age thirteen when I took Discovery Flight from the Gibson Air Academy located at Monmouth Airport. It was a thrill beyond words and I was hooked! But the real groundwork came from an Uncle who had fought in the Korean War. On a number of occasion he would say that he always regretted not becoming a pilot. Another Uncle was also a United Airlines Captain.

When I finally took the big step it led me to KBLM's, Gibson Air Academy and Garret Flight Center. There I flew a C-150 and a 152 5. From that beginning, my aviation career went right to the top having now logged over 14,000 hours in several several piston singles along with twins such as the Baron, Navajo, King Airs, and then over to Lear Jets, Falcon Jets, Gulfstream 650, Challenger 604. In addition, I hold certification in ATC with 9 different type ratings.

On a more personal side of the picture, I was born in Neptune, NJ and went to Manasquan High School later graduating from University of South Carolina. One accomplishment that I am very proud of is becoming an Eagle Scout. Scouting taught me many things that have help to guide my life along a very rewarding path. My wife and two kids, travelled the world when they were a bit younger allowing them to be exposed to many different cultures and places.

**Aircraft Hardware: Rivets** by Charles Burke

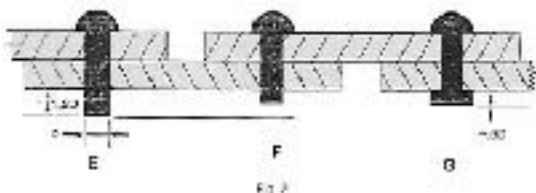
Without question, this is truly a riveting story! There are many ways to attach two or more things together in an aircraft and this involves using fasteners such as sheet metal screws, nuts and machine screws (bolts). One thing that they all have in common is that they can be unscrewed. Thus, these are usually associated with items that need to be periodically separated for servicing or replacement. But when you want to permanently secure two or more sheets of metal together, the rivet is the way to go. The next time you fly, check out the skin of the plane and you will see them, they appear as small bumps lacking slots such as those found in screws. Actually, one place that you can easily see much larger and robust rivets is in the iron members of exposed member bridge! For those in my generation the word rivet evokes a different type of memory that of Rosie the Riveter who symbolized the work being done by women in factories during WW2.



Rivets are a very old and simple system of fastening. To understand the process we can begin with the rivet itself. The basic rivet look like a machine screw but there are no threads or shots on the top. Instead, the shaft is perfectly smooth with a semi-round smooth bead on one end. While the vast majority have a universal (rounded head), they do make flathead rivets as well as rivets with heads that allow for a smooth outer finish.

Most aircraft rivets are relatively small running between 3/32 to 3/16" in diameter and most importantly, they must be made of the same metal as the pieces you wish to attach together. In this case, they are a special allow of aluminum. Actually, this rule should be applied to any fasteners where metal is involved including bolts and nuts. Unless stainless still is involved, two metal, especially when exposed to moister, cause a chemical reaction between them that causes on metals to be literally be destroyed by the other Ask any boater especially those who keep their boat in salt water!

Getting back to rivets, the rivet requires that the pieces being attached together have a clearance hole drilled through them. The hole's diameter is critical because if it is too small, you will not be able to insert the rivet and if it is too large, the joint will allow for slippage and failure. Another important number is the proper length. A rivet should extend through the pieces of metal being joined by 1.5 times the diameter of the rivet. This extra length will later be used to form the securing head on the rivet.



*A rivet is inserted into a hole made in the layers of sheet metal then a pounding force is applied to the straight end. This causes it to flatten out and secure the metals together*

Tools required to mount rivets can be as simple as a hammer and a block of steel called a bucking bar. But most professional aviation mechanics use a compressed air gun and bucking bars designed to help better shape the new head. Also, there are a wide range of special bucking bars available for hard to reach places.

So lets say you want to install or replace a rivet. Once you select the appropriate size of the rivet and have you tools in hand, you simply insert the rivet, press their bucking bar against the existing head and apply a force to the other end. As the force is applied, the straight end of the rivet begins to peen over and flatten out. As this happens the two sheets of metals are sandwiched tight together. If all goes according to plan, you have have secured them properly.

But what if you cannot get a bucking bar behind the rivet ? Enter pop rivets. These are used on aircraft but only in limited applications. What makes them different is that the rivet comes with a rod going through it. Using a special tool, the rivet is inserted into the hole and the special tool pulls the rod out. As this happens, the end of the rivet expand forming its own head. Pop rivets are a super secret tool for the person who wants to do repair work around the house!



Pop Rivets



Pop Rivet Tool

### Basic Med Revisited by Charles Burke

At the February Membership meeting our featured guest was Dr. Forzani who is certified to administer the Basic Med physical for airmen. This program is a relatively new option running parallel to Express Med. As you know, Express Med is handled only by a FAA-designated aviation medical examiner. What is important here is that the a very large pool of Basic Med authorized medical personnel exist, when added to the pool of FAA medical examiners it dramatically increases the selection pool for a pilot to chose from.

While the Basic Med program only began in March of 2017, it popularity has grown dramatically. But there are some pilots who have chosen not to take the Basic Med route because of a concern that this system may be inferior to the FAA Express Med. Fortunately, this belief has been proved baseless by the FAA itself. The study team assembled to fulfill the FAA obligation to report the results of Basic Med implementation to Congress included representatives from the FAA's Flight Standards Service, the Office of Aerospace Medicine, and the Office of Accident Investigation and Prevention. Their review found no differences in safety when comparing private pilots flying with Basic Med medical qualification to private pilots who obtain third class medical certificates.

“Basic Med works and Basic Med pilots remain safe pilots,” said AOPA President Mark Baker. “We have just gone through the safest three or four years in general aviation history; the FAA recently expanded the BasicMed program to include safety pilots; nations such as Mexico, the Bahamas, and other Caribbean countries accept U.S. pilots flying with BasicMed; and I strongly believe the program will continue to grow and expand.”

The number of individuals holding a private or student pilot certificate in the United States has climbed from 584,000 in 2016 to nearly 757,000 today, a 30-percent increase. According to the FAA, private pilots account for more than 26 million safe flying hours annually, which represents more than 30 million takeoffs and landings each year.

According to the FAA report, the total number of estimated flight hours over the three-year study period—hours flown by pilots having a Basic Med qualification—increased from more than 15 million in 2017, the year FAA implemented Basic Med, to more than 16 million in 2019.

AOPA's Air Safety Institute has reported that the overall GA accident rate, based on National Transportation Safety Board data, including Basic Med pilots, is at its lowest level in decades, and continuing to drop every year since the 1990s. The GA community has never had a stronger focus on safety, and the U.S. airspace continues to be the safest in the world.

Along with unfounded concerns about using Basic Med have been persistent unfounded limitations on the pilots that hold a BasicMed medical. Yes there are limitations but for the vast majority of those who fly small aircraft, they are of limited application. According to the FAA, the limitations are that the maximum number of passengers that may be carried is five (5) and the aircraft operated is limited to six seats and may not be certified for more than 6,000 lbs. Pilots are also altitude restricted to 18,000 feet MSL and a speed limit of 250 knots.

Another major plus with basic med, especially those with special issuance, if you hold a FAA Third Class medical there are no special requirements should you switch to BasicMed. In reality, unless you develop an issue that would require you to seek medical treatment, your BasicMed medical is good for four years. But remember, you still need to take the on-line course every two years.

If you have any questions or concerns, the ultimate resource is AOPA's web site. The AOPA developed BasicMed and also provide excellent support services for those seeking information and guidance in using this service.

### **Before Digital Movie Segments** by Charles Burke

When we watch films such as Top Gun, or any other movie that contains scenes involving aircraft, we usually just go with the flow and enjoy them knowing some may have been digitally created. But before the magic of digitally created planes was possible, you either had to have the actual aircraft or simply never write the scene into the script. But in 1969 a corner was turned when in the film, The Battle of Britain they needed a German (Junker) Stukas dive bomber because at this point in time there were none. All of the Stukas aircraft had been destroyed during WW2 so a novel idea was floated, use scale model aircraft. Taking this approach, the film's producers sought out professional model makers who crafted powered replicas of these aircraft that were subsequently used in the film. This marked a first in film making.

If you are into scale model aircraft currently, you are aware of the fact that making and flying replicas has, in its own right, achieved unimaginable heights. In some cases, models have been used in You Tube stunts that look so real, many people have been fooled into believing that seeing is believing. See [www.youtube.com/watch?v=YRqQCbzVKN8](https://www.youtube.com/watch?v=YRqQCbzVKN8)

By the way, the film, Battle of Britain can be seen on You Tube at <https://www.youtube.com/watch?v=dmsXyJgzk-8>.



**e6bx** by Patrick Milando

The E6BX is the mobile app version of the E6B aviation calculator. It has many great features but the one that is most helpful for N12 is calculating crosswind components. See sample below on left.

The app is easy to use costing only \$9. It also can run on both Mac and Android systems. In this single app you can:

1. Obtain WX reports, 2. Have an E6B calculator, 3. Navlog calculator, 4. Holding pattern calculator, 5. W & B, 6. Density altitude calculator, 7. Airports listed by county 8. Metar decoding 9. wind components, 10. Cloud base altitude, 11. True air speed and much more.



Wind Components Calculator



E6B Computer / E6B Emulator

**Facebook MAFC**

If you use Facebook did you know that MAFC has a club page? Member Steve Fox created the page a few years ago and offers members an opportunity to share ideas, and make new friends. [www.facebook.com/groups/flymafc/](http://www.facebook.com/groups/flymafc/)



**Meeting Minutes by Chris Kuelzow**

All Minutes and Administrative Related documents are available to you on-line. There are several document stores, among them:

- Flight Circle's (<https://www.flightcircle.com/v1/#/dashboard/files>)
- MAFC's website (<http://www.flymafc.com/documents.html> )
- MAFC's Facebook page (<https://www.facebook.com/groups/flymafc/> )

You are encouraged to explore these repositories.

Please contact any of your board members, should you have questions/suggestions.



**Overheard Overhead-Dedicated to the "fine art" of Pilot and ATC communications. by Dave Pathe**

One of the joys of flying into NYC metro area is listening to the controllers. In addition to being the best in the business, they deliver some good wisecracks, always with that unmistakable accent.

We had just landed at Islip (KISP) and had the following exchange:

Islip Tower: "Comair 234, take a left at the next intersection and taxi to the gate."

My first officer read back the instructions. Then to make sure Tower didn't want us to switch to ground frequency, he asked: "Stay with you?"

Tower (without missing a beat): "Sure, but you'll have to sleep on the couch."

**ANNOUNCEMENTS**

**NEW CALENDAR DATES**

1. The Rub and Scrub has been moved to June 17.
2. The Sunday May 21 membership meeting is back on.



**Safety Program by Mark Herega**

A special safety program covering the banner towers at N12 will be staged during the Sunday May 21 meeting.



**Takeoffs are optional but landings are mandatory**



**Cross Keys 17N**

**The Wright Answers:**

*The correct answer is b. 1903*

**Top Hours Flown in April**

<i>PILOT</i>	<i>HOURS FLOWN</i>	<i>AIRCRAFT</i>
Dean Gittleman	18.7	N4287Q
Bill Geier	11.7	N61WT
Bill Butler	11.1	N61WT, N738NY, N55804
Jim Purcell	9.7	N61WT
Motty Perl	6.6	N4287Q

**Awesome Paint Jobs: Art Templeton**



**"Hurry! HURRY!!"**

