



Spirit of Flight

**Experimental Aircraft Association
Chapter 14: San Diego, CA**

September 2024



Large version of our portable hangars outside of Paris in the early 1920s. Charles Lindbergh landed here.



Upcoming Events

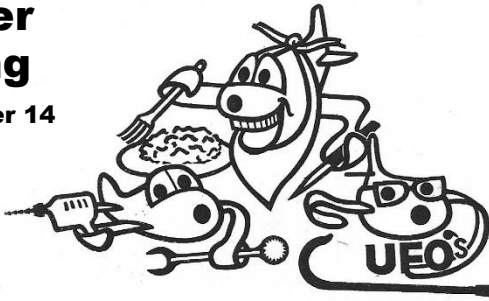
- September 14th**—Young Eagles Rally
- September 21st**—Pancake Breakfast and Membership Meeting. Michael Reyes from San Diego FSDO speaking.
- September 28th**—Flyout to Catalina Island. See Chris Constantanides for details
- October 5th**—Oktoberfest, Gold Chapter Recognition Lunch (Rescheduled from September 7th)
- October 12th**—Young Eagles Rally
- October 19th**—Pancake Breakfast and Membership Meeting. Chase Franzen on “Planning For and Flying To Alaska

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Chapter Briefing

EAA Chapter 14 Members



Chapter Activities: Information provided by Chapter members.

Week ending Aug 3: Warm, but pleasant weather meant a number of members were down at the Chapter, either working on aircraft or flying. One of Ron's relatives was down from Washington and scored a ride in the Aircoupe. Gert, as usual, took to the skies in his RV12iS. Jonathan and Gary worked on the Meyers. Joe was busy on his Stits project, Jimmy had new member Mike B helping him on the Nieuport, Jim made even more progress on his Nieuport, and Ryan worked on his E-racer.

Week ending Aug 10: Ryan started out the week with a long Eagles flight – always a treat to share love of flying with someone who has never experienced a flight before. The young man, just recently out of the Marines, happily accepted the offer of a repeat flight. Tim, one of our members and a proud owner of a VariEze, has been permanently transferred back to Florida to be the department head of a squadron. A great career move for him, but we're sad to see him and his plane go. Some good news though. He flew the plane back to Florida and he reported it was a good journey – no trouble at all with the plane.

Week ending Aug 17: Jimmy reports he and Mike B are making great progress – now they are working on the wiring for the Nieuport. Gert and Chris took to the skies during the week – great flying weather right now. One fortunate builder is now the happy owner of Gene H's beautiful Nieuport project. Gene very generously donated it to the Chapter and it now has a new home in Arizona. The man was really impressed with Gene's fine workmanship. We were really sad to see it leave – it represented what EAA is all about.

Week ending Aug 24: While asking about another issue, Chris C. heard from Airport Ops that it looked like the whirly bird on Bill B's hangar was getting loose and maybe needed tying down. It was a group effort to get it fixed. Chris found out about the problem, Ryan climbed up on the hangar to make the repairs, both Zack and Bill contributed safety wire. We had an unwelcome visitor at the Chapter – a rattler was discovered between hangar 1 and the WW1 hangars. Someone had driven over it, so no problem. Just remember it is that season, so be careful. Pay special attention around boxes or behind cabinets and use a flashlight in dark corners.

Week ending Aug 31: Ryan, helped by Jim M and Mike B continued hauling off unneeded material and generally cleaning up. Duane and Pauline are off for a trip east and will be going to the Cessna 170 convention in Kentucky. Adam reported that he has been fixing up the Titan piece by piece and is getting close to putting most of the things together. He hopes it will become flyable by the end of the year.

September will see a whole slate of activities down at the Chapter once again, beginning with our Gold Chapter Recognition luncheon on the first Saturday, followed by a busy Young Eagles Day on the second Saturday, pancake breakfast and a program by a FSDO employee on the 3rd Saturday – and a special treat – a flyout to Catalina Island on the 4th Saturday. That's what makes a Gold Chapter – different activities, community involvement, up-to-date aviation related information, - and the best part: food and flying!



Jim M adjusts the brakes on his Nieuport project. 9/3



Jimmy and Mike B. work on the wiring for Jimmy's Nieuport project.



Joe works on his Playboy. 8/10



Gene's Nieuport project heads to its new home in Arizona. 8/22



Joe Andrade in 2004

Gone West: Joe Andrade

Joe Russo

After battling cancer for years, a long time member of EAA 14, Joe Andrade went West. Although Joe moved to Payson, Arizona over ten years ago, each time we spoke he asked how the Chapter was doing.

And even though he had moved away, he kept his membership current as he was always a big supporter of the Chapter. He also offered members who might be visiting out his way a place to stay.

A long time pilot, Joe raced a T6 in the Reno Air Races. He was also an A & P who was always willing to lend a hand. He helped many of our experimental aircraft owners with suggestions and elbow grease. He will be missed.



President's Message

Welcome back,

After a month off for a summer break our Chapter is back in full operation for the month of September.

Our first event, the Gold Chapter Recognition barbecue scheduled for the first Saturday of September, has been rescheduled due to the forecast of extreme heat for that day. It will now be on the first Saturday in October. This gives us an opportunity to change the event from a BBQ to an Oktoberfest celebration. We will send out an email later this month with all of the details.

On the second Saturday, Young Eagles Day will return. Our volunteer pilots will again be flying local youth and giving them an introduction to aviation.

For the third Saturday, we will be hosting our general meeting and presentation. We need a Chapter member to volunteer to prepare the pancake breakfast. Kevin, who has been an incredible chef for years, says it is time to pass the torch to someone else. See the article elsewhere in the paper about how you can help.

On the 4th Saturday of the month our Chapter members will be hosting a flyout to Catalina.

Our Chapter lease renewal negotiations with the City of San Diego continue. We are making good progress and expect to complete a long-term lease renewal which includes the parcel between Old Charlie taxiway and the small brown covered tiedowns on the south side of our existing ground lease. This additional land will allow us to put up 4 to 6 hangers and provide space for parking.

We have a number of activities planned for the next few months and we urgently need volunteers. All Chapter activities operate solely with volunteer help. Member participation is essential to allow our activities to continue.

I am asking that all members, renters, and Board members do their part and help us to continue the Chapter activities we provide. Volunteers can contact me directly.

Trinidad Lopez
President

**It's push to talk, not
push to think!**

Medical Certifications - Problems and Solutions

Short Summary by Donna Ryan

The following information is based on a recent EAA National webinar given by Tom Charpentier

As part of *Learn to Fly Week 2024*, EAA National provided a series of webinars to help people get started in pursuing their dream of learning to fly. One of the webinars was entitled “Medical Certification: Common Problems and Their Solutions” presented by Tom Charpentier, EAA Government Relations Director. The following information is based on the slides and comments shared during the webinar and covers just the highlights of the presentation. This was a very interesting and enlightening program, and a must-see if you have medical conditions or take medications that might affect your getting your license.

Tom started off with a high-level overview of the three types of medical certifications described in the table at the bottom of the page. He then went on to describe the process of applying for each of these certifications.

Third Class

Tom spent the majority of the time in the webinar discussing Third Class Medicals. The medical application process normally goes smoothly for the majority of applicants.

- 1) Fill out the MedXPress form (go to medxpress.faa.gov) within 60 days of the appointment with your AME (Aerospace Medical Examiner). After 60 days, the online information is removed and destroyed so you would need to start over again.
- 2) Schedule an appointment with a local AME
 - a. If you are looking for a good AME, ask around. You may also use the FAA.gov website and type in local AME in the search field.
 - b. Discuss any medications and conditions ahead of time – before the doctor pulls the online Certificate paperwork. Nothing is official until that is pulled.
 - c. You can even give him a printout of the online form (with the reference number blacked out) and have him go through the process first.

- d. You can also contact EAA National about any possible issues that may arise and they will be glad to offer information they may assist you.
- 3) If all is normal, you’ll walk out with a medical certificate that day.
- 4) If problematic issues or medications are present, you may be deferred and/or require additional documentation.

Tom spent a lot of time discussing possible trouble areas and how to address them. Be sure and watch this webinar if you think you may fall into one of the categories.

He began by talking about medications. The FAA is concerned about medications for two reasons: side effects and underlying conditions. Certain medications may act differently at altitude, or may affect vision or make you light-headed – obviously issues if flying. Tom shared a sobering statistic: 12% of all fatal accidents occurred when pilots had a drug in their systems that occurs in many over the counter cough medications like Nyquil or Benadryl. Do not take these medications if flying. And give your body time to get it out of your system. Multiple the time between recommended dosage by 5 to see approximately how long this will take. For instance, if the directions say to take it every 12 hours, multiply this by 5 which equals 60. You would need to wait at least 60 hours after taking the drug before getting behind the wheel of the aircraft.

The FAA has given AMEs authority to decide if certain conditions can fall within acceptable parameters. This is called CACI (Conditions an AME Can Issue). It’s a lengthy list and includes such items as arthritis, asthma, prediabetes, prostate cancer, hypertension etc. For instance, with pre-diabetes, the physician must review certain items (partial list shown below).

AME Must Review	Acceptable Certification Criteria
Fasting blood sugar	[] :Less than 126 mg/dl
Current A1C	[] Within last 90 days [] Less than or equal to 6.5 mg/dL
Oral glucose tolerance test, if performed	[]Less than 200 mg/dl at 2 hours []N/A

If the levels for the pilot meet certain criteria, the AME can decide immediately that the pilot is within acceptable levels

Three Types of Medical Certification Available

Certification	Third Class	BasicMed	Sport Pilot
Requirements	Meet FAA Medical Requirements	Have had at least one 3 rd class medical since July 2005, take self-cert course, and be signed off by doctor	Valid State-Issued Driver’s License
Pilot Certificate	Private	Private	Sport
Can Fly	Anything	Up to 7,000 gross, 7 seats or fewer*	Sport Pilot eligible aircraft

*Note, President Biden just signed legislation which increased the weight limit and seat numbers for BasicMed

– you aren't shunted into a special FAA Review. Tom also shared examples for hypertension, and prostate cancer.

Tom then went on to discuss AME-Assisted Special Issuance. According to him, this is not a real big issue. It is similar to CACI, but it needs additional approval by the FAA. The AME will forward your paperwork to the FAA after renewal and the renewal cycle is then at the FAA's discretion. For instance, for Type II Diabetes (not insulin dependent) the following may need to be submitted:

- Status Report Worksheet (available on FAA website)
- Statement from treating physician concerning adherence to diet, current (30 day) A1c, history of hypoglycemic events or other complications.

Acceptable parameters are also listed:

- A1C less than or equal to 9.0
- No significant complications, no prohibited medications, medication combos, or insulin. The FAA has a chart of prohibited medications.

And then there is the Traditional Special Issuance. For this type of Issuance, the FAA must authorize every renewal and the renewal interval is at the FAA discretion. You would receive a letter saying it is time for a visit. Try and get any issues taken care of before the visit with your AME so that all goes smoothly.

Coronary heart disease (CHD) treatment would fall under this category. This could include heart attacks, bypass, stents. For first and second class, there is a mandatory wait of 6 months for bypass or left main artery stent, 3 months for all others. The typical requirements for CHD for third class include:

- Documentation of event/surgery
- Doctor's note including medical history, modifiable risk factors, medications, bloodwork
- Bruce Protocol Stress Test
- Any other additional testing if clinically indicated.

Go to www.FAA.gov and type in "CHD" to learn more. Note: It may take a while to get approval, but it is definitely doable – so don't get discouraged.

Josh also spent some time discussing neurological and mental issues, such as head injuries and stroke, as well as depression, DUI, ADHD, substance abuse. Head injuries and stroke often require long wait times and neurocognitive testings before a decision is made. Josh mentioned it may take up to 5 years before approval. Certain conditions are not certifiable, including Bipolar, Epilepsy, and ADHD with active medication.

If the FAA has been involved, patience is required. If you feel your medical approval is stuck, ask your AME for help, and you can even contact your regional flight surgeon (find yours on the FAA web site by typing in regional flight surgeon in the search field of www.FAA.gov)

Basic Med

Tom then discussed the Basic Med certificate, an alternative to the 3rd class medical.

Before this certificate was restricted to a six seat aircraft, 6,000 lbs gross: however, President Biden just signed a new law that increased this to seven seats, 7,000 lbs gross. You can fly, day, night, VFR, and IFR. The requirements for this certificate follow:

3rd Class Medical valid on/after July 14, 2006, most recent medical not denied/suspended/revoked

Free self certification course (AOPA or Mayo clinic) once every 2 years

Physical with state-licensed physician once every 4 years.

Note: Sometimes a doctor declines to sign you off. That doesn't mean you failed. He might be concerned about insurance issues. Either work with that doctor to deal with any concerns or go to another doctor.

One of our members recommended reported that Dr. Daniel Monlux did a Basic Med certificate for him and it went very smoothly. Book appointments at <https://calendly.com/daniel-monlux/faa-medical-examination?> His office is Wingman Med at 4295 Gesner St # 1F, San Diego, CA 92117. Phone number is 619-320-5511.

Another of our members recommended Larry Marshall, a physician in Lakeside. His office is at 12517 Lakeshore Dr, Lakeside. Phone number is 619-443-3843.

If you know of any other physicians working with Basic Med, please let us know so we can share the information with other Chapter members.

Sport Pilot

As we have mentioned in other recent newsletter, many of the requirements for Light Sport Aircraft and Sport Pilot license will hopefully be changing early next year. Tom reviewed these changes. Bottom line is when these changes go into effect, many pilots will select this option for a medical certificate from the beginning. It is cheaper and easier. For right now, for the Sport Pilot medical option, there are only two requirements:

If you have previously had a medical, your most recent cannot have been denied/suspended/revoked

According to FAR 61.53(c), you cannot fly if you know or have reason to know of a medical condition that would make you unsafe to fly the airplane.

Tom wrapped up the webinar by urging members to contact EAA National if they have any questions or concerns about their medical certifications. You can contact him at govt@eaa.org or 800-564-6322.

Why I Need a 3-D Printer

Gene Hubbard

Last year I purchased a 3-d printer—not for any particular project, but because I was interested in the technology and wanted to get some experience. This summer, I finally realized why I needed it. Here’s the story.

Figure 1. Creality Ender 3 from Amazon. Nothing special, but I chose it because it was inexpensive and seemed to have a fairly good reputation.



The printer is a Creality Ender 3 V2 SE from Amazon, shown in Figure 1. I didn’t do a lot of research to choose the “best.” I just picked out one that was inexpensive and

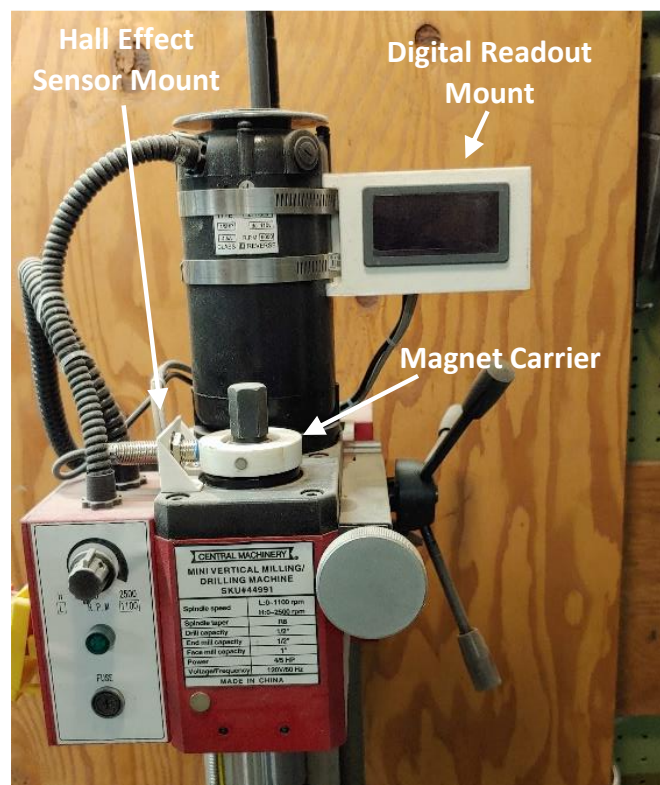


Figure 2. 3d Printed Parts Adapt New Components to Old Machinery. Here I modified my Harbor Freight mill to include a generic Hall effect tachometer and readout.

seemed to get reasonable reviews. When you don’t know where you’re going, any road will get you there.

Soon after I purchased the printer, I was upgrading an inexpensive Harbor Freight milling machine to include a digital spindle speed readout. This readout involved mounting a small magnet to the spindle, a Hall effect sensor on the case, and a readout module somewhere I could see it. I could have used any number of materials to mount these items, but I decided to try out my new printer. It worked, as you can see from the photo of the mill head in Figure 2. So far, so good, but as I said, there were a lot of ways to do the job.

Then this spring, I got serious about dust collection in my shop. I used a single-stage Harbor Freight dust collector and plumbed it to all of my major tools with plastic drain pipe from Lowes, as shown in Figure 3. The rub? Many of my tools are over 50 years old from an era when nobody even thought about collecting dust. Also, nobody ever intended drain pipe to connect to spiral vacuum hose. This time there weren’t a lot of obvious solutions. Searching the Amazon website, I found a few adaptors that maybe I could modify to maybe work, but nothing looked easy and it was all expensive. But it turned out to be easy to design and print adaptors from almost anything to almost anything else.

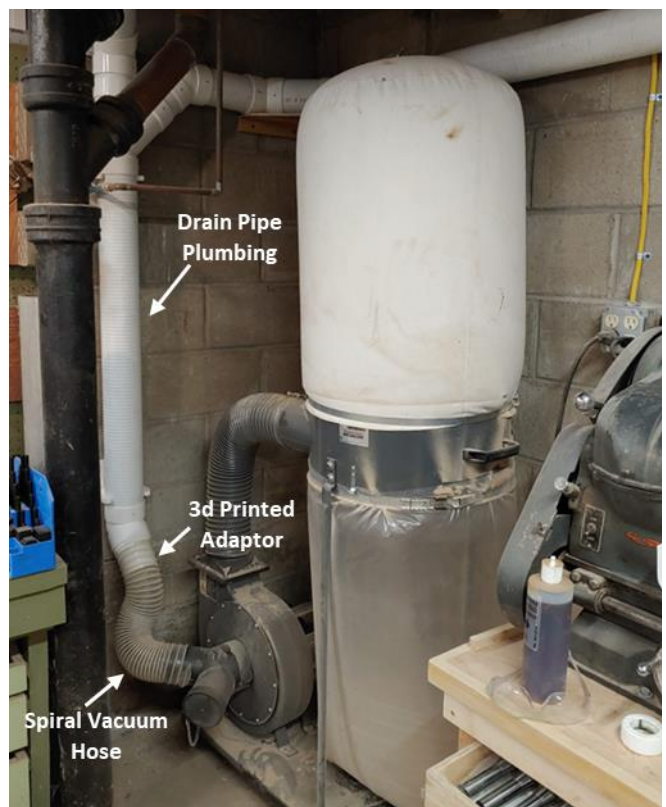


Figure 3. Dust Collection System. Dust collection accessories were never intended to interface to yard plumbing, even though they’re roughly the same diameter. Making custom fittings with a 3d printer vastly increases the number of design options.

Figures 4-6 show some of the mounts and adaptors I used for the dust collection system.

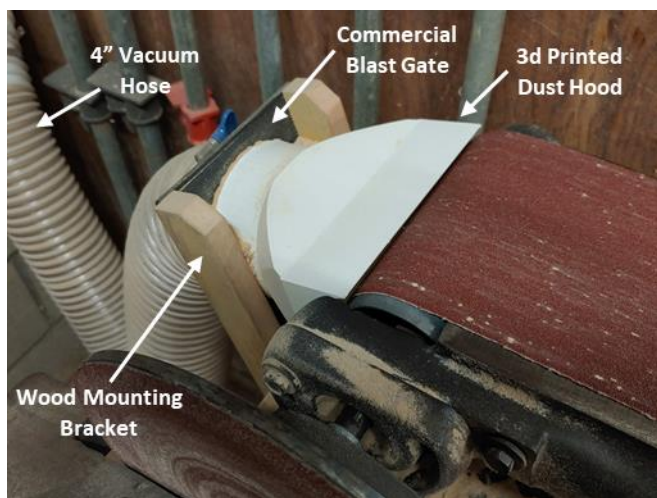


Figure 5. Belt Sander Installation. Here I 3d printed a custom dust hood for my 60-year-old Craftsman belt sander that fits directly on a commercial blast gate. I then used wood rails to mount the blast gate to the sander table.

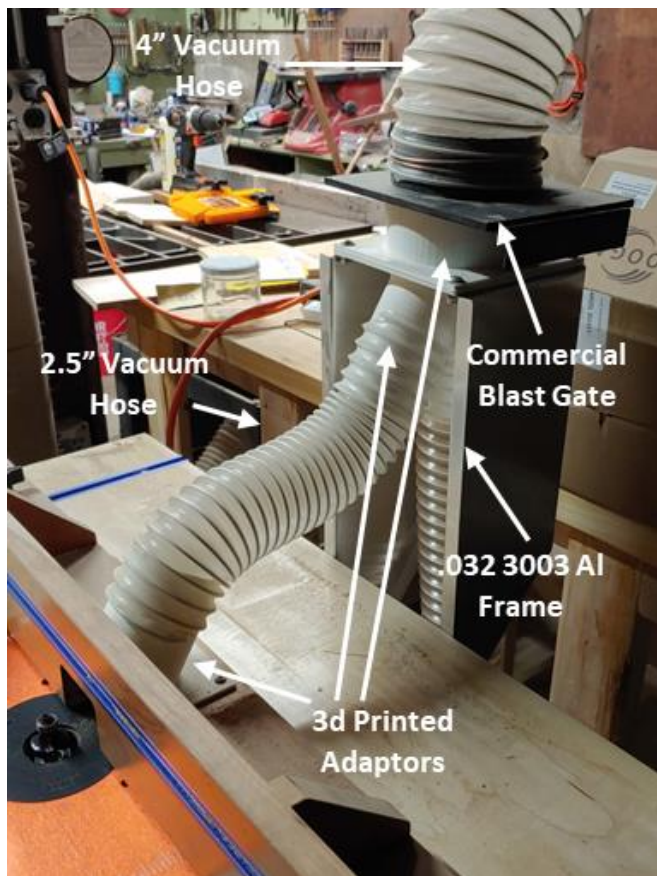


Figure 4. Router Table Installation. I used a commercial blast gate for the router table, but 3d printed all the hose flanges and adaptors.

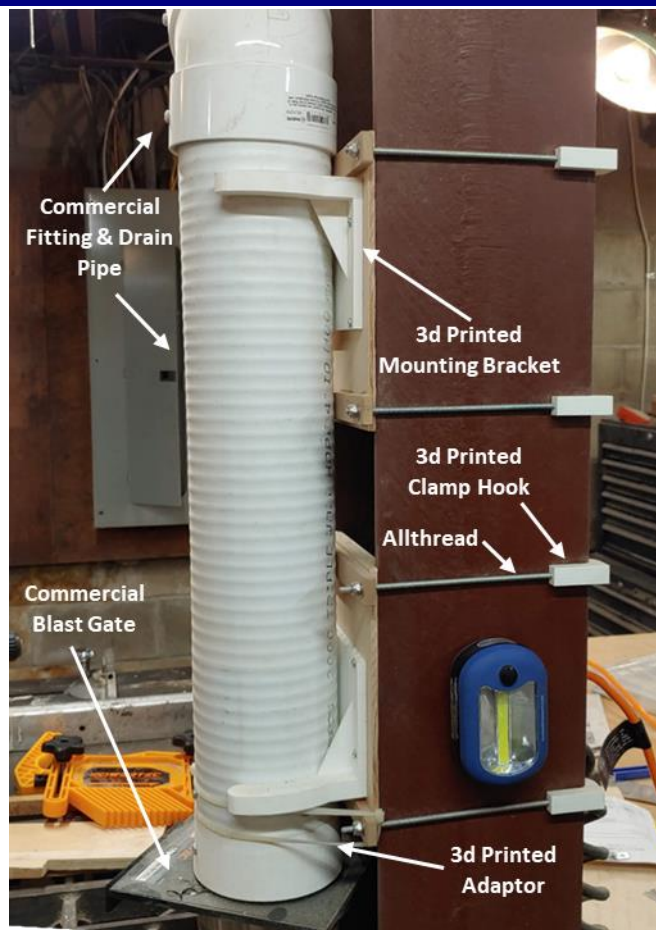


Figure 6. Blast Gate Installation for Table Saw. This saw is older than I am. I improvised a dust port below the saw itself and mounted the blast gate on a nearby steel column.

So how do I get from need to product? It's basically a four-step process as shown in Figure 7. I generally use pencil and scratch paper to establish the product specifications for step 1. Avoiding the computer at this step lets me concentrate on the critical features and dimensions and ignore the ones that don't matter much. For example, if I'm making a flange to mate to a vacuum hose, the only critical dimension is the inner diameter of the hose. If I'm matching a plug-in fitting, the

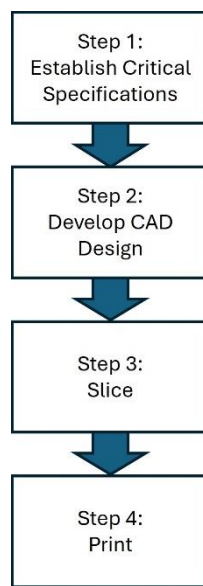


Figure 7. Process Flow for Designing and 3d Printing a Part.

diameter and taper matter. I'll use a hold-down clamp intended to secure a commercial blast gate for an example. Figure 8 shows my initial sketch.

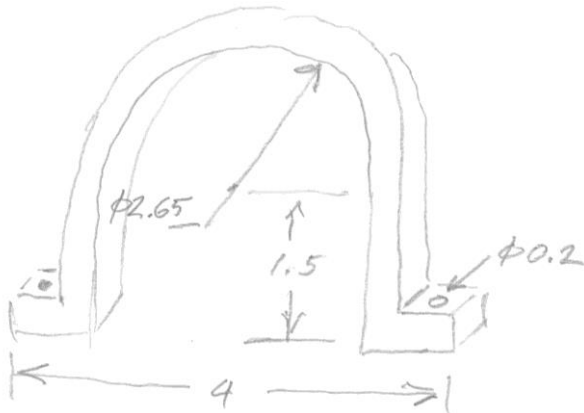


Figure 8. Sketch of hold-down clamp. This sketch shows only dimensions critical to making the part fit and do its job. Missing dimensions will be determined during the detail CAD process.

Step 2 involves translating the specification sketch from step 1 into a machine-readable 3d model, a “.stl” file. Depending on who you ask, “STL” stands for “stereolithography,” or “Standard Triangle Language,” or maybe “Standard Tessellation Language.” This takes a Computer-Aided Design (CAD) program. Any number are available: Fusion 360 and SolidWorks, are two of the high-end standards; SketchUp and TinkerCAD are freeware that don't have much of a learning curve. I use TinkerCAD because it does most of what I want and lets me spend more time in the shop and less learning yet another new software package. TinkerCAD lets me build up my design by combining basic shapes: blocks, cones, cylinders, spheres and so forth. It also lets me subtract the same shapes from a design. For example I can specify a hole by subtracting a cylinder from the design. I can hollow a shape by subtracting a slightly smaller copy of the shape I need hollowed out. By the end of stage 2, I have a complete 3d description of my final widget that I can save as a .stl file. The .stl file describes what I want to 3d print, but doesn't give the printer instructions on how to print it. Figure 9 shows the TinkerCad rendering of my hold-down clamp.

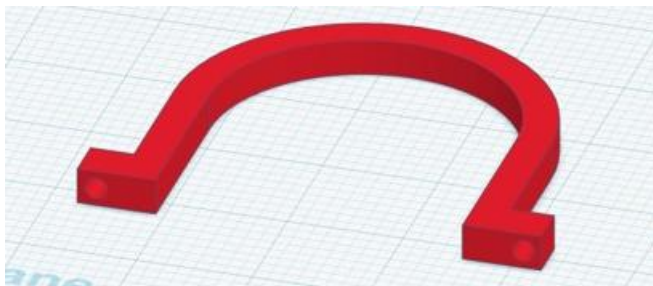


Figure 9. Hold-down rendering from TinkerCAD. At this stage, all the “missing” dimensions have been established and the CAD system guarantees that the description is self-consistent.

Step 3, slicing, translates the .stl file into a detailed description of how the printer lays down each layer of plastic used for the final print. There are a few subtleties here, most of which I ignore most of the time. Here is where I could control parameters like wall thickness, infill percentage, supports, and so forth. So far the defaults have worked OK for what I've done. Creality supplies the slicing program and it generally takes less than a minute to run, generating a “.gcode” file. “GCODE” stands for “Geometric Code.” Up to now, everything has been done on my laptop computer; now I have to copy the .gcode file onto an SD (stands for “Secure Digital”) card that I insert into the printer. Creality supplies an SD-to-USB adaptor with the printer since most laptops no longer have a full-size SD slot.

Finally, in Step 4, I insert the SD card with the .gcode file into my printer, select the file to print, and press the start button. Then I go away and do something else for a few hours. 3d printing is slow, but the overall process is faster than figuring out how to cobble together a solution. Figure 10 shows the completed hold-down clamp, and Figure 11 shows it mounted to the blast gate of my new drill press table.

This is why I need my 3d printer. Why do you need yours?



Figure 10. Hold-down clamp fresh from the 3d printer. All that remains is to see if it fits. If it doesn't, it's easy to modify the CAD design and print another one.



Figure 11. Completed hold-down clamp in place. This clamp mounts to my drill press auxiliary table to stabilize the Loc-Line system I'm using for dust collection.

Volunteers for Pancake Breakfasts Needed

By: Donna Ryan

Since 2008, Kevin R has faithfully shown up on the 3rd Saturday of the month at the Chapter to make a delicious breakfast of pancakes, sausages, and eggs to order. We have been incredibly grateful for his dedication and his great cooking skills. Others have helped him out through the years, including Jimmy K., Gene L., Chuck S., and Stu S. For a number of years, his son David has been by his side, making delicious waffles to order. But it was always Kevin who took the lead, quietly ensuring everything was ready and waiting when Chapter members arrived ready for a hot and delicious breakfast.

Kevin recently announced that it was time to pass the torch to another member of the Chapter and we are asking for volunteers to step up and take over this much-loved Chapter activity.

One person doesn't have to do the job all alone. You are always welcome to bring a family member or friend along. It also would be a great idea to have maybe three primary volunteers and each one could do one breakfast a quarter, spreading the load around a bit. To get you started, we will ask one of our past cooks to show you the ropes.

Reflecting the time when members actually show up for breakfast, the food should be ready by 8:30 am and available until 9:30 am. This gives the cook and volunteers time to clean up the kitchen before the monthly meeting starts.

Once you know the setup, you probably should be at the Chapter no later than 7:45 am to get the flattop heated up, the pancake mix ready, and the plates out. You are welcome to change up the menu a bit, just like any new chef does – just keep the pancakes in “pancake breakfast.” Save receipts for any food or supplies purchased and we'll reimburse you.

Getting together and talking over food is one of the favorite pastimes at the Chapter and we want to make sure that our pancake breakfasts continue to be available. It is very rewarding to talk with our members while flipping pancakes and the hungry bunch that shows up each month is most

appreciative. This volunteer activity is one of the most important in our Chapter in terms of helping out all of our members and visitors.

If you think you could volunteer or if you want more information, please contact Donna Ryan at ryan@san.rr.com. All of us would really appreciate it.

New Member

Donna Ryan

Welcome to **Mike B.**, our new member in August.



Mike has a PPL and an interest in Nieuports. Well – he has come to the right place. Two members are actively building them here at the Chapter. And Mike wasted no time in getting involved. He's down there 3 times a week helping Jimmy with his Nieuport. They are making great progress.

Look for Mike at the next meeting, introduce yourself and get to know him better. We very much appreciate his support.



Another photo of new member Mike B. helping Jimmy with the wiring on his Nieuport project.

Chapter Information

Facebook	http://www.facebook.com/pages/EAA-Chapter-14-San-Diego-CA/134162329986593	Events	Open House at the Brown Field hangars: every Saturday from 10:00 am to 2:00 pm. Pancake Breakfast: 7:30-9:30 am, third Saturday of each month General Meeting: 10:00 am, third Saturday of each month
Website	http://www.eaa14.org		
Hangar Phone	619-661-6520		
General Information	eaal4contact@gmail.com		
Membership	Applications available at our Brown Field hangars and on our website		