

**January 2019**

**Chapter  
732**



**January 20<sup>th</sup> Meeting**

**Arkansas Air & Military Museum**

**1:00 Food**

**2:00 Meeting**

**Bring a side dish to go with chili**

Send newsletter items to: [ea732newsletter@gmail.com](mailto:ea732newsletter@gmail.com)

A festive graphic for the New Year. The background is a vibrant blue with a subtle rainbow gradient. It is covered with numerous white, intricate snowflake patterns of various sizes. The text "Happy New Year" is written across the center in a large, white, 3D-style font with a slight shadow effect.

**Happy  
New Year**

# New Chapter Co-Presidents



**Pam Doughty & Ada Younkin**

## A Note From Pam

Hello Everyone!

I wanted to update everyone on the status of the January meeting that will happen this Sunday, January 20. We will be meeting at the Arkansas Air and Military Museum again. At 1:00, we will have a meal and the Younkins will be bringing chili to help warm us all up. So everyone else bring something to go with it. Our meeting will start at 2:00. We look forward to seeing everyone there!

Thanks,  
Pam Doughty  
EAA Chapter 732 President



See Ya!

Don't forget your name badge!



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## Steve Bray Project Update

Update on my Zenith 750 Cruiser, N750SB:

I'm at 1644 hours into the build and I feel like I'm getting close to "completion". The construction and assembly of parts is essentially done and everything works. I do have some things like the prop and doors temporarily removed for convenience sake, but those are quickly re-attached. The custom wing root fairings have taken more time than expected, but are done. I have declared the cowling to be complete until I paint or wrap the plane after phase I testing. Almost done with the required labels and placarding. I still am putting the final touches on the interior. I still need to do a weight and balance and am looking for some scales to borrow. I'm also looking for recommendations on someone to do the final inspection for the special airworthiness certificate. As you can see from the photo, quite a bit of dust has settled from activity in the shop, so a good wash is still on the to-do list.



# Give and Get!

Ask for help or offer information!

Post your message here by sending to the newsletter editor.

Steve is nearing completion of his Zenith 750 Cruzer and would like to start working with a DAR. Can anyone recommend a DAR and provide him with contact information?

His email [sbrayjunk@centurylink.net](mailto:sbrayjunk@centurylink.net) and phone 479-359-0317 in the request.

This new section of the newsletter will be a page where you can ask questions and receive helpful guidance and information from the experience of other members. Please share your expertise with chapter members!

# The High Speed Scout or Land Pursuit Type

submitted by Gerald Resh

Excerpt from the *Aeronautical Engineering and Airplane Design*, published 1918 describing the requirements for a “modern” fighter design. Interesting take from 100 years ago when aero technology was still in its infancy. I would sure like to fly an airplane with the performance listed in the table!

## The High Speed Scout or Land Pursuit Type

The high speed scout or pursuit type has in the present war assumed a very great importance. IN the War Department memorandum on “Military Airplanes,” its functions are well defined:

“By virtue of its tremendous speed and climbing ability, it can dodge and outmaneuver its larger enemy, maintaining an effective fire with its machine gun, at the same time presenting a small and bewildering target. This is an ideal machine for tactical reconnaissance. It can even drop a few bombs where they will do the most good.”

The United States Army memorandum gives the following figures pertaining to this type:

Table 1. Land Pursuit Type.

Horsepower: 110

Type: Tractor

Number of men: 1

Military load, pounds: 200

Fuel load, pounds: 150

Miles, radius of action, full power: 315

Climb, feet in 10 minutes: 8000

High speed, miles per hour: 115

Low speed, miles per hour: 43

Factor of safety: 7.5

Percentage demand in war: 21.0

## The High Speed Scout or Land Pursuit Type continued

Very few machines of this type have been built in America. Abroad such machines have been used in great numbers, but little information is available for recent French and English types, such as the Nieuport, Morane, Vickers, Bristol, Sopwith, etc., with light rotary engines of between 80 and 130 horsepower. Lately very light and more powerful 150horsepower V-type Hispano-Suiza engines have been employed in great numbers.

We may say that an average of 120 horsepower is used in this type, that it is a single seater machine, almost always a biplane with the smallest possible wing spread, a tractor with a light machine gun firing either through the propeller or above the wings.

English opinion based on experience in the war supports an inherently stable machine which the pilot can leave uncontrolled for a short period while engaged in combat or other functions. To obtain inherent stability in this type is a difficult problem. The high loading per square foot of area is not conducive to stability, and the employment of correct fin areas and dihedrals is still a problem. The high loading also introduces difficulties from the point of view of stresses in the wing structure. Nothing lower than 7 pounds per square foot of wing area seems possible.

With the production in the United States of such engines as the General Vehicle Company's Gnome and the Hispano-Suiza, there is to be expected a very rapid increase in the number of American speed scouts. These light and powerful engines will enable the weight per horsepower to be diminished and the speed and climb to be increased until European practice is equaled.

# 2018 Recognitions





# Inclinometer

submitted by Gerald Resh

## HANDS ON

BUILD-IT-YOURSELF

An instrument you can build for under \$5

I JUST STARTED TO GET SERIOUS about my Sonex's instrument panel. My goal is to keep it simple (aka cheap). Since I haven't been in the market for instruments in a while, I was absolutely taken aback by how expensive slip-skid indicators are. I found prices anywhere from \$40 to \$90! There had to be a better—cheaper—way, so off I went to the *EAA Sport Aviation* online archives. Bingo! Val Bernhardt, EAA 59376, had shared plans for a homebuilt inclinometer back in January 1982. Here is a full-size template to make an inclinometer for well under \$5. Plus you'll have the satisfaction of building it yourself.

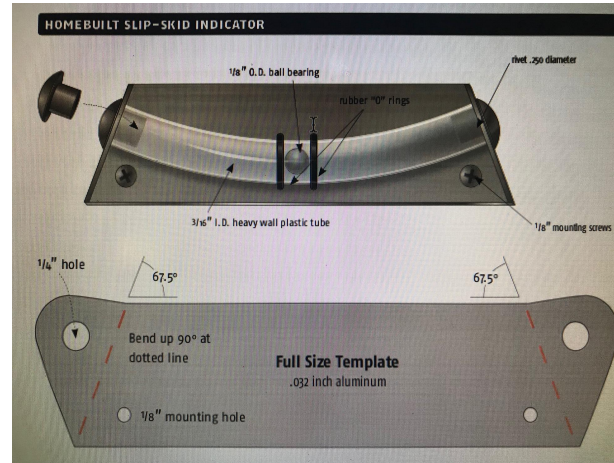
The hardest part of building this instrument was finding the raw materials. I found my supplies at a True Value hardware store after striking out at the local big-box store. Try your local bike shop for the ball bearing. You can scale the template down a bit if you don't want to burn that much space on your panel. I copied the template on a photocopier at 80 percent. I modified mine by using a tubular rivet (3/16 inch by 1/4 inch) as a plug and used a smaller vinyl tube with a 1/4-inch outside diameter and 0.170-inch inside diameter. I liked the tubular rivet because it hides some of the trapped air within the mineral spirits we used as the liquid medium.



Gerald shared this article from Feb. 2010 SA. These simple instruments are wildly expensive, and he made one for his Pietenpol project. He used antifreeze as the dampening fluid and made snug fit plugs for the ends out of aluminum on a lathe. He actually flight tested this setup in their Aeronca last summer and it worked surprisingly well. (See photo left)



Tubular rivets



1 1/8" O.D. ball bearing

1 3/16" I.D.  
heavy wall plastic tube

1 .032 inch aluminum (scrap)

2 .250 diameter rivet

2 black rubber "o" rings

# 2018 Update

Submitted by Dale Mitchell

The year of 2018 was quite a year. The ongoing Lake Amphibian project was finally finished up two weeks before OSH and was flown home to North Carolina by my brother Myron who then flew it to OSH 2018. During the Lake project Myron bought a Bonanza from TRI State Airmotive that had been rebuilt after a gear up landing. I got to do all the test flying on the Bonanza project before delivering it to Myron just in time for us to fly it down to my first Sun and Fun. I ended up flying the Bonanza to OSH and then flew the Lake back home to 4M1 where I proceeded to get my Seaplane rating over at Grand Lake Seaplanes. Got to keep the Lake for awhile after the rating and flew seventeen days in September and took about a dozen people for their first Seaplane ride. What a blast!

I am pretty fortunate to be based at 4m1 and fly several airplanes for Larkin at Tri-State. Some of them include a Sierra, an Arrow, Cessna 188 Ag Wagon, Cessna 150 taildragger which is now getting a 150 hp engine, C172, 150 hp Grumman Yankee. Also was babysitting the Cessna 180 that went back home. Oh, and you might remember the C180 lost a brake and ground looped at one of our meetings in FYV. As if I needed another challenge over the winter! Got some twin time in a Seneca delivering it from OKC to Mena for paint and then from Mena to Branson and finally to Pratt, Ks. to be sold. Finally got back to my C175 after an engine/prop swap and now have "Speedy" back. First test flights were in December. It is quite the performer now with 180 HP and constant speed prop. That engine was from my BD4 project, so was looking for a replacement when my other brother, Gary, from Kansas City let me know that their Vintage Chapter had a project for sale with an IO360 and constant speed prop for sale. I jumped at that and now have an engine for the BD4. That engine was attached to a yet unknown single place bi plane project. I will try to keep you updated on those projects.

2019 started with more test flying on the C175. While I was up I noticed a Pawnee flying west and called to find it was John from the Peninsula Strip going to Bentonville for lunch. I asked him if we could join him and we made a flight of two over to the new Louis Thaden restaurant.

Blue Skies and Happy Flying to all.

Dale Mitchell

Cessna 175 @ 4M1

# December Meeting



# Pineapple Casserole

Submitted by Jim Wimberly

**There are many versions of this casserole, but this is the one that Joan use:**

**2 large cans pineapple chunks (drained)  
1 small can pineapple chunks (drained)**

**Line chunks in bottom of 9 x 13 inch pan**

**Mix: 1 cup sugar  
3 Tablespoons flour  
2 cups grated cheddar cheese**

**Spread over pineapple**

**Melt 1 1/2 sticks oleo/butter. Crumble 1 1/2 sleeves of Ritz crackers and mix into the melted butter. Place over top. Bake at 350 for 25/30 min.**

OPPORTUNITY

Paul Howard Poberezny

PAUL HOWARD POBEREZYNY

“Can you imagine living years and years ago, as a person with a desire to fly but no way to achieve it?”

A special thanks to Randy who contributed to the newsletter !

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