



# The Flightline

EAA Chapter 958 San Marcos, TX  
Where every day is a good flying day!

## June 2015 Issue

Experimental Aviation



The Success Continues...

EAA Chapter 958



The Leader In Recreational Aviation

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## June Chapter Meeting at Redbird Skyport

*The May meeting will begin with Coffee and doughnuts at about 9:45 am followed by the regular meeting at 10:00 am Saturday 6/20/15.*

**Program: Erik Svendsen, General Manager of McKee Avionics speaks on ADS-B**

## Prez Sez

### Greetings 958

Many thanks to the chapter members who supported the fly-in on the 6th. You all did a great job and we had plenty of volunteers for what ever the task. There was a little larger crowd in attendance Than most all had anticipated. This was a pleasant surprise given the events in the area a few days prior. Upon my arrival We jumped into finishing some set up work in the large hanger and getting the concession up and running. The grill was started and off we went. People where asking for food well before 10:00 AM. As I was part of the cook team I did not leave the area most all day. From my vantage point at the grill I saw a number of aircraft arriving and departing. The CAF had the b-25 on display along with some other fighter aircraft (which also flew earlier in the day). The P-39 Air cobra made a pass or two late in the day. With those I had the opportunity to chat with both chapter member or not all said they had a good time.

I am happy to report the food concession was a bigger hit than we had anticipated and we restocked twice thru out the day. Although I did not have the opportunity do make the rounds of the venders on hand there where some interesting things those folks had to view. Both Redbird and the Chapter leadership where very pleased with the outcome of the fly-in. I think this may be the start of a annual event. We will brief on the cost and return at the chapter meeting. We Will not be having the pancake breakfast this month There will be coffee and donuts prior to the meeting. Not to worry we will bring it back. Just need a little break. Our Speaker will give a program on ADS-B.

Oshkosh is just around the corner I know some of our members attend pretty regular. I have brought up the idea of the chapter going up as a group. It is probably to late for this year but I would like to get a committee to investigate the chapter starting a yearly trip camping and helping provide transport of people and gear. Those wishing to fly could do so others that do not have aircraft could drive up. It is also middle of the year and Christmas will be here before we know it. We need to start thinking of the Christmas party, so we can reserve a place to have same, before all are taken. See you all on the 20th.

Phill Steele

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## **EAA Ch 958 May Meeting -Minutes**

### **General**

- New name badges arrived last month and were handed out
- Presenter: John Brecher on Sheetmetal Basics
  - He's an EAA technical Counselor and new member to 958

### **Bluebonnet Fly in**

- Need Volunteers for Bluebonnet Fly in
  - Concessions have 3 people signed so far need couple more
    - (Note: volunteers get free lunch)
  - need additional folks for poker Run
    - (have KBAZ and T50 signed up)
    - Need people for other airports
    - Airports - Listed in previous notes
  - Positions for floaters will be assigned on day of show
  - Young Eagles tentatively will have insurance coverage
- If weather doesn't cooperate we will take contact info and have separate YE day.
- Eagles flights info will be available but not flying that day

### **New members**

- Ken Saliger - Retired engineer - Interested in UL
- Fredrick Magare - Building RV-9 - Looking to connect with like minded people

### **Newsletter**

Always looking for information on ongoing project  
Thinking of putting advertising in newsletter  
Business card size advertizement \$25/yr

### **Email Group**

Everybody will be added to the mailing list unless you specifically opt out

### **First Flights**

Larry New's RV-7a has flown  
Signed off by Tim Martinez DAR (highly recommended)  
First flight on Thursday, Flew again Friday

## Redbird Skyport's Blubonnet Fly-in Big success for Chapter 958

Although turnout was light, the pilots were hungry as Chapter members had to make 2 additional food runs to keep up with the demand at the Fly-in. There was an excellent show of volunteers and everyone worked seamlessly with the Redbird staff. Fun was had, food was great, weather was perfect and for a first time event it was considered very successful.



Some of the volunteers pose in front of Clell Bond's beautiful Mooney



Nathan and Gale Timmerman were the face of Chapter 958, serving up hamburgers and sausage to hungry pilots



The Burnett wing of the CAF brought in their B-25



Guy, Kermit and Phillip discuss the fine points of cooking burgers and brats

**More Pics see last page**

# Reasons Why We Fly #1

By Larry New

We took our first RV trip to South Padre Island (SPI). Neither Paula nor I had been and when she said that's where she wanted to go for her first trip...she had me at "lets go flying"!

The weather was clear and smooth with only a few pretty white puffy clouds. Perfect for her first flight in the RV. Flight time was less than 1.5 hours from San Marcos to Brownsville South Padre Island International Airport (KBRO). Much better than the 5+ hour drive through South Texas desolation which was the main reason we hadn't been.



Despite being "international", Brownsville is only a Class D airport and easy to get in and out if you avoid flying into Mexican airspace just a couple miles south. The FBO was great, Southmost Aviation. Ben Douglas, one of the owners, personally replied to my email to welcome me. They're next to the tower and centrally located on the small airport. They loaned us the crew car for the day but there is the normal selection of airport rental car companies only a minute or two walk next to the main passenger terminal. I considered both Port Isabel - Cameron County which was closer but didn't seem to have any facilities and Harlingen - Valley International which looked to have great facilities and cheaper gas but was an extra 30 minutes from the beach.

It took us about 35 minutes to drive to SPI with the beach tourist traffic. We ate lunch at Blackbeard's on the recommendations of the guys at Southmost. They were right; it was very good and reasonably priced despite being on the tourist drag.

For our beach time, we chose Andi Bowie County park which is on the north end of island development. Entrance is \$5 per car and that gets you large clean restrooms with indoor showers plus outdoor beach showers, an extra large covered pavilion with about 60 picnic tables, a small snack bar plus it was less crowded than the beach in front of the condos and party pavilions we saw on our walk. The only problem at the beach was I didn't read the directions on the sunscreen about how long to wait before going into the water so it won't wash off. I've got a painful reminder now.





Since we only spent the day on SPI, I'm sure we didn't get the entire flavor of the island but Paula did say it seemed a little one dimensional. Not a bad thing if you want the beach and tourist shell and t-shirt shops and not much else. The actual beach and sand and water was better than all the other Texas beaches we've been to many times. Not a bunch better like going to Cozumel but just a little better. Port A (Mustang Island/Port Aransas) has always been our go-to mini beach vacation and we enjoy the broader variety of activities it offers.

The trip back was even easier as we had a good tailwind and little traffic. By now, Paula was relaxed enough that she finished her book on the Kindle. It was just getting dark as we arrived back in San Marcos so she got to see nice sunset before we landed. We enjoyed the trip and she thought it was really cool that we could do it all in one day. We both agreed that we would like to go back but only if we fly. I would call that a successful first trip!

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## Building the Sport Trainer

by Clell Bond

This on and off (mostly off) project is a Wag-Aero Sport Trainer, basically a clone of the Piper J-3 Cub. It is my intention to build it to the military observation version, the L-4 or L-21, the latter using a slightly larger engine and a pressure cowl. I suspect that many in our chapter are a bit more familiar with tube and fabric construction than I am and this has been a real learning experience. Mine is strictly a plans built plane, although there are kits available and there are a number of compete parts and assemblies that can be purchased if you have the funds. Additionally almost all Piper J-3 parts are interchangeable, the only significant difference between the two planes is the wooden ribs that are used in the Wag-Aero version. Of course if you use too many parts from the certified J-3 you might have trouble meeting the 51% rule.

The Wag-Aero Sport Trainer plans are in some ways sort of minimal. There are no instructions, dimensions are sometimes in error and there is no schedule of fasteners or a detailed materials list. Fortunately the plans for the original Piper are available on the internet as is a good support group for the various Wag-Aero models.

The most recent assembly that was completed was the fin and rudder. Basically it is constructed from 3/8, 5/8 and 7/8 inch 4130 steel tubing with ribs made from 24 gauge low carbon steel. Some of the other parts, such as the rudder horn are made from 0.90 4130 steel and the double layer hinges are made from 1/2 and 3/8 inch 4130 bushing material.

The ribs require four bends, the two 90 degree bends were made in metal brake while the two 15 degree bends were made by first making a tapered wood form with 15 degree edges and then bending the metal edges down with a mallet. To match the rib ends to the various tubing diameters the half round cutout at each end was first trimmed out with a sheet metal nibbler then smoothed with a high speed tungsten cutter. The ribs and some of the other parts were made last year although I got to make a replacement rib when I forgot to measure twice and weld once during the assembly



Once cut to length and shaped, the various tubing, ribs and other parts were assembled on the work bench and held in place with small wooden blocks for tack welding. One of the more difficult aspects was forming the rudder trail edge tube. Several jigs had to be constructed and the tubing had to be bent in numerous stages to achieve the specified shape without spring back. The forming of this tube required approximately 4-6 hours of time.



The fin and rudder required approximately 40-50 hours to assemble. A lot of time was spent redoing various parts of the jig or making new jigs so welding could be completed. The hinges also required a lot of time to manufacture and ream and additional jigs to hold them in place also had to be constructed. The rudder horn has not yet been welded in place as I did not like the fit. Made of 0.090 4130 I unfortunately did not follow the Tony Bingelis advice to make any required bends before cutting away access metal.



Currently the bottom 11 inches of the fin is only temporarily tack welded in place to provide a base for the bottom rudder hinge and will be removed when a rudder tail post is available. Now primed with modified epoxy it's hanging on the garage wall. The Wag-Aero price for a similar completed fin and rudder is \$872.00



# The homebuilders Tools

(or how not to hang curtains)

by Stan Timmerman

I purchased a Northern Tool Sheet metal pan brake. Before going further, I need to emphasize that you probably would not need one to build an airplane. Just because I did not need one did not mean that I did not want one.

Sheet metal brakes are generally not made for work on aircraft. Sheet metal bends used for aircraft construction need very large bend radius. These brakes were meant for someone that wanted sharp bends.

In the picture is a green insert. It is called a shoe. The shoe has the large radius that I need. Unfortunately, the Northern Tool brake cannot be adjusted back enough to accommodate the shoe. The brake went unused for some time.



Then one day the necessary impetus to move forward on the project occurred. My wife wanted me to hang up curtains. Suddenly, I found this languishing project to be far more interesting.



This picture shows the factory method for adjusting the set back, which does not provide the large radius required for airplane work. Under the slot is an eccentric that can be locked into place.

Here the eccentric (offset hole within a hole ) can be seen after I have cut away the slotted bar.





I made two plates. Each plate has two slots and a ¼ key stock bar added. The key stock will provide a surface to run on latter.



This is the other side of the plate. I have welded a nut on. Also shown is the fixed bracket that will be mounted to the back of the brake. Notice the long bolt has a retaining nut that is pinned to the bolt. It can only rotate.

Here is the final product. The eccentric is no longer used. The plate slides on the ¼ key stock ledge. It can be adjusted in and out with the large pinned bolt. The other bolts in the bracket hold it fixed to the lower portion of the brake. The other bolt that can be seen runs in the slot that can no longer be seen. When the brake is adjusted correctly, it is locked into place.



This view shows the locking bolt below the non-function eccentric. Also, the key stock ledge can be seen providing a sliding support. The bracket has two bolts holding it to the base. The third bolt is used to slide the plate back and forth as required.



It took two days to drill and file out those four slots. I have some nice files that I have hidden from my boys so that they have remained sharp. I hate to use files that have been used as hammers.

Now my brake can be used for aircraft parts.  
p.s. - I still have not hung up those curtains, and I am desperately looking for another airplane related project.



# Editors Notes

Well the last few weeks have certainly been eventful for the Chapter as well as Central Texas. The San Marcos airport played a central role for aerial rescue efforts to help those impacted by the flood with the resultant postponement of the Bluebonnet Fly-in to June 6th. The fly-in turned out to be a success for everyone involved and Redbird generously donated all gas sales proceeds to the flood recovery efforts.

The chapter had a great turnout of volunteers for the event on the 6th and the chapter thanks each and everyone of you. Special thanks goes to John Brecher for loaning his gas grill to the event and for spending some lonesome hours to hand out cards at Lockhart for participants in the Poker run. Also special thanks to Gale and Nathan Timmerman who provided smiling faces and good food at the concessions stand to the pilots looking for a tasty lunch. And lets not forget the Grill Meisters, Guy Bowen and Phillip Steel, who kept the burgers and sausage coming.

Unfortunately, insurance coverage for the Young Eagles flights never materialized in time for the fly-in, but Mike short tallied up a half dozen names for a separate YE program later this summer.

Considering the events of the preceding week, over-



Guy Bowen, Mike Short, Larry New and Jon Sanders all set at the information table



Kermit Krickhahn lives on a street called "Stearman" so....



Representatives from the San Marcos and Burnett wing of the CAF were there.



Hungry folks waiting for the grill to start up after running out of Burgers and Sausage the first time