



## Colorado/Wyoming Chapter Short Wing Piper Club



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### *Meetings and Newsletters*

It's been awhile since we had either a chapter meeting or a newsletter. We decided to stand down on both accounts at the end of last year because there were just too many competing things going on during the Thanksgiving to New Year's holiday season. Our meetings had suffered from poor attendance even during non-holiday times. So, we just stood down.

March 21 is our chance to get together again: this time at Rocky Mountain Metropolitan Airport (a.k.a. Jeffco). Come join us. The restaurant's good and the company will be the same.

Note, in the meeting box to the right, that there are numerous months without a "local" chapter meeting (if you can call a chapter region twice the size of the old west Germany, local).

We'll make you a deal...if you suggest a meeting, we won't ask you to put it together. We'll do it. Would be nice if you show up, howsomeever. We'd also love to have suggestions for programs to have at one or more of our meetings. We'll try to make that task easy, as well, though we can't promise to put a program together if we're not competent to do so. Coordinating a program? We can do that. Send us some ideas.

### **Meetings:**

Mar. 21 Rocky Mountain Metropolitan [KBJC]  
Runway Grill Planning and lunch 11:30 AM  
Apr. 18 CoWySWPC normal meeting date  
Apr. 30- May 1-2-3 Southwest Regional,  
Albuquerque NM Double Eagle II airport (KAEG)  
May. 16 CoWySWPC normal meeting date  
June 20 CoWySWPC normal meeting date  
July 18 CoWySWPC normal meeting date  
Jun. 29 – July 2 SWPC International Conclave,  
Knoxville Tennessee (KDKX Knoxville  
Downtown)  
July 11-12 In connection with the annual Chicken  
Show Coffee and Donuts. 7:00 to 10:00 AM.  
Omelet Feed - **7:30 to 9:30 A.M.** - Bressler Park  
**FLY-IN'S FREE**  
Wayne Nebraska. From what I hear this is a good  
fly-in  
[info@waedi.org](mailto:info@waedi.org)  
July 27 – Aug 2 **EAA AirVenture Oshkosh,**  
**Wisconsin**  
**July 30 & 31, August 1, 2009: Tri-State Antique**  
**Engine & Thresher Show – Bird City**  
Thursday, Friday and Saturday  
This is a wonderful showing of how things were in  
farming. For more information:  
[www.thrashershow.org](http://www.thrashershow.org).  
Aug. 15 Jim's Hanger  
**September 12th & 13th, 2009: McCook Balloon**  
**Fest.**  
Sep. 18-19 PROPOSED: Bartlesville, OK – 52  
Annual Tulsa Regional Fly-In, Contact 1-918-622-  
8400, [www.tulsaflyin.com](http://www.tulsaflyin.com)  
Sep 19 CoWySWPC normal meeting date  
Oct. 17 CoWySWPC normal meeting date  
Nov. 21 CoWySWPC normal meeting date

## Updating the Panel

By Jim Lambert

I started about a year back and was thinking of upgrading my pilot's certificate. I thought it would be nice if I had an Instrument rating, then on to a commercial, then on to a heavy aircraft rating, then on to the space shuttle! In doing so I did some research and found that my panel needed some updating. It was close but no enchilada. So I began doing research on what I would need in regards to instruction, and panel improvement. I fly a PA28-160 and it appears to me that this aircraft would make a good aircraft for what I wanted to do and a perfect trainer. I have flown it on many cross-country flights and know its capabilities very well by now.

Last year we were at the AAA fly-in at Mindin, Nebraska and had planned to fly out the next morning to Pueblo, Colorado and attend a close friend's livestock showing at the Colorado State Fair. Up bright and early and we had a ground fog layer that was close to 400 feet thick and a ceiling of around 500 feet. It would have been nice to cut through this stuff and go on top for the 30 or so miles it took to get out of this and on to our destination. This may have been one of the options I could have had with instruments. But may not have been what I decided to do at the time. I try to stay on the conservative side.

Anyway, on to the decision of upgrading the plane. I contacted several shops and talked to them in regards to this upgrade and located an instructor. My instructor is a close friend and I went over the options and quotes from two shops that I liked and the equipment options. One shop quoted us a full King upgrade of used and new equipment. They also looked into a Garmin GNS430W system for us. The King equipment uses old technology and hasn't been updated for several years. King is a high quality product with excellent service and good capabilities. They gave a quote on King Equipment that was over my budget though, and indicated that a Garmin upgrade would be more.

The second shop went into great detail on the King equipment, GPS, Coms, and Navs. This equipment was going to be some used and new stuff also. Then we sat down and looked at the Garmin GNS430W equipment. This seems to be the newest of the new at this time. It has a good reputation and service record. I could lose most of the stuff that I had and put in just one piece of equipment and have all I needed. The price was less than the equipment I was looking at in King. And would do more with less. I would only need to learn to operate one instrument rather than three. They came in within my budget and I negotiated on some of the extra work I thought I needed. We decided to check all the equipment that would remain, move it to a more convenient location, and install a new GNS 430W.

*Here're two sides of Jim's panel. I know...it isn't a Shortwing panel, but good is good. And, this one is GOOD. Fuel flow meter: on the left. Reduced radio stack: in the center (of course). Chart box and door: on the right.*



After the new equipment was installed and the remaining equipment had been checked, repaired, and moved to the proper location I ended up with a large gaping hole on the right side of the pane. This hole was where we had removed the KT76, KR86, KNS-81 and KX170B. The center location was filled in with the KMA20 with marker, GNS 430W, KX125, and the KT76. For temporary a cover was placed over the vacant part of the pane.

On investigation into options for the gaping hole I found that many Pipers that didn't have radios in this location had a chart box with a door. So I proceeded to get all the information on this option that I could and was able to install a box and door mechanism that matched closely the original option.

Now all should go good. But on some test flights I found that one of the VOR indicators was not as good as we had thought upon testing it. So off it goes to the shop for repair. The radio shop folks were good on helping in this and so it was repaired in record time with a loaner during the time of repair. Now as I proceeded to get started with the trials with an instructor I found that the 30+ year-old clock was not as accurate or dependable as I thought. So I did my research again and got an EI SC-5 Supper Clock to replace the old one. This unit is digital with a battery back up and is connected to the Hobbs switch so it can give run time and trip times. A little complicated for me but I mastered it quickly.

At the annual inspections I like to do some upgrades to my aircraft to keep it in top shape or update some part to a more modern or useful piece of equipment. So I added a JPI FS-450 to the panel. This is a fuel monitoring system that is connected to the GNS-430W and adds to the useful information that is generated by the GPS and the Fuel Monitoring system. The two units communicate back and forth to give an accurate monitoring of fuel used, fuel rate, fuel to next waypoint, and fuel remaining at destination. If all things are entered in both units "correctly", it will adjust for winds aloft. Not quite sure about the exactness of this yet, but am able to get the information compiled and loaded. The learning curve of the GNS-430W along with the FS-450, and the SC-5 clock is steeper than I had expected. So as of this article I can tell time, can find out how much fuel is being used per hour, and follow the little line on the GPS, and a little more.

I also have found some very good books, and study materials to go along with my training. The GPS has been the most intense on the learning curve. I have flown several VFR flights that were planned to the last moment of flight and found out that things worked out but not quite like I had planned. So back to planning and reading the manuals, and going back into the sky for another trial. One thing about this process is that I have gotten a lot of X-wind practice with one landing in 30kts. On this trip I found that landing in 30kts was difficult enough but then trying to stay on the runway and taxi was another learning experience that I had not had in a low wing aircraft before.

I will try and continue this story on to my first real flight using the new GNS 430W on X-Country. And, some of my experiences learning something about IFR.

## *Scud Running*

*Excerpted from AOPA's ePilot on-line report. – Ed.*

Flying home on Thanksgiving weekend in 2005, the VFR-only pilot of a Piper PA-28-140 Cherokee attempted to scud run below a 900-foot ceiling. The relatively flat Nebraska terrain was forgiving, but the 1,000-foot radio tower in his path wasn't. The collision sheared off both wings and killed the pilot and two passengers. It knocked the tower down, as well.

About three hours into the flight, the Cherokee was passing Atlanta, Neb. Weather conditions were deteriorating ahead of an approaching winter storm. The METAR at nearby Brewster Field Airport was reporting 19-knot

winds gusting to 24 knots, 10-mile visibility, sky overcast at 900 feet agl, temperature 1 degree C, dew point -1 degree C, and altimeter 29.32. Witnesses reported random patches of heavy rain.

The story goes on, but the above paragraph tells the story. Please...if you see the weather going down ahead of you, get on the radio. If you get a report like the one above, land. Borrow the courtesy car. Go have dinner. Stay overnight. The pilot who didn't pass three airports in the last 50 miles of his flight.

### *Three Rotation Fixtures and a Few Assorted Comments*

What do you do when your wing doesn't have a fitting on the wingtip to which you can mount a rotation fixture? If you have a super memory, you might remember that I wrote a short article a few months ago about building a rotation fixture for wing recovering and painting. Well, the fixture worked and didn't cost much to build. Trouble is, it worked just fine on a Cessna 140 wing. The fixture should also work for a Colt, as shown on the Stewart Systems DVD on wing covering.

Ralph Gutowski reminded me, thankfully quite gently, that the C-140 wing rotation fixture design wouldn't work for a Tripacer. As is so often the case, Ralph was right. He sent me pictures of the rotation fixture owned by the Club. Ralph was the first user after we bought it, and it worked just fine.

Here's Ralph's wing before he covered it. No, it's not in a rotation fixture, just thought you'd enjoy seeing what aluminum as bright as it came out of the furnace looks like...on a fiftyish year old wing. Has to be one of our all time best pre-cover clean-up jobs. But, I digress. Just had to show you something nice.



Ralph's wings, ready for cover. You should see the finished product at our International convention at Knoxville, Tennessee in June.

The Club loans out the fixture free of charge for four months. Well, it's not quite free...you pay to ship it to the next user. A bargain, in any case. If you need more time, we charge a nominal fee. Fair enough, since there's somebody else waiting to use it

The second picture shows the club's rotation fixture in "action": i.e. attached to Ralph's wing. The rotation fixture comes in two parts: the hoop, which attaches to the wing strut support brackets, and a rotation pedestal that attaches to the spar fittings at the inboard end of the wing. Ralph reports that the Club's fixture really worked well for him.



The Club's rotation fixture. Since Tripacers don't have wingtip attach points, the rotation ring attaches to the strut support fittings. If you're a member, you can use the fixture for four months. Cost? Shipping to the next user.



If you don't want to wait, you can also build a fixture. Tom Anderson, an Ohio member who does so many things for the Club, acquired an eight-foot (2440 mm) hoop and the wheels to rotate it on and built everything else. Looks good and works well? You bet. Hope Tom will write an article showing us how to build it.

I've previously admitted to being a wood butcher, so I designed a rotation fixture using plywood. I don't like it as well as I like Tom's, but if you have a half sheet or so of plywood, some wood scraps, and deck or drywall screws you can build one. I used 1/2 inch (13mm) plywood. We'll see, but I think 3/4 inch (19mm) plywood would be better. The rotation pedestal that attaches to the inboard end of the wing at the spar fittings came from the C-140 fixture I wrote about earlier. Told you that scrounging and reuse are two key skills handy to Shortwingers, didn't I? The wood hoop should work, but the jury is still out. I'm still cleaning up the wing, and I haven't put it in the rotation fixture yet. Assuming that my wood fixture works (it's neither rocket science, nor elegant), I'll write up plans in a future issue of the News. If you want details sooner, email me at [Headwinds@msn.com](mailto:Headwinds@msn.com).

Tom Anderson's rotation fixture. The ring rotates on wheels in the base. The wheels are lawn mower tire rims (or a similar wheel rim).



Here's the "wood butcher's" wing rotation fixture. Six foot diameter, since our wing chord is five feet. Rocky Mountain foothills in the far background. And yes, that's my yellow lab, Kate.

Speaking of wings, expect differences between the port and starboard wings. My port wing was dirty and had rust that I needed to sand blast and prime. The fabric was painted with dope. The dope had dried out and had become brittle. When the hail (during our Burlington, Colorado Southwest Regional Fly-in) hit it, there were a lot of holes and chipped ringworm spots. I took the cover off and, as it wrinkled, the dope shattered.

The starboard wing was covered and painted with Poly-Fiber products and after about 13 years, the glue was still flexible. Further, it was DIFFICULT to pull the glued fabric off the wing structure.

Hail went through the Poly-Fiber fabric in several places. But, if the hail didn't make a hole, it bounced off, leaving no sign that the paint had been hit. The dope surface had been painted four years earlier, but the airplane has been hangared, so I think that most of the difference was in the finish products, not solar exposure.

Doug and Dan Stewart report that samples of their fabric finishing system have been mashed up into fabric "snowballs" many times, with no noticeable effects, for about 5 years at air shows like Oshkosh and Sun 'n Fun, where the Stewarts demonstrate and sell their products.

We have some really good fabric recovering systems available to us. And, there are still many among us who think that doped systems are still the way to go. I wouldn't argue with them. My opinion, howsomever, is that while doped finishing systems work, they're like Mr. Edison's incandescent light bulb. It's time to move on.



When I took the dope-painted fabric off the left wing, the paint shattered. Many of our members swear by dope finishes, and that's fine. I don't. The dope finish dries out and becomes brittle. Some say that rejuvenation liquids can be used to soften and flow the finish back out. I found that rejuvenation didn't work very well. My opinion: rejuvenation ain't the key to the fountain of youth.

### *Avgas Prices Have Come Down*

Pres. Jim Lambert reports that avgas at Platte Valley is \$2.79/gallon: quite a drop from about \$5 at Front Range a few months ago. [Note: in talking to Jim Lambert today, March 19, the price may be \$2.59/gallon. In either case, that's quite a price drop.]

### *This from The Denver Post*

“Rep. Cory Gardner was astounded when 40 people showed up at his town meeting in Cope (Colorado), population 285. Then he got a copy of the South Y-W Star, which serves Washington and Yuma counties.

The church-bulletin newspaper ran a three-quarter front-page announcement about the Yuma republican's visit. It's so big it looks like an ad.”

*So, why is this, from the Denver Post, important to any of us? It's First-Lady Donna Lambert's hometown, that's why....*