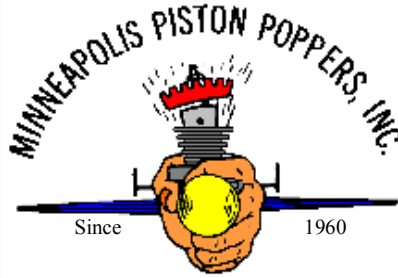


# Prop



# Wash

May 2016

## Prop Wash is a publication of the Piston Poppers Inc., an AMA U-control club

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Any articles for the newsletter are greatly appreciated and will be published as soon as possible. Send to

[seanemery2@mac.com](mailto:seanemery2@mac.com)

Club web address is [www.pistonpoppers.com](http://www.pistonpoppers.com)

## April Meeting

**Old Business:** Tom Sontag said that with the help of Bob Cheney's daughter, he's been able to make progress on the club web site. It should be up and running in a month or two. The Iowa contest is on June 3-4 and the D.A.D. weekend is on June 4-5. Apparently no kids showed up for the Westwood school building session on the 16<sup>th</sup>. Keith, Rachael and maybe a few kids will be at Tom's home at 1pm on the 30th for the building session.

**New Business:** Tony has talked to the school and we have an agreement to use the site for our flying just like last year. Because of some construction, we may be further east from our area than last year. We can start using the school field after school ends on June 15<sup>th</sup> and we have the use of it through the end of September. The days are Wednesdays 4-9 and Saturday and Sunday 8am to 9pm, just like last year. The school would like a mid-summer meeting with us in case there are any issues to resolve.

**Show and Tell:** Jeff Lange showed us his Williamson Flying Flounder from plans in a model magazine in '65. It's powered by an OS .25. He also showed a sport/combat wing he's been working on, for a .15. Tom Sontag showed his Ryan PT-22 Recruit, powered with a FP .40. It uses a Twister

wing and it's the largest plane he's built so far. Mike Pratt showed his plans for the P-Force XL, it's electric powered but it can be converted to glow power too.

Jim Gevay

## SHOW AND TELL

Our show and tell at our meeting night brought out some great stuff. Mike Pratt made an appearance and brought along a set of plans for a larger Primary Force for electric power. He then provided us with the way this design is coming about. It will be nice to see the completed plane.

Another new plane to grace our tables was the Flounder by Jeff Lange though Jim Gevay gave it a better nick name as he called it the Green Pickle. Jeff also had with him a 15 powered combat style plane he has been perfecting over the last couple of years. He brought this with him to get some different thoughts on ways to complete the strengthening of the motor crutch.

Just another reason for being involved with a model club different builders with different ways of doing things and the sharing of ideas. This leads us to Tom Sontag and his creation.

Tom (*aka the "Rookie"*) decided to take a Twister wing kit and with a little kit bashing has produced his rendition of a Ryan PT-22 Recruit. Tom is very proud of this airplane and should be; as it is coming along great. Tom mentioned to us that this is his first big plane he has built and gave credit to all of the suggestions and tips we gave him.

Another person progressing and having success, because of the Piston Poppers. We all can take pride in their accomplishments.

Bob Cheney



## New Piston Poppers Website

Check it out. Thanks to Tom and Carey.

<http://www.pistonpoppers.com>

## NORM'S DESIGN PAGE

Well, you haven't seen that for a while, and I won't bother with all my excuses; most of you are well aware of them anyway.

I want to begin by saying how much I've enjoyed all the contributions to Propwash. Since I can't seem to make it to most meetings, I feel well informed by the newsletter. I've seen some great planes, and read some interesting (or at least entertaining) material. Thanks to all who've enriched Propwash, and to Sean for encouraging submissions and assembling the material – in two formats no less.

So, now on to my contribution for this month:

Because I don't fly very much, my engines are always gunky, my fuel is old, and I'm pitifully out of practice. Combine these, and when I find myself with a plane overhead, a dead engine, and the inability to run 60 feet in the 3 seconds it takes for that plane to meet the ground, I also find myself with a broken airplane.

I build my models really strong, so usually the damage is minimal. I've nosed right in, with as little damage as a broken prop and a muddy spinner. However, sometimes (usually with a profile model) the fuselage breaks right in half. Then the plane sits in my workshop for a year or more until I can get around to fixing it. I consider myself pretty good at repair work since I've had plenty of practice, and that brings us to my topic.

### FIXING A BROKEN PLANE

I know that most members of the club have had their fair share of repair work as well, but there may be one or two who could benefit from my experience. I will address only the mending of a two-piece profile fuselage.

I have two approaches to sticking planks of wood together, which is basically what you have to do in this scenario. I suppose "biscuits" could be used if you had the cutter and all that, but I don't, so it's either dowel rods down the middle, or it's splines

inlaid to the outside. If you're really modern, you could also epoxy a nice layer of carbon fiber mat to each side of the fuselage at the break, however, it won't be flush, so it will always show.

If your break is kind of flat where the balsa is sheared, you might be able to drill a couple of holes (slightly sloppily i.e.– oversized) into each side of the break, then glop a bunch of yellow glue or epoxy over everything, jamb the halves together, wipe off the excess glue, and clamp in whatever way possible. Dowels should be inserted in at least two places that make sense structurally, and, of course, you need to align the two parts very carefully. The slightly loose holes permit some adjustment, and the glue should get around to make a decent bond.

If you've just snapped off the tail (often the case) you can probably get away with a lot of yellow (aliphatic resin) glue just by itself, and the repair will likely be stronger than the original balsa. I recommend yellow (water based) glue, because it soaks into the grain of the balsa, or most other woods, and spreads the adhesion further along the stressed area.

Dowels can help for wing repairs too, if you can get into a thick leading edge, etc. However, for profile repairs, I prefer the spline method. Here's why. Most breaks are ragged, and it's difficult to get two holes drilled that actually line up with each other. I have some dowel center-marker plugs that you can stick into the first hole then press the pieces together to mark for the second hole. They're great for planks of wood, but not very helpful when the edges to be glued are like mountain ranges. It's also difficult to align the parts properly unless the dowel holes are perfect. With the spline method of reinforcement you can eliminate most of those problems.

Your first goal is to stick the two parts together with perfect alignment and a super tight joint. I just slop on a bunch of yellow glue, then use a stiff glue brush to spread it to every single surface. You can coat both sides of the break to really ensure coverage, but work fast. Then stick the halves together and push them FIRMLY, trying to squeeze

out as much glue as possible. Epoxy doesn't squeeze out as readily as yellow glue, so that's another reason I prefer it. Yellow glue will make a stronger, lighter, and tighter joint (in my opinion) it's also cheaper!

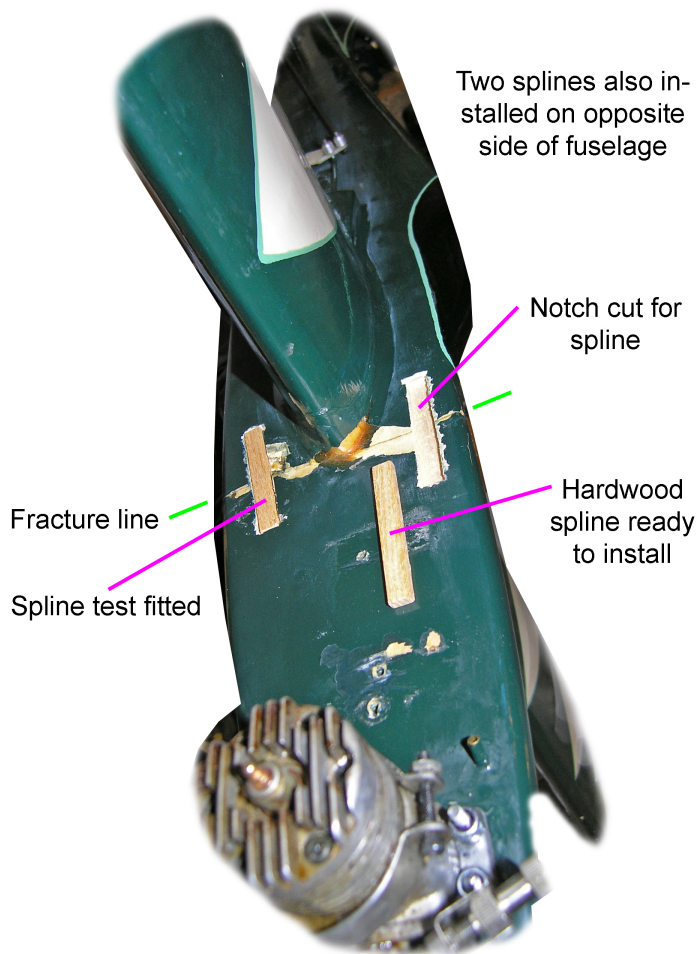
Once you've got your parts together, and the extra glue cleaned up, find some way to clamp or hold everything in place until it's fully cured. Remember, the water-based glues have to evaporate their water (volatile) in order for the polymeric chains to lock together and make the bond. Since some of the drying must take place deep within the wood, you've got to give it plenty of time. The dope film you have on the outside of the repair resists moisture moving out from within. Wait at least 24 hours.

It's actually possible that a great glue job on a really craggy break might be adequate, but I wouldn't trust it, especially if the plywood doublers were sheared. On profile planes, because the piston is vibrating the "weak way" across the plank of the fuselage, there is a lot of force working against any repair.

If you look at my photo, you can see how a spline system looks. Once the initial glue job is set, you can then fuss with installing splines and not have to worry about aligning anything as far as the airframe is concerned.

I begin by cutting splines from hardwood. Making them all identical makes life simpler. Then I use one of the splines to scribe lines over the repair seam, locating each where it will do the most good structurally. For example, try to locate the splines (or dowels for that matter) near the top and bottom of the profile fuselage where they will have the greatest structural leverage to resist future stresses. You also wouldn't want to locate a spine right where you need to re-drill a hole for mounting landing gear, etc., since it would substantially weaken the tiny spline. Once I've scribed the spline outlines, I use a moto-tool with the tiniest saw blade and cut the notches. On the repair shown, the thickness of my splines was the same as the depth the saw cut with its shank running against the surface of the fuselage – kind of like a router.





## KIDS DAY

The kids building day got off to a prompt start at 10:00 AM with five kids taking part. Tony and Keith were the instructors with Tom and me helping out where ever needed.

Meet the builders Edwardo 15, Milton 13, Leila 9 along with little Rachel just 5 days before she turns a whole 9 years old. Later during the building our 6<sup>th</sup> young lady appeared Veronica (*hope I got the names right*). Along with the Raven builders Mason was there with mother doing some work on his plane and picking up paint for finishing.

For the most part there was little distraction and the building progressed rapidly with mothers and dads taking an active part. As you can see in the pictures five of the six planes were ready for the next step by 3:00 PM. Each builder went home with paint and instructions on finishing.

Next up will be final assembly and motor starting. This step will get scheduled in the next couple of weeks.



Once the notches are cut and splines tested for a nice tight fit, clean off all the sawdust, etc., and simply glue them in place using PLENTY of yellow glue. I used enough glue to fill every little crack flush with the fuselage surface, so I did one side at a time allowing the glue to set-up rather than run out. Next, clean up all the excess glue that gets squeezed out, and finally, clamp the spines and allow everything a day to dry.

When fully dry, you can sand down the spines, fill as necessary, and dope, cover with tissue, or whatever other finishing process you like.

I very much doubt this repair will ever break again, though the plane will likely break somewhere else. The splines and glue do add a tiny bit of weight, but probably no more than dowel rods or any other kind of "doubler" method.

Hope this helps next time you leave the circle with more pieces than you brought.

Norman Andersen



I think this was a very good thing to do and some special people need to be recognized and thanked. Tom Sontag for opening up his house and arranging the builders, Keith for the time and donations of Paint, glues, tools and knowledge. Also the support of the club to make this work.

Bob Cheney

P.S. I have almost forgotten to thank the most important person, Tom's wife Cindy. She was the one that had to put up with the mess we made. Thank You Cindy Sontag.



## Tom and Bob out to Fly

Weather was perfect and we put in about 12 flights.

Bob flew the Tudor. I flew the Super Twister. Ted flew the Junior Ringmaster.

We put up the airplane from Boise and the Sportwing for the first time. That Pat Johnston airplane is nimble and powerful!

The Sportwing looked cool and it's 1955 vintage OS Max-1 was loud.



### Videos:

Couple of the PPs trying to get in some practice for Polk City.

<https://youtu.be/TCi7Y3ne2Zk>

### First Flight of the deBolt Sportwing

Let's get two things out of the way immediately. First thing is that the deBolt Sportwing (1949) is a very groovy, peculiar looking little airplane. It is short and stubby with a giant vertical stabilizer. In the air, the forward swept wing glides through the air like a bat with a giant forehead, a 1955 vintage O.S. 35 Max-I forehead, that is.

Second thing is the O.S. Max-I loudly punctuates why people use mufflers. With the giant Kavan

muffler strapped with a hose clamp to the combat engine, she looks like a Star Wars fighter with a giant bazooka on her right shoulder. Since Tom was a chicken, Bob took her up for the first time to determine flight characteristics. We replaced the plastic spinner with an aluminum one and removed the shiny nose of the muffler so the prop would clear the muffler, then fired her up. The motor started and ran beautifully.

Flying guest, Ted, went deaf and requested ear muffs before flight #2.

With plenty of up flapivator, the Sportwing rose smoothly into the air. Bob found the Sportwing to fly well in straight and level flight. Line pull was adequate and comfortable with 50' lines. The thin wing stalled easily and Tom's giant muffler and the heavy aluminum spinner made her quite nose heavy.

Bob warned Tom (the Dork Master), that if he tried any loops, to do them in a very large circumference. It was a good warning to the Rookie for the bird's second flight, a warning he thankfully listened to.

Tom did some wing overs and waves, and experienced the special "thrill" of watching the airplane slowly slide back to level flight after a steep dive. Yikes!

True to the advertisement on the box (published in a previous Prop Wash), the Sportwing flew very well. She glided smoothly to a landing, then immediately flipped onto its back, separating fin from fuse. It was minor damage considering two otherwise excellent flights.

Tom got a huge kick out of seeing her fly. After three long years of pampering in the micro hangar, recovering the wing, repainting the fuselage, implementing Dale's perfect idea of using a split die to clean the threats of the prop shaft, and finally the painting of trim, the deBolt DMECO Sportwing was in the air and looking good.

By Tom Sontag

## CONTESTS:

### Wisconsin State Control Line Championships

With the demise of the SIG contest and the cessation of the Brodak contest after this year, the Circle Masters will be continuing to increase the scope of our contest in the future. We have added more official and unofficial events, in an effort to provide an option to take the place of those events that are being lost. We offer two flat, paved circles for Scale and PA events, grass circles for Combat events and clean facilities at a large local High School in Mukwonago, Wisconsin.

During these times when interest and participation in Control Line are waning, here's an opportunity to help us grow our yearly event, and provide an opportunity for competition, comradery and plain old FUN. Please make the trip to the beautiful rolling green hills of Wisconsin on June 5th, 2016.

Thanks for supporting PAMPA!!

Mike Strand  
PAMPA Secretary/Treasurer  
N2 W31920 Twin Oaks Drive Delafield,  
WI 53018  
262-352-0645  
[pampamembership@gartekinc.com](mailto:pampamembership@gartekinc.com)



**WISCONSIN STATE CONTROL LINE CHAMPIONSHIPS**  
**June 5TH, 2016**

**Presented by the Circle Masters Flying Club**

**CONTEST DIRECTOR: PETER MICK 262 377-6137 pmick82541@aol.com**  
**WHERE: Mukwonago High School, Mukwonago, WI**

- ALL PAMPA CLASSES WILL BE FLOWN ON PAVEMENT
  - SCALE JUDGING WILL BEGIN AT 8:30 am. OFFICIAL FLIGHTS WILL BEGIN AT 9am. Static judging will begin at 8:30 am.
- Please try to register before then.

**OFFICIAL EVENTS**

All PAMPA stunt classes, Combined Old Time, Classic and Classic 30 event, Sport Scale, Profile Scale, 75 MPH Combat (4 rounds).

**UNOFFICIAL EVENTS**

Half A Scale using Brodak fly-in rules available on the Brodak Fly-in web site (Mufflers are not required) and 1/2 A Stunt (Two classes, Beginner and Expert. Standard PAMPA patterns will be used).  
\*\*New for 2016 – Profile Stunt (Expert, Advanced and Beginner) and 1/2 A Combat

A PRACTICE CIRCLE FOR PAMPA STUNT WILL OPEN AT 8 AM.

OFFICIAL FLIGHTS WILL BEGIN AT 9 AM.

MUFFLERS FOR STUNT AND SCALE (OTHER THAN HALF A) ARE REQUIRED. THE MUFFLERS MUST BE STOCK, TONGUE OR AFTER MARKET MUFFLERS

Registration begins at 8 am.

Events: All Scale Classes

Registration fees: \$10.00. No additional charge for second or third individual entries.

Events: All PAMPA Stunt Classes

Registration fees: \$10.00. No additional charge for second or third individual entries.

Events: 75MPH Combat

Registration fees: \$10.00.

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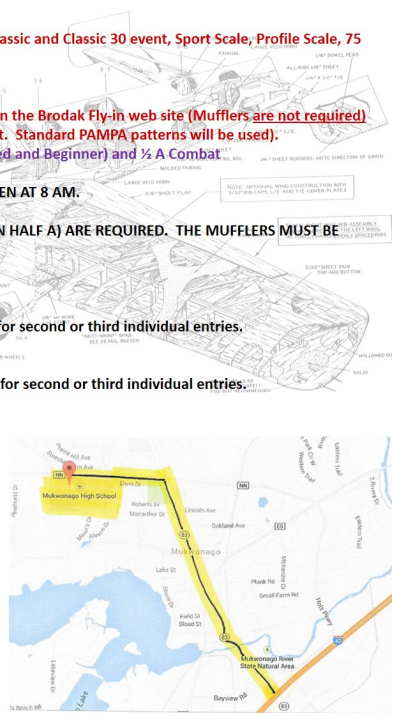
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Events: 75MPH Combat

Registration fees: \$10.00.

Events: 75MPH Combat

Registration fees: \$10.00.



HWY I-43 to WI State HWY 83  
North 2 miles to County HWY NN  
West 1/2 mile to Mukwonago High School

Creek State Park. The site offers on-site rest rooms, picnic areas, fishing and close in parking. Five minutes from the town of Polk City. We thank you all for your past and future support.

NOTES: Registration closes at 10:30 on Saturday and 9:00 on Sunday. Late entry will be accommodated as best we can, depending on the event. We strongly urge you to pre-register, by mail or e-mail. See the registration form on the back of this flyer for fees. If you pre-register, we will pre-check your AMA and have your paperwork already filled out when you arrive. Use e-mail and PayPal!

Contact:  
CD: or  
Bob Baldus Mike Anderson  
6719 Colby 402 2nd Ave  
Des Moines, IA 50311 Madrid, IA 50156  
515-255-8025 or 515-240-1196 515-460-2562  
bstudeman@aol.com mikeainia@windstream.net

Special Rules and deviations:  
Spectra/Dyneema (GSUMP) lines allowed in Non-Rulebook events. See Safety Code & C/L General for size and use guidelines.

Stunt Notes: No Appearance points in any class. Profile – no engine displacement limit. 10 point no-flap bonus.

Classic will use Pattern Points. Old-Time will keep the 10 point 'non-flapped' bonus. Ringmaster: Profile versions only (42" span or smaller) – Old Time Pattern {Questions? - Ask in advance}

Fargo Special Slow Rat: Any plane/engine, 60' lines, 10 minute flight 'window', 2 pit stops required,

Score is total air time (during 10 minute window) {Speed doesn't matter, it's a pit stop contest}

Raffle  
Preregister by email/paypal and we can check AMA and fill out your paperwork for you.  
Contact Mike to pre-register.

## Mid Iowa Control Liners

19th Annual MICL "Fred Miller Tribute" Stunt Contest

June 4th – 5th, 2016

Big Creek State Park -- Brett Smith Memorial C/L Site

Polk City, Iowa AMA Sanctioned – AA

Saturday

Aerobatics: 9:00 AM – finished

Profile (BEG/INT), (ADV/EXP) Combat – 75 mph

Classic(JSO) Fargo Special Slow Rat "Race"

Old Time (JSO)

1/2 A (JSO) – Full Pattern

Sunday, May 4th

Aerobatics: 8:00 AM– finished Navy Carrier

Combat - 1/2A

PAMPA Classes (Beg, Int, Adv, Exp) Class 1-2

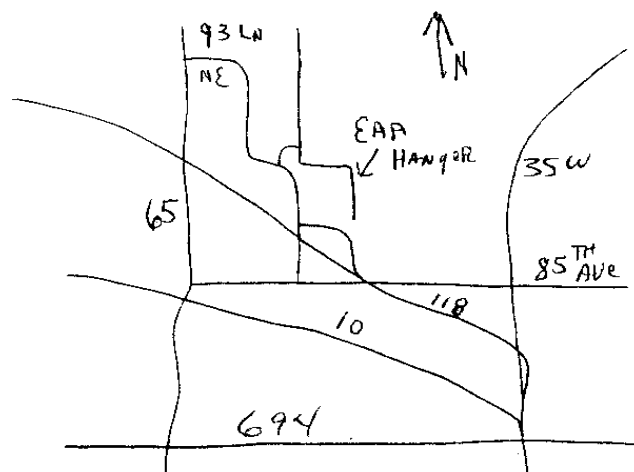
Basic Flight (Beginners) Profile

Profile Ringmaster Stunt .15 Profile

(using Old Time Pattern) NCS Sport

Site is Brett Smith Memorial U-Control site in Big





## Hey Everybody

Why not submit an article, a paragraph, a photo, a blurb, a report, a story, an account, a review to the Prop Wash here.

Sure would make this newsletter a lot more interesting.

### MEETING NOTICE: May 26 – Anoka County

Airport at 7:30 PM

The Piston Poppers Club meetings are held on the last Thursday of each month at the Anoka Co. Airport in Blaine, MN. Enter the airport road from the automatic gates on the West side, turn right and go south past the airport beacon to the 2

hangar. It's the Blue hangar between Thunderbolt Aviation and the Golden Wings Museum, next to the road. Meetings start at 7:30 PM. Visitors are always welcome.