

FARM Newsletter

AMA Charter 1654

November 2017

FIELD MARSHALL'S CORNER

Ernie Padgette



Well, the end of the flying season is just around the corner for those of us who prefer not to fly when we have to break icicles off the plane before attempting to navigate snow mounds and ice on the runway. At least we don't have to worry about dropping the transmitter from numbed hands. Simply getting the transmitter out of hands frozen in place is sometimes a chore; not to mention running noses (wipe, fly; repeat), watering eyes (wipe, fly; repeat) slippery grass and wind that cuts like a knife. Hmmm.... Sounds like I've been there a time or two, doesn't it?

As most of you know, I am a great student of History. Simply learning about the past enables us to better guide the present into the future. And to avoid well meaning, but failed, social experiments that have been tried from cave man days to the present, all with disastrous results. One thing I've learned is the explanation of the rapid, perhaps astounding, advance of the Human race (the ONLY

"race", BTW, is the "Human" race. There are more than one specie of the Human race, of course; but we are ALL the same race). That explanation is simply communication; the ability to write down important facts and pass that knowledge to the next generation; so each generation is saved from performing the same time consuming, arduous and occasionally deadly process as previous generations. And each generation can build upon knowledge gained previously; advancing, rather than maintaining, the Human condition. The fly in the ointment is that the written word does a pretty good job of imparting knowledge; but not so good a job of teaching skills. That usually requires an instructor.

Within the FARM Club, we are blessed with a few individuals who instruct new pilots. Bill McMullen taught me to fly and today new instructors or trainers have taken his place. And, we have a lot of very knowledgeable individuals who are always happy to share information; although you sometimes have to choose from several conflicting opinions. What we don't have is a formal system of teaching, and the teachers to manage the system. Or a written record of problems and their solutions to guide the next generation of flyers. My "tips & tricks" column is an attempt to record those nuggets of wisdom as they are shared with me, but sometimes a bit more is needed. Occasionally, I come across a problem and everyone acknowledges the problem; and most have figured out some sort of "work around" to avoid the worst aspects of the problem; but no one has really worked out an easy and dependable fix. And I have recently come across just such a problem.

For some time, I have struggled with the set screws used in the various wheel collars most of us seem to use. The problem seems to be inferior metal used in the set screws themselves. When the set screw is tightened down securely, the set screw seems to be deformed. Removing it to readjust the wheel position is almost impossible. And, the set screws can't be counted on to actually hold the collar, and hence the wheel, in position. There are various workarounds employed; filing or grinding a flat on the axle, Lock Tight on the set screw, etc.; but no real "fix" seems to be in the offing.

I recently came into possession of a partly assembled Extra 300 ARF which used wheel collars. The previous owner had tightened down the set screws on the wheel collars properly. That means tight. I decided to change to larger wheels, to deal with grass takeoffs. I figured it would be a five minute job, right? Simply loosen two set screws, switch the wheels, retighten the set screws and "Bob's your uncle". And then the problems began.

When I tried to loosen the set screws, the Allen wrench (also called a hex key, by the way) stripped out, of course. I tried three different Allen wrenches, all in good shape, and none of them could loosen the set screws. So, I grabbed my recently purchased set of "intended for use on metal" drill bits and tried to drill out the set screw. Guess what? Despite being sold as suitable for drilling metal, the drill bit was unable to drill through the set screw. So now I was dealing with poor quality set screws and poor quality drill bits. So, I jumped in the van and ran down to the local hardware store and explained to the nice gentleman there that I needed some very good, high quality drill bits for use on metal. He sold me a handful of individually packaged Carbide drill bits for a decent price; around \$20.00 for four sizes. I got back home and again started back into drilling out the set screws. Guess what? Carbide drill bits aren't what they used to be either.

By this time, I was starting to feel a bit frustrated. I knew this wasn't supposed to be that difficult. I finally decided that if the set screws weren't up to par, they probably weren't gripping the axles very well either. So, I grabbed a good set of pliers and simply ripped the wheel collars loose. It wasn't even very hard to pull them loose. Problem solved. Luckily I had an ample supply of wheel collars and set screws on hand. Since I already knew the set screws were crap and not to be trusted, I went ahead and used my Dremel tool to grind flats on the axles and installed new wheel collars. And, I'm guessing here, I probably missed lining up one of the set screws with the flat I had ground on the axle. My bad.

The next day, I put my new (only two shake down flights with the old wheels and wheel pants) plane into the air. A nice, easy takeoff, gentle climb out, slight trim adjustment on the elevator and she was flying nicely and tracking straight. I started working her out, doing a few gentle (okay; maybe not so gentle; maybe a little snappy, in fact) rolls and nice big (maybe not so big) loops. She was flying well. As I made a low pass over the runway, I suddenly thought to myself "That's funny, self. I could have sworn I had two main landing gear wheels the last time I made a pass". Yep, one of the main landing gear wheels had fallen off. Dang it! No sense in delaying the inevitable. I set up for landing, as slowly as I dared. As soon as the one remaining wheel touched ground, I threw full right aileron

into her to try to keep the wheel less side of the gear off the ground. And it worked!! For about a second. As the plane slowed, all the aileron in the world didn't help. The landing gear dug in and the landing gear and fuselage parted company. And then the plane ran over the landing gear. And ripped out some monocoat in the left wing. And a couple of ribs. And a piece of monocoat in the bottom of the fuselage. And wrinkled some monocoat at the rear of the fuselage. And hurt my all too tender feelings really bad.

Okay; lessons learned. Or maybe lessons relearned. (1) Be careful assembling the bits and pieces. (2) Don't EVER use parts you already know are inferior to start with. (3) Don't try to work around a problem. If the problem is the set screws, fix that problem. And, (4) Be careful assembling the bits and pieces.

A few days of thought and effort have taught me this: (1) The set screws in question are 6-32 x 1/8. Replacing those set screws with 6-32 x 3/16 set screws helps a little. The longer set screws give the Allen wrench a slightly longer bearing surface and the set screws are a bit less apt to strip out. Not good, but better. Using 6-32 x 1/4 set screws would probably be only a bit better. I now have some stainless steel 6-32 x 3/16 (supposedly) high quality set screws, and some hardened steel hex keys, on order. If they work as advertised, the problem will be solved and I'll order a larger quantity. About enough to last me several lifetimes. And; (2) The set screws are, as I mentioned, 6-32 x 1/8. A 6-32 socket head bolt will replace the set screw nicely. And the socket head bolt won't strip out, even if you wrench down on it solidly. Yes, it's a work around; but it's a work around that will work until I find some decent set screws. This is one problem that I'm going to fix, and fix completely. More to follow.

Ernie Padgette



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EDITOR'S NOTES – Upcoming Events

Jeff Killen

- 1. Joint CMB and FARM Christmas Party, at the Warrenton Community Center, 6:30 PM, 12/2/2017**
- 2. Vote for 2018 Board of Directors by 12/2/2017. Vote by email, snail mail, or vote at the Christmas party.**

SECRETARY'S REPORT

Jeff Killen

The October 2017 FARM Club meeting at the Warrenton Community Center was called to order at 7:01 pm by Treasurer Nic Burhans.

- Four club members were present: Duane Beck, Nic Burhans, Keith Crabill, and Ernie Padgette.
- President - not able to make the meeting.
- Vice President - Sick.
- Secretary - not able to make the meeting.
- Treasurer:
 - We have 96 members.
 - 12 of the Club's members have not completed their solo check outs.
- As of the meeting the Club has \$1750.65 in the bank.
- We are about to start membership renewals for 2018.
- Would like the membership to renew before the end of the year.
 - If everyone renews before the end of the year we will be about \$500.00 ahead of where we started 2017.
 - The FARM Club's November meeting will be held on Tuesday, 21 November 2017, at the Warrenton Community Center. NOTE: This is one week earlier than normal to allow the Secretary to get election ballots out to the membership.
 - The dates for the 2018 FARM Float Fly events have been coordinated with Lake Ritchie and are Saturday, 23 June 2018, and Saturday, 22 September 2018.
- Safety - Keith Crabill: Nothing to report.
- The 2017 Culpeper Airfest was discussed by Nic and Ernie.
- The 2017 Crocket Park Children's Festival was discussed by Duane.
 - Duane and his daughter did the event.
 - Made many flights over the park to draw attention to the buddy box area.
 - Only buddy boxed 2 children and 1 adult.

- The poor turnout and low prices at the NVRC fall auction were discussed.
- The floor was opened for nominations for the seven positions on the 2018 FARM Club Board of Directors.
 - Nominations received: **Nic Burhans, Keith Crabill, Jeff Killen, Charlie Koustenis, Ernie Padgette, Dave Rothbart, Bill Towne.**
 - Nominations will remain open through the 21 November 2017 Club meeting. **Joe Beaudin** added later.
- No 50/50 was held.
- Show and tell:
 - Duane Beck showed his new vacuum pump setup that he constructed from a kit.
 - The setup has two vacuum cylinders that maintain the vacuum level without the pump having to work full time after the desired pressure is reached.
 - Duane noted that once he put a muffler on the vacuum pump the noise level became "acceptable" [wife approved] for in-home, overnight, use.
- The meeting was adjourned at 7:40 pm.

TIPS & TRICKS

Ernie Padgette

If you're into foam airplanes, and who isn't these days, pay close attention. No doubt about it; the detailing and realism of an off the shelf foam plane often looks better than we could ever achieve with traditional stick and monokote planes. Of course, foam comes with a couple of drawbacks as well. Sort of like when you were dating. Nothing is ever as perfect as it first seems; and the better they look, the higher the price and more gently they must be handled. Hangar rash seems to be one drawback. Somehow, foam planes seem to all be a bit weathered and tattered around the edges after a while. One other problem seems to "alligator skin". That's with the planes, not the dates. Hopefully. We've all seen it. After a while the texture of a foam plane changes. Ever wonder why?

The problem seems to arise when a foam plane is left in the hot sun for a while. The foam cells expand when the sun bakes on them for a while; and the cells never again shrink to their former selves. Again, sort of like dating. The answer is to protect the plane, as much as is possible, from the sun's rays. A simple white sheet of some sort, perhaps weighted around the edges, will do a better job than you might expect. Charlie made some temperature readings on a dark plane sitting in the sun a while back; both before and after covering the plane with a white sheet. The difference, if I recall correctly, was dramatic; around 40 degrees or so on a hot, sunny day.

Many of us seem to permanently, or semi-permanently, mark the CG on our planes. A thin strip of stick-on Velcro, cut from the bulk pieces of Velcro we all seem to use, and applied to the underside of the wing, will allow you to feel, and not just see, the CG point. And, it won't be visible to casual observation.

If you have a good tip to make flying easier, pass it on to me, and I'll spread the word. Thanks; Ernie P.

2017 World Championships **Don Szczur**

The F3A World Championships history goes back to 1960. Every two years, the FAI selects a location from around the world to host this event. It brings together the best pilots in the world to compete flying 2 meter pattern planes that weigh no more than 5 kilograms, or 11 Lbs.

Most aircraft are powered by electric but glow powered and even gas powered planes remain in use and competitive. The top two places were awarded to glow powered aircraft. The U.S. team consisted of four pilots: Andrew Jesky, Jason Shulman, AC Glenn and Joseph Szczur, the Junior pilot and reigning Junior World Champion from 2015.

The event was held in Argentina. The flying site was about 5 hours south of Buenos Aires in a small town called Villa Gesell. The opening ceremonies featured helicopter and full scale airshows. There were 27 countries represented, with 65 pilots attending.

The US Team arrived in Argentina on 30 October and practiced for a week. The competition took place from 4 through 11 November. There were then 4 days of preliminaries with each pilot flying one flight per day. The best 3 of 4 scores were used to rank pilots and the top 30 pilots went on to the semi-finals on Thursday. The semi-finals consisted of two flights of the extremely difficult "F-17" pattern sequence. The top 10 finalists were selected by the best two of three scores or the following: average score of top 3 preliminary flights (on score average) and the best "F-17" score, or both F-17 scores if the pilot got better scores than in preliminary scores. All the scores were normalized (with top pilot score of 1000) and TBL was used to throw out biased judging. Judges consisted of 10 total, with one selected by each respective country and/or region from around the world.

The finals took place on 11 November. Due to the high wind an allowance was made to land cross-runway on the left of the judges and spectator area. The finals consisted of the best one of two F-17 flights, and both Unknown sequence flight scores. It was a brand new contest with no scores carrying through from preliminary or semi-finals. So how did the team do? Best in recent history. All four pilots made it to the finals (top 10). Jason Shulman

finished 3rd, Andrew Jesky finished 4th, Joseph finished 8th and AC Glenn finished 9th. Joseph defended his Junior World Champion title for 2017. Christophe Paysant LeRoux, many time world champion finished 2nd this year. Tetsuo Onda from Japan finished first. There is a complete write up and many more pictures on RC Universe (Don Szczur) and the F3A team facebook page posted by Mark Atwood, team manager.

We both want to take this opportunity to thank the FARM club for its support. We spent all our effort since June to prepare for this competition and missed a lot of local events and airshows that we wished we could have attended. We could not have done it without all the support we received. (Pictures from Don follow. Editor)



Junior winners- FARM club member Joseph Szczur 1st place



Joseph and Onda with their aircraft after the Finals of the F3A World Championships in Villa Gesell, Argentina

Membership Renewal form for 2018.

FARM Club Ballot for 2018 Board of Directors

1. Nic Burhans
2. Keith Crabill
3. Jeff Killen
4. Charlie Koustenis
5. Ernie Padgette
6. Dave Rothbart
7. Bill Towne
8. Joe Beaudin

FARM OFFICERS for 2017
 President. Dave Rothbart 703-327-0476
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F3A World Championships - Flags blowing during opening ceremony. Being spring in Argentina, the climate was cool and windy with rain and fog during the week.

