



The *SENIOR PATTERN ASSOCIATION*

Official S I G (Special Interest Group) of AMA

Dedicated to the Building, Flying and Competition of Vintage Pattern Model Aircraft

SPA NEWSLETTER www.seniorpattern.com JAN-FEB 2019

VINTAGE PATTERN FLYING FOR ALL AGES!

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Pat Ensign -West

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Duane Wilson

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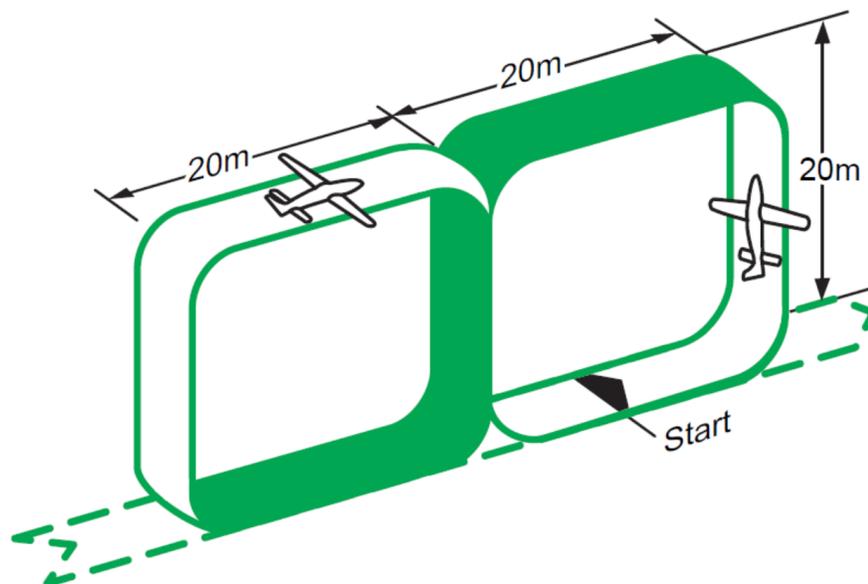
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2019-Year of Experimentation

Make Pattern Great Again



One maneuver at a time



Join our Discussion list from within the webpage or inform any officer and we'll "sign you up". It's like a gigantic Mailing-list, but at NO CHARGE. A service to membership and potentials from SPA.



FROM THE PRESIDENT – Jeff Owens

I started the last column by saying that the temperature was falling. Well, it has really fallen now! That polar vortex, you know. Fortunately, it isn't all that cold here in Florida, but the Midwest is sure getting clobbered. Well, what better to do on a cold (well, cool) evening than write this column!

We had a very successful Board of Directors Meeting in Dalton, Georgia on January 19. Frank Cox and Pat Ensign joined in from Texas via Skype. You can see all the smiling faces (including two on the computer screen) on the opening page of our website. In the following I'll touch on a few of the issues that were discussed.

With the new sequences in place Phil Spelt has been hard at work updating the Competitors Guide. During the season it is not unusual for questions to arise concerning the fine points of various maneuvers. These questions are noted and addressed in the update of the Guide. In addition, the new maneuvers are added along with their descriptions and lists of downgrades. Be aware that much will have changed when the new Guide comes out, so please be sure to review it. And while you are at it, give Phil Spelt a virtual pat on the back for all the work he has done.

A lot of time was spent on the questions of how to generate interest in SPA and how to recruit new members. You can go to the Members Only section to see how we are doing compared to prior years. Admittedly, the membership numbers start out low in the winter as folks remember to renew and generally the membership numbers grow throughout the year. Currently, we have 42 Life Members and 26 Renewals for 2019 for a total membership of 68. Compare this to the 135 that we had a few years back and you can see the problem we face. Jamie Strong has been hard at work drumming up interest in contests and he has arranged a contest in Jacksonville, Florida! Yea – a contest close to home for me. There is a lot of pattern interest in Florida and Jamie is working hard to tap into it. One innovation will be to have an Open Expert class where tuned pipes and retracts can be used. The entrants will be judged along with the SPA Experts – same flight line and same judges, but the trophies will be separated out for the Expert and Open Expert contestants at the end of the contest. This has been tried before with no takers, but Jamie has been pushing hard on some former pattern flyers he knows who still have some of the old equipment, so we shall see who turns up. Dave Phillips (Alabaster) and Scott Anderson (East-West Shootout) are talking of doing the same thing.

Out West, Frank Cox and Pat Ensign are going to try loosening the aircraft requirements at the discretion of the CD. Basically, it is a "fly what you brought" approach with the same engine/motor limitations as we currently use, an 11 pound weight limit, and no pipes or retracts. The idea is to allow more people to try out SPA competition without having to build or purchase a special plane. Experimentation is the name of the game this year. No special rules have been added and the experiments described above are being done at the CD's discretion. After this season we will evaluate how things worked out and perhaps then consider some formal rules proposals.

The 2019 Southeastern Model Show, a.k.a. The Perry Swap Meet, is coming up on March 1-2. We will be at tables K21-23 in the McGill Building where we were last year. Please plan to stop by if you attend this years gathering. Scott Anderson has arranged a booth for us at Toledo again and we have some volunteers who plan to go. Let Scott know if you plan to attend the Toledo Show.

Time to get back to some building. Until next time!.....Cheers, Jeff

Dan Grotzinger Birdy Twin Article

Sometimes Good Things Take Time But Are Worth Waiting For



Dan Grotzinger's Dirty Birdy Twin

was first featured in the JULY-AUG 2017 SPA newsletter as a preview for an article that would appear in "an upcoming issue" of Model Aviation. Remember that was back in mid-2017. Well, guess what? The article is finally



Dan G on the right at the 2015 Masters with Bernie Olson, middle (Bernie had an article in last month's issue), and the editor.



Bruce & Jane Underwood

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“And Away We Go” Into 2019

LINE-UP: The only ones smiling are the Pres and the West guys on Skype



Dalton, GA January 19, 2019....”Take-Off” is complete now.

Your SPA Board of Directors officially launched our new season with the annual meeting here.

Just like the equipment we enjoy in our sport/hobby has advanced, so has our ability to communicate. High tech was certainly evident here as we used three computers and the software app known as SKYPE to bring us all together, East and West in the same room, a nice \$149.00 meeting room reserved and set-up for us by Sec/Tres Keith Watson in the Hilton Garden hotel/motel. The EAST Directors were in that room while the WEST Representative and Vice President were in Texas, in person, but with today’s technology, able to participate in every discussion. Look to the left. pictorial evidence of this innovative “set-up”.

President Jeff opened with a silent prayer of thanks for the safe trip to Dalton. Some had spent the night there in the motel, others of us braved some strong, in some cases, tornado-like winds and constant rain, sometimes in torrents, to drive there. Meanwhile, the West guys Frank and Pat stayed warm and dry at home

The Frank & Pat Show while saving some \$\$\$\$ in the process.
on SKYPE—It Works!



Keith Watson, Sec/Tres reported a beginning balance of \$4232.10 and Pay-Pal balance of \$619.18. "We're in good financial shape, Watson concluded. He said arrangements for the Perry, GA trade show had been completed and he was preparing for the "bonus" payments agreed on for all clubs sponsoring a contest this season to be paid. Heretofore, the financial assistance for the Master's host club only, was provided by the Association.

It's official now, the boundary separating the EAST from the WEST Divisions of SPA is the Mississippi River and includes ALL of Minn. And ALL of LA parts of the WEST.

A motion carried which will provide ONLY a SINGLE High-Point award in the points championships annually and in event of ties among Senior Experts who qualify for the Memorial Trophy.....the annual "fly-off" will include all qualifiers. The West Directors were brought "up-to 'snuff" on the history of the Memorial Trophy.

A West proposal for "fly-what-you-brung" carried. This will allow "sport flyers, AMA pattern pilots" etc. to participate in SPA contests with whatever models they'd like to fly that meet the engine (up to .65 2S, or .95 4S) and weight requirements (up to 11 lbs.). Pat Ensign introduced the motion saying "we need all RC modelers that want to enjoy the joy and fellowship that we do at SPA contests to be allowed to do so, and this will provide, we think, an avenue for them to do that. "We'll do it on an experimental basis in 2019 and report on it's outcome at the next annual meeting". At least two of the SPA East contests this season will be doing the same, maybe more. Jamie Strong said, "several AMA pilots have expressed a desire to fly SPA meets, if only they could relax the stringent model requirements". This will allow any RC modeler to purchase an available ARF or build an original and give our patterns a try in 2019". Just keep the model within the engine and weight requirements. One of the West Directors said "there's several ARF's now available that'll fit this....Hangar-9 has a TYPHOON, Phoenix has an AURORA". Strong referred to an Open/Expert Class perhaps at a contest in Florida and at Clover Creek. Stay tuned for his detailed description. **(See details of the West proposal for rules changes on the next page...editor)**

Pat suggested "any member please look for a list of kits and ARF's that'll be available this season and let us know,; we'll publicize them for we're doing this to solicit new 1st-time flyers in SPA contests this season, and this opening up on the requisites should be the initiative needed to swell the ranks of contestants". Engine and weight limits only!

Phil Spelt is updating the 2019-20 patterns into the competitors Guide as well as some wording corrections and modifications in maneuver descriptions. He's refining some wording as well in the other sections of the Guide. It'll be posted on the website pending his completion.

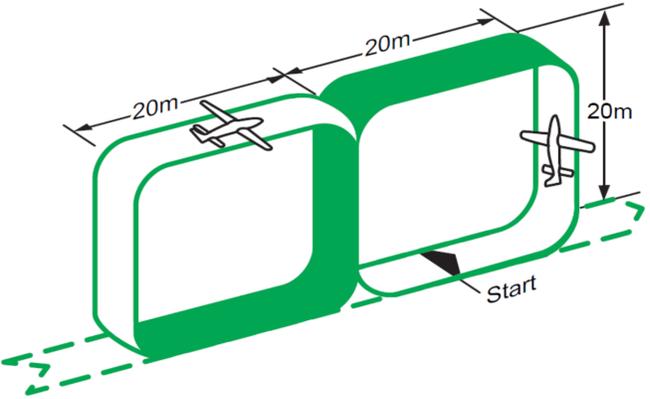
Spelt received many "kudos" for his devotion to this appreciated task.

CD's, this problem of dwindling participation at SPA meets was seriously discussed. The relaxing of model regulations outlined in the previous couple of paragraphs, (which HAS been addressed) needs to be supplemented by adequate contest publicity. Not every RC Modeler constantly checks the SPA newsletter or Model Aviation for contest listings. That's unfortunate. Recall back in the "golden years" how a contest sponsoring club would mail, directly, via U.S. Mail, a flyer defining the date, motels, kind, etc. their upcoming contest was, the name, address etc. of the CD, etc. That has become a thing of the past in recent years perhaps because of the increased postage rate, the availability of the computer, etc. Why not start doing that again? Entry fees have constantly increased to equate to current expenses. This PERSONAL flyer can be directly mailed to modelers YOU know would appreciate receiving a direct invitation to visit your club contest. Jamie, our Special Projects Chair suggested getting names and addresses from the AMA Club Site listing. He said "there must be 17 or 18 AMA sanctioned clubs within 100 miles of Prattville, AL and I'll wager you'll find the same number surrounding your club and they should certainly receive this event mailing". "I'd suggest it 6 weeks to 2 months prior to your event". Let me conclude this topic with an "AMEN" to this suggestion....let's make the current season like the Jackie Gleason intro to his TV show "And AWAYYYYYYYYYYYYYYYYYYYY we go!"

While it's on your mind, this week, call a modeling Buddy, and invite him to "Let's go to the flying field and practice those SPA patterns and fly with that good group this year"!

Thanks to all that made the trip to Dalton, literally and electronically. It was an excellent "launch".

Make Pattern Great Again



One maneuver at a time

Putting politics aside-the shirt with this logo brought by new East rep Scott Anderson was a big hit

The Following Rule Changes Will Be Implemented for the SPA WEST Region for the Upcoming 2019 Season

THIS IS AN EXPERIMENTAL TRIAL.

If Successful, These Rule Changes May Be Adopted for All of SPA as We Seek To Address Long-Standing Problem Issues as SPA Prepares For the Future...By Pat Ensign and Frank Cox

Editorial: Times have changed since Mickey Walker first envisioned SPA back in 1991. SPA has always adapted as we've grown, making rules changes as they became needed and necessary. A couple notable examples were decisions made to allow the use of 4-stroke engines, (to meet noise requirements that threatened our contest sites), and later the BOD allowing electric power of equivalent output as the modeling public embraced the new power plants as they became available. Both of these changes caused major upheavals, contention, and division within SPA to the point where some people left us in protest—the rule changes became more important to them than the joy, fun, and camaraderie simply of getting together and flying. It was difficult and regrettable to lose those friends, but looking back, those seemingly monumental (at the time) changes don't seem all that important to most of us now.

Today we are facing a new type of challenge as the number of model builders continues to diminish as the public increasingly turns to (essentially), disposable, (rather than repairable) ARFs that are readily available from the major modeling suppliers. While we have had access to "legal" ARFs, for various reasons some of these (such as the very popular Dirty Birdy and Phoenix 7 ARFs), have come and gone—they are no longer available. Other legal ARFs sold by German companies, while available and true to the original, are more expensive, while others hardly resemble the models they are named after, or they don't fly well enough in the very competitive upper classes. They also have been extensively modified in order to update and modernize them to expand their appeal to a wider audience of pilots. **The bottom line: there just aren't enough quality ARFs out there for those considering SPA.**

All these factors tend to discourage potential new pilots interested in aerobatics from making the leap to join us, and we are losing more members that we're gaining. Participation in contests is lowering to the point where the host club can't make a profit with ten or less participants. If this trend continues, it will no longer be practical to continue to stage contests for fewer and fewer contestants, [and this comes from some of our most experienced and long-term contest CDs]. **We must face this situation head on**, while trying to do, (not just "band-aid" fixes), but everything we can to attract newcomers. SPA will remain an AMA "Special Interest Group", and we will continue to point pilots to planes from the "legal era" **suggested plane list**, but first we need to get new people coming out.

As an organization, we've wrestled with modifications of planes, the 3% Rule, and so forth for many years. Now SPA West is taking a hard, objective look at the problems we face. They are adopting limited common sense rules changes in their region that will simplify legal requirements for competition. They will try out these new ideas for the 2019 season and report back on how successful they are in increasing our ranks. Our BOD must take a serious look at the results, see what works, and make hard decisions about our future, and whether or not to adopt beneficial changes SPA-wide. It may not be an easy or comfortable decision, but it may be absolutely necessary for our future.

Ultimately we, (both SPA East & West), need to **follow the same rules**. What good are rules if **both divisions within SPA don't follow them?** How strong will we remain as an organization **if we follow different rules?** We finally need to 1) face and deal with this issue and 2) return to simple, meaningful rules that everyone observes.

A summary of the proposals are listed below by SPA West representative Pat Ensign and Vice President Frank Cox. They are trying to preserve the principles of SPA while making limited, practical changes to fit the times we live in. Think about the participation problems we now face and our future if changes aren't made. What other workable alternatives for real solutions are available? Let's keep an open mind, and see how 2019 goes....*Duane Wilson, editor*

The 2019 Experiment: Rule Changes for SPA West...By Pat Ensign & Frank Cox

We in the west continue to be concerned for the existence and growth of the SPA. Contestants are dwindling to the point that it's hard to make a contest that breaks even or makes money for the clubs that host our contests. We had an average of 12 contestants at last year's contests, (the East experience is similar.) Our Seagoville contest that was rained out had only 8 people signed up. At our masters, a record low of 15 fliers showed, and only 8 were local fliers. Thank God for the 7 out-of-towners including the three from the east, or the masters would have lost money. This is unsustainable and something must be done NOW or SPA will cease to exist.

We must get more people interested and willing to participate. We have been looking at and discussing options all year about what to change. We believe we have an obligation to try. We are way too limited on aircraft to choose from, as most of the aircraft on the SPA "Legal list" do not exist any more as kits and the ones that do, most people

West Rule Changes Continued:

Simply do not want to build. Face it, today's society wants instant gratification and is not willing to take the considerable time and effort necessary to build any more, especially folks curious and wanting to try SPA, but not yet committed to spending money on an airplane **dedicated to SPA**. Lots of folks say they'd try SPA if they could "run what they brung".

The whole point of this is not only do we need new people, we need to retain the current people as well, which include more than 50% ARF fliers in the West. **The SPA is not only about the kind of airplanes we fly, it's about the style of flying we do, and the friendship, camaraderie, and skills of our SPA flying buddies. The plane itself isn't the most important factor that draws people to SPA.** Lots of long-time SPA members don't build any more and are quitting because they can't find planes, therefore participation is dwindling. Most of them want ARFs, which are too limited on availability. (Dirty Birdies not available, the Intruders are iffy at best, European ARFs may be considered as too expensive by the time shipping is paid, and Big Stix and ARF Kaos' can't cut the demands of the upper classes. Even if they could, Big Sticks and ARF Kaos' will go to the wayside when the current supply is used up, leaving no other options except the ARFs from Europe. And should we change things for the ARF crowd, we will need to change equally for everyone. We may not be able to go back to SPA "legal" planes and still get the participation we need. That's the harsh reality.

Without any disrespect to Mickey, we in the West have objectively looked at the problems, and have come to the unanimous decision that the "Legal list" must be opened up to include **modern ARFs, existing kits, and scratch built airplanes.** We all want to fly pattern exactly the way it was in the 60s and 70s, but according to present rules we must deal with this "list" that did not exist back then. We actually want to fly in a manner closer in "spirit" to the "Golden Age" of pattern where anything was allowed that met the basic engine rules. That's how it was done then.

We believe the answer to the problem is to go back to the rules AS WRITTEN back then. The rules specified an engine rule and a weight limit. We are going to use just that. We realize some insist on 4-strokes and electrics that didn't exist back then either, (and .60s are hard to find), so we are going with the existing SPA engine rules and the 11 pound weight limit. Again we will have the rules AS WRITTEN in the 70s—an engine size rule and a weight limit.

These changes will allow new fliers to use the common planes people already have in their fleets, such as Ultra Stiks and Great Planes Sportsters. This will apply to ALL CLASSES. Due to differing skill levels among prospective participants, not all people want to start in NOVICE. The idea will be to get more contestants, let them "run what they brung", and once they get hooked on SPA, they will realize on their own that they will need to acquire an "SPA legal" airplane to fit in and be competitive, as they are the "right tool for the job" of SPA flying.

As for pipes and retracts, (which were legal in the 70s), we are going to stick with SPA rules, not only to keep SPA **"simple and affordable"**, but to make it more competitive for the new people willing to try SPA.

Regarding season points, we think **SPA membership should be the only requirement to be eligible for points.** Practically speaking, most new SPA fliers don't know about, or care about points, they just want to fly. I myself flew a season before I knew points even existed, (and that's not the reason I started flying SPA anyway).

This decision is unanimous in the West and is an effort to keep SPA going and hopefully promote needed growth. I am sure some won't like it at first, but we would rather see it this way and have SPA survive than to see it dwindle and eventually fail. We are trying to look at the big picture, for the sake of both East and West. Yes, the R/C scene is changing with the times and SPA is going to have to change as well even though nobody (including the West), is wild about having to do it. For now we will treat this as an experiment for a year to see how it goes. That might be all we need for now. One step at a time. If it does not help, we can try other options.

In a way, I can understand the reactions of those who might not initially support these changes. It is the nature of the human species to resist change, yet when change must happen, humans are the most adaptable species world history has ever seen. That's how we came to be at the top of the food chain and are the only species in earth history to survive on all 7 continents. And when humans adapt, it always ends up being for the better. I am sure that when we work this out, together, SPA will be stronger for it. Change is inevitable, and far better than the only other alternative.

Finally, we all understand Mickey's concept and vision for SPA and understand what SPA is all about. That said, both we and Mickey also understand that as we start our 28th year, times change and it is better to change with the times than let SPA die out. We don't want that, you don't want that, and we don't believe Mickey wants that. Please give us your support on this and we'll see how it goes.

Pat Ensign-West Representative & Frank Cox-Vice President

Summary Of 2019 West Rule Changes (Tentative)

General: Any aircraft that meets both weight and power requirements is allowed.

SPA current rules for weight and engine displacement

1. Weight not to exceed 11 lbs.

2. Engine displacement (.65 2-stroke, .95 4-stroke, 1400 watts electric)

- **Propeller: no more than a 13.5 inch propeller will be allowed on all aircraft.**
- An approved power source must be used. Power sources are listed below and are not subject to change or modification.
- Retractable landing gear are not approved at this time but may be modified at a later date. Flaps may be used. Engines may be mounted in any position. Landing gear may be tri-gear or tail dragger.
- Tuned Pipes: Tuned pipes are not allowed, (see below)
- Gyros: No gyroscopes or other stabilization devices are allowed.
- Points: **SPA membership required** for regional points

Power:

- Both internal combustion (IC) and electric power are permitted in all classes of SPA, except that electrics are not allowed in Antique.
 - For internal combustion engines, a proper muffler must be used, but not tuned pipes.
- Pumps may be used, but no air chambers or over sized carburetors are allowed. No propeller larger than 13.5 inches in diameter may be used on any SPA aircraft.

Internal Combustion (IC) Engines:

Additional specific requirements by event type for Internal Combustion engines are:

(1) Regular SPA Pattern

- (a) Any two-cycle alcohol powered engine up to .65 cubic inches.
- (b) Any four-cycle alcohol powered engine up to .95 cubic inches with no air chamber or supercharging of any kind.
- (c) Any gasoline powered 2-cycle engine up to 15cc/0.91 cu. in.

(2) Antique SPA Pattern

- (a) Any two-cycle engine up to .61 cubic inches.
- (b) Any four-cycle engine up to .72 cubic inches with no air chamber or super charging of any kind.

Electric Power:

The intention of these rules concerning battery voltage and wattage is to produce a verifiable system that has capabilities similar to the internal combustion engines permitted in SPA.

- (1) The highest permissible nominal battery voltage is 22.2V. For lithium polymer batteries, this means a maximum of six (6) cells in series (6S) is permitted.
- (2) There is no battery capacity limitation.
- (3) The original manufacturer's label indicating voltage must be attached to the battery and available for inspection.
- (4) A mechanism for disconnecting the battery power from the electronic speed controller (ESC) must be provided on the exterior of the aircraft. That mechanism must be clearly available, easily operated, and have visually clear states. A simple example of the intention of this rule is a plug that is visible and can be manipulated from the outside of the aircraft. This mechanism is often referred to as an "Arming Device."
- (5) No electrically-powered braking or reverse pitch of the propeller is permitted.
- (6) The maximum power available to the motor is 1400 watts at any time during the flight.
- (7) **Electric power is NOT permitted in Antique classes."**



1st Annual Florida SPA Season Opener



Gateway RC Club Field

3461 Lannie Rd. Jacksonville Florida 32218

Website: <http://gatewayrc.com> [Click here for an interactive Google map of field](#)



My intention for implementing the Unlimited Expert Open Class (with pipes and retracts allowed) is for any and all Florida folks attending the 1st Annual Jacksonville SPA contest to be greeted with open arms. I want them reliving and experiencing pattern flying the way it was in the mid to early 80's. Some of the AMA flyers attending will be flying a plane of that day that they flew in the non-turnaround plane era. I can see this Unlimited Expert class being offered only in the Toon TN and Florida contests. My hopes are that new folks who come to fly (or at least watch) the new class will go back home telling their fellow modelers/club members how fun a time they had.

If we can accomplish that, we should have our foot in the door for new interest and members in a new area of the Southeast. Then, hopefully those flying the Unlimited class may stir the new found Florida flyers to get themselves a true SPA plane and come participate. I will also run the new class at the Prattville SPA contest in case any of the Florida flyers decide to attend because of the good time they had in Jacksonville. **The Unlimited Expert Class will fly and be scored along with our regular Seniors, then separated later at trophy time.**

Another idea to grow attendance is to use the AMA "club finder" and do a search for area clubs within a 50-150 mile radius from the contest site, look up the contact for that club, then send a hard copy (paper), newsletter and contest flyer of the event that's coming in their area. Taking that thought a little farther, we could meet the new contestant and assign a seasoned SPA flyer as a mentor for the entire contest to make the weekend a comfortable experience. If planned well ahead of time, we could even visit a club meeting to speak and explain SPA and what we do.

My ONLY reason for allowing the pipe and retracts is the attempt to grow SPA into Florida. These folks down there did fly their 1976-1980 model planes with pipes and retracts and there are still a lot around. We should offer them OPEN ARMS first exposure to SPA—it just seems to make sense as we attempt a serious effort to expand into Florida,

With limited legal ARFs available, there are folks hanging on the fence when it comes to SPA. We can make it easier for them to try us out. Florida has the majority of our AMA flyers (over 35 active now), and my intentions are to pull a good bit of these guys into our type of flying. Only Florida and Toon, Tn have the kind of AMA pilots we're looking too attract. I would never advocate pipes and retracts for our SPA, it would never get my vote. Like Dave Patrick last season, (who hap-

- Registration begins at 8:00 a.m. with Pilots Meeting at 9:00 a.m.
- Entry fee: \$30 All SPA Classes will be flown. Full rules are available at <http://www.seniorpattern.com/compguide.html>
- **Unlimited Expert** class will be flown utilizing the SPA Expert pattern. Pre-turnaround aircraft with retracts and tuned pipes will be allowed in this class only.
- Calling cards: https://seniorpattern.com/pdf/CallingCards/2019-20CC_Ig.pdf
- Trophies thru 3rd Place in all classes
- 4 rounds on Saturday and 2 rounds on Sunday
- Concessions will be available at the field.
- Camping on-site is allow—no hookups
- Electric and indoor bathrooms available in the pavilion
- Motel info: <http://gatewayrc.com/about/directions/area-hotel-information/>
- SPA Newcomers flying in the Novice class will be paired with a designated SPA helper for the weekend to help make your first SPA pattern contest a real treat.
- Come join us and kick the 2019 season off right!
- For further information contact CD: Jamie Strong
- Email: jstrong49923@gmail.com or call (334) 612-1152

pened to build a legal plane which is unusual), many of these guys don't know what they're missing, but most won't take the time/effort to build a legal plane like he did just to see what it's like. I'm offering them a chance to try us out by allowing what they have—if they TRY IT, they'll LIKE IT!! like we all did. Just wanted you t&

"Don't Lose Your Bearings"

RC Engine Bearing Primer

by Jim Johns

I've worked on model airplane engines for almost 40 years, worked for a bearing distributor during college, and learned a lot more about bearings when I owned my own high end bass fishing reel repair business. I'll be using the OS 65AX engine as an example in this article.

There are two very important considerations when buying bearings for our model engines. The first concern is manufacturing tolerances. Bearing tolerance specifications are set by the [Annular Bearing Engineering Committee](#). Simply put, the higher the ABEC number, the tighter the manufacturing tolerances. Therefore, an ABEC5 rated bearing has tighter manufacturing tolerances and an ABEC3 rated bearing. An ABEC1 or unrated bearing will have even looser tolerances—more variation between pieces. I prefer to use nothing less than ABEC 3 rated bearings in my engines. The second concern is the retainer type. There are three basic styles of retainers used in bearings for our engines.

1. High speed plastic – these have a retainer which is a single piece of material designed to hold the balls in place.
2. Riveted metal – these retainers have two separate pieces of metal (usually stainless steel) with pockets to hold the balls and rivets between each ball holding the two halves together.
3. Folded metal tab – similar to the riveted metal type, EXCEPT that the two pieces of the retainer are held together only by tabs on one half of the retainer that are folded over the other half of the retainer between the balls.

High Speed
Plastic Retainer



Riveted
Retainer



Folded Tab



The 65AX stock rear bearing uses a folded metal tab retainer—see bottom photo. Those tabs can suffer metal fatigue and break off. The only place for the broken piece to go is through the engine, which will usually destroy the piston and liner in seconds. A replacement piston and liner set currently sells for \$125.

<https://www.towerhobbies.com/cgi-bin/wti0001p?&I=LXAETC&P=7>

I personally WILL NOT run rear bearings with folded metal tab retainers in any of my engines. It's too cheap and easy to replace them to risk costly engine damage. I insist on either plastic or riveted metal retainers for rear bearings in my engines. This isn't as important for front bearings as there is no way for parts to be ingested into the engine.

I have been using bearings from [RCBearings.com](#) for years. They sell very good quality bearing at a fair price - much cheaper than Boca. Additionally, their bearings are all rated at least ABEC3. The 65AX uses a 6903 (17x30x7mm) rear bearing. This is the same rear bearing that



was used in the OS 61FSR/VF, the early OS 61SF/RF, and all the YS 60 and 61 2-strokes. The photo at the right shows two rear bearings for my brand spanking new OS 65AX. On the left is the factory stock bearing with the folded tab retainer that I removed. On the right is the replacement 6903 from RCBearings.com that I installed. I have used this bearing for a long time with excellent results. It's a plain chrome steel bearing with a plastic retainer that sells for under \$9. <http://www.rcbearings.com/products/6903-17-x-30-x-7-bearing.html>. Another option is a stainless steel bearing like one of the two below. They cost more but resist rust better than chrome steel bearings.

<http://www.rcbearings.com/products/s6903m-17-x-30-x-7-metallic-retainer.html>

<http://www.rcbearings.com/products/s6903-17-x-30-x-7-stainless-steel-bearing.html>

Front Bearings: There are basically 3 types of bearing enclosures — open, shielded and sealed. Open bearings are just that—open on both sides so you can see the balls and retainers. Shielded bearings have **metal shields** which leave about a 0.005” opening between the shield and inner race to prevent friction. The third type is the sealed bearing that uses **rubber seals** which actually contact the inner race very slightly and seal in any stray lubricants. Using sealed bearings prevents a condition called “wet nose” where oil leaks through the front bearing.



I prefer to use sealed bearings for front bearings. I also remove one seal and place the open side toward the rear of the engine. This allows blowby oil to lubricate the bearing. At right top are two front bearings for the OS 65AX engine. One seal (bottom) has been removed from the right bearing which is ready to install. The easy way to remove the seal is to insert the point of a #11 Xacto blade under the inner edge of the seal and simply lift it off. It can be snapped back in place after removal if desired.



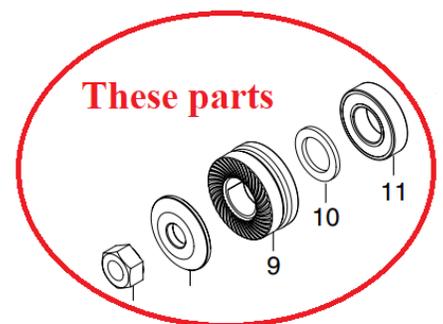
Installing Bearings: While working on a friend’s engine this week I was reminded of the importance of proper installation of your bearings. My friend has recently replaced the bearings in his OS 65AX. Unfortunately, one or both of them did not seat properly. This caused the crankshaft to bind at one point in it’s rotation. So here’s short primer on how I change bearings. Disclaimer: Some prefer placing the crankcase in the oven to heat it. I’m an impatient sort, so I use a propane torch to change bearings. Use the method you’re comfortable with. An “Ove-Glove” - a heat resistant Nomex and Kevlar glove designed for handling hot ovenware - is very handy when handling hot metal parts.

Disassembly:

- Disassemble the engine. I always remove the carburetor to protect the O-ring.
- Tap out the crankshaft. Thread the prop nut on until it’s flush with the end of the crankshaft to protect the threads.
- Heat the case around the front bearing. It should drop out when heated sufficiently. Use as little heat as necessary.
- Heat the case around the rear bearing. I find it easiest to hold the crankcase by putting my thumb inside the cylinder bore.
- If the bearing doesn’t drop right out, try whacking the back of the crankcase on a hard object like a chunk of 2x4. It should pop right out when the case is hot enough. It may require more persuasion if the engine is excessively gummed up
- Clean up any debris in the crankcase or on the crankshaft. I use a Scotchbrite pad to clean up any corrosion or buildup. BE GENTLE!

Assembly:

- Slide the new rear bearing onto the crankshaft. I like to have the open side of the plastic retainer toward the front of the engine. I’ve never had a plastic retainer fail, but no need to take chances.
- Heat the crankcase where the rear bearing seats. When heated sufficiently, drop the crankshaft/bearing assembly into the engine. It should go in and seat fully.
- Locate the parts shown: new bearing, thrust washer, drive washer, prop washer, prop nut and a prop.
- Hold the crankshaft in place — otherwise it will want to slide out of the crankcase. Heat the crankcase around the front bearing, then slide the new front bearing onto the crankshaft with the open side TOWARD THE BACK OF THE ENGINE. Press bearing as far onto the crankshaft as you can.
- Add the thrust washer, drive washer, prop, prop washer, and prop nut. Tighten the prop nut finger tight.
- Reheat the case at BOTH bearing locations, then tighten the prop nut with a wrench and let the entire engine assembly cool. I often tap the outside of the crankcase around the bearings with a small hammer to help seat the bearings.
- When cool, remove the prop and roll the crankshaft between your thumb and index fingers. It should turn



smoothly with **NO DRAGGING** at any point. If it isn’t 100% smooth, repeated the step above until it is. The OS 65AX in particular needs to have the bearings carefully installed for maximum performance. This engine is a little more prone to binding for some reason. The OS65AX uses a 6903 (17x30x7mm) rear bearing and a 6901 (12x24x6mm) front bearing.

Hopefully, this information will be useful for you. Contact me if you have questions. Good luck with your engines. 10

2019 SPA Contest Calendar

Contact CSP [Jamie Strong](#) with changes or concerns
then send information to Webmaster [Jim Johns](#) to be posted.

SPA East Schedule

Date	Event & Contest Director	Location
March 1-2	2019 Southeastern Model Show Georgia Nat'l Fairgrounds, Perry, GA	Perry, GA
March 23-24	1st Florida SPA Contest Jamie Strong CD	Jacksonville, FL
April 6-7	Prattville SPA Jamie Strong CD	Prattville, AL
May 18-19	Ben Oliver Memorial SPA Jimmy Russell CD	Knoxville, TN
June 22-23	Alabaster SPA Dave Phillips CD	Alabaster, AL
Aug 3-4	SPA East-West Shootout Scott Anderson CD	Toone, TN
Sept 21-22	Chattanooga RC Club SPA Jim Johns & Jamie Strong CDs	Chattanooga, TN
Oct 12-13	East Masters Steve Byrum CD	Cullman

SPA West Schedule

Date	Event & Contest Director	Location
March 2 11 a.m.	2019 SPA West "All Hands Meeting" Spring Creek BBQ Fort Worth, TX	Ft Worth, TX
Apr 27	Spring Opener - Texas Wings Pat Ensign CD	Newark, TX
May 18	Golden Triangle Frank Cox CD	Grand Prairie, TX
June 8	Greater Southwest Wayne Galligan CD	Ft Worth, TX
June 29	Spring Rain Date if needed	
Aug 3-4	SPA East-West Shootout Scott Anderson CD	Toone, TN
Sept 7	Wichita Falls RC Club Bob Redmon CD	Wichita Falls, TX
Sept 21	Waco Area SPA Todd Blose CD	Valley Mills, TX
Oct 5	Ft Worth Thunderbirds SPA Gary Alphin CD	Benbrook, TX
Oct 26-27	West Championships Ken Knotts CD	Benbrook, TX

Member Profiles Are Going Away– Unless...

For nearly two years we have featured member profiles from both East and West—even one from one of our overseas members (Reidar Johansson from Norway). The idea of having a profile each issue was suggested to me from more than one member; I have enjoyed reading them and passing them on to you. They prove that we all have lives outside of flying radio control pattern, and many of us have had other interesting pursuits besides RC over the years.

Unfortunately, starting with this issue the profiles end due to lack of response from the membership to repeated requests for more.

BTW- If by chance you have already submitted a profile and haven't seen it yet, then I may have misplaced it somewhere. If so I apologize and ask you to please resend it and I'll put it in the next issue.

Please understand that I'm not trying to give any of you a "guilt-trip" or something over this; there are many good reasons for folks not wanting to submit something personal about themselves for publication in a newsletter. Reasons range from general shyness, not thinking your story is special enough, and of course many of us are just private people and don't feel comfortable. Some just don't want to be bothered or haven't yet taken the time. I get it.

I would still like to put your profiles in the newsletter if you'd like me to, and I'll try to make the process as easy as possible. **Here is the procedure:** 1) Go to the "members" section of the SPA website, 2) enter your AMA number and password, (contact Jim about any password problems or reset your password), then select the "Download Member Profile" option. 4) Download the form and enable the form for editing (at the top). 5) Follow Jim's red instructions at the bottom and answer the questions while including any especially "cool" stuff you'd like your fellow SPA flying buddies to learn about you. When finished, follow the instructions to email your form to me and you're done. Don't forget a nice "headshot" photo. If you don't then I'll find a suitable photo for you, so it's better to take control and attach a photo you know you like.

I will include your profile in future newsletters as I receive them. There is always a chance that I may now get a bunch of these profiles at once, (it would be nice if members decided to respond in mass—like right away), so be patient—since the newsletter comes out every other month, it may take a while, but I'll get to you. If you don't see any more profiles in the future, you'll know that all our members who want their story to be included in the newsletter have been accounted for.

I'd like to offer a sincere thanks to all the members who have responded over the past two years.....Duane

Senior Pattern Association Member's Only Area

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Welcome back Duane Wilson!

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SPA Member Profile

Name/SPA Number:

City/State:

Occupation/Former Occupation:

Years in Model Aviation:

When did you join SPA:

How did you find out about the SPA and why did you decide to join?:

Are you or have you been a full-scale pilot? If so, when, where and what do you fly?:

Favorite pattern planes and why you like them:

Do you or have you competed in other organizations-have you gone to the NATs:

Something others may not know about you (other or past hobbies and interests):

Insert your photo here!

*****PEARLS of WISDOM*****

- ***“Sometimes, when I look at my children, I say to myself, 'Lillian, you should have remained a virgin.' —Lillian Carter (mother of Jimmy Carter)***
- ***“Last week, I stated this woman was the ugliest woman I had ever seen. I have since been visited by her sister, and now wish to withdraw that statement.”— Mark Twain***
- ***“The secret of a good sermon is to have a good beginning and a good ending; and to have the two as close together as possible.”— George Burns***
- ***“Santa Claus has the right idea. Visit people only once a year.”— Victor Borge***
- ***“By all means, marry. If you get a good wife, you'll become happy; if you get a bad one, you'll become a philosopher.”- Socrates***
- ***“I was married by a judge. I should have asked for a jury.”- Groucho Marx***
- ***I have never hated a man enough to give his diamonds back.”- Zsa Zsa Gabor***
- ***“Only Irish coffee provides in a single glass all four essential food groups: alcohol, caffeine, sugar and fat.”- Alex Levine***
- ***“My luck is so bad- if I bought a cemetery, people would stop dying.”- Rodney Dangerfield***
- ***“Money can't buy you happiness But it does bring you a more pleasant form of misery.”- Spike Milligan***
 - ***“Until I was thirteen, I thought my name was SHUT UP.”- Joe Namath***
 - ***“I never drink water because of the disgusting things that fish do in it.”
—W. C. Fields***
 - ***“We could certainly slow the aging process down if it had to work its way through Congress.”- Will Rogers***
- ***“Don't worry about avoiding temptation. As you grow older, it will avoid you.”- Winston Churchill***
 - ***“The cardiologist's diet: if it tastes good spit it out.”—Billy Crystal***

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Mail this form along with check/money order made out to The Senior Pattern Association for \$20.00 to: Keith Watson 1411 Farmington Court Marietta, Ga. 30008

Keith Watson
1411 Farmington Court
Marietta GA 30008

