



# Northwest Scale Aero Modelers

VOLUME 3, ISSUE 1

January-March 2013

## Hands on Throttle and Stick Newsletter

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Director -  
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Vice Director -  
Mike Ingram

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Robert Bailey

OR Coordinator -  
Scott Enochs

BC Coordinator -  
Gregg Lawarne

ID Coordinator -  
Mike Ingram

ALB Coordinator  
Jean Belair

AK Coordinator -  
OPEN

MT Coordinator -  
OPEN

Editor -  
Dave Rawlings

### *DIRECTOR'S CORNER*

Hello All,

Thank you for supporting NWSAM through a membership donation.

I hope all is well; winter is about settling in to the North West. Good shop time weather. Wishing you all the best for the Christmas and New Year season.

Dates for your 2013 calendar;  
North West Hobby Exposition - Munro  
WA - February 8, 9 & 10, 2013 -  
<http://www.nwmhe.com/>

Dawn Patrol & SCALE -THE SPRING  
FLY-IN & SWAP MEET - April 20, 2013  
Cascade Scale Rally - May 17 - 19 -  
2013.

Farragut Qualifier- Athol Idaho- June  
21-23

British Scale Classic- Vernon B.C- July  
19-21

North West Scale Aero-Modeller's  
Championships - Wenatchee, WA -  
August 16 -18, 2013

U.S. Scale Masters Championships -  
Alameda - California- Oct. 9-13 -  
<http://www.usscalemasters.org/forumsmf2/>

Please take the time to mention and encourage Fun Scale events/day at the field to help promote scale activity. Even a one day Scale gathering at the field helps to promote scale without interfering with other flying.

Scale activity promotes our National programs and helps to create the interest while promoting the hobby. This is where we get the local

fliers to gain experience/credentials through local events and regional qualifiers to represent our area in national programs. From this experience gained they can get invited, qualify for national programs and Top Gun. Without the local experience they will have little experience to help them do well nationally.

The reality is that percentage wise, for any of the RC venues, the interest is small to progress beyond the local level. Looking at the ARF manufacturers I would say from what they are producing "Scale Interest" must be very high. The majority of the ARF's produced are Scale Aircraft. So I encourage you to promote the Scale Fun Fly's and days at the club level. It's a great way to promote the club and provide income for club/site improvements.

DH Mosquito flies in New Zealand  
<http://tvnz.co.nz/national-news/warbird-flies-again-video-5108120> .

Vintage age photos:  
<http://www.barnstormers.com/eFLYER/2012/243-eFLYER-FA01-tigers.html>

Instrument Panels  
- A high wow factor for instruments here along with good pilot sources;  
- <http://www.iflytailies.com/>  
- <http://aerocockpit.com/en/7-eshop/2-sets-of-instruments.html>

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OK, this one is a little out in left field however can you imagine if this happened to you at the flying field? <http://www.youtube.com/watch?v=O5ElGt6iAYw> (turn the audio down if you don't like the F bomb)

Best Regards,  
Roly Worsfold  
Director,  
NorthWest Scale Aero-Modellers

## NWSAM in IDAHO

Greetings from Idaho,

I woke up to snow today & that means that it is time to get to work on next year's projects. I have been cleaning out my collection of engines and stuff that I will probably never use. The wife is happy, but this just funds other projects. I have been very busy listing over 20 engines on E-bay this last week. I sure do like the looks of the CT-114 Tutor that CARF sells. We'll have to see what Santa brings this year! I hope everyone is busy repairing and/or building their projects for 2013. I think 2013 is shaping up to be an awesome year for scale modeling in the NW & possibly in the country.

It is hard for me to believe that another year has gone by. As I look back though, I think we had a great year! I hope that we can make next year even better. With that in mind, I have some good news, some great news, and a little bad news. For those of you that attended the SM Qualifier years ago in Farragut, Idaho you may be getting another chance. I have been working with Tim McGee & it looks like we may be a go for the third week in June. That's the good news.

Now for the great news. The Red Apple Flyers of Wenatchee have agreed to host the 3<sup>rd</sup> annual NWSAM Championship in August of 2013. The Championship has been moved up a week & we are going to a 3 day venue instead of 4 in hopes of encouraging more participation. We realize that time & money is a valuable commodity & hope this will also encourage more participation. The RAF field is what all other flying fields are judged by. I simply cannot say enough about the gracious RAF hosts. If you cannot make it to the NWSAM Championship in 2013, you are truly missing out. I also think that several RAF members found out that that "scale thing" isn't the scary monster & actually had fun! Now for a little bit of bad news. It looks like there will not be a Qualifier in Molalla, Oregon in 2013. I do not have the details, but hope Scott Enochs can shed more light on the subject.

As it stands right now there will be quite a number of scale events for 2013. Here is what is on the schedule so far.

Gun Smoke Qualifier - Mesa, AZ	Mar 1-3
49'er Qualifier - Davis, CA	May 4-5
Cascade Scale Rally - Snohomish, WA	May 17-19
North Idaho Qualifier - Farragut, ID	June 21-23
BC Scale Classic - Vernon, B.C.	July 19-21
NWSAM Championship - Wenatchee, WA	August 16-18
USSMA Championship - Alameda, CA	October 9-13

Although not a judged scale event the IMAA Rally of Giants is being hosted in Medford, Oregon on June 27-30.

Bob Bailey I believe is having a couple of noncompetitive scale events this next spring also.

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Don't forget the NW Model Expo in Monroe, Washington in February.

One of the things I hope to accomplish as your newly railroaded Vice Director is to keep the web site updated with current and future scale events. I know it is very helpful for planning which events to attend when you have adequate notice. We also put a great deal of thought and planning into the scheduling of events. We are trying to have at least 3 weeks between events. Also it is time to update our rule book for 2013 and get it published on the web

site. If you have any updates you want considered for 2013, please contact me ASAP. I also want to see each of our coordinators contributing to the newsletter. Any local news is always welcomed, but other info is welcomed as well. It would be nice to see some Tips & tricks or other building articles shared with us newbies. With that in mind, I am submitting a tip regarding the throttle and choke linkages on DLE engines. I hope this will get the creative juices flowing for others.

Cheers,

Mike Ingram

## NWSAM in OREGON



Hard to believe we're at that time of year when the flying events calendar is blank for the coming months. Guess it's a time to reflect on events gone by, start new building projects, or continue those put on hold during the summer, and look to the future. For some it's time to lick wounds and make repairs to damaged aircraft and damaged pride if those wounds were caused by pilot error. That last thought would apply to me. After 8 flying seasons I lost my SPAD XIII in Wenatchee while making a barrel roll just a little bit too close to the ground. The SPAD had been my baby. Its markings were of a French

squadron with a Fighting Cockerel emblem and it had affectionately been nicknamed the "Angry Chicken". I've received many condolences, but wanted to share one that's really special. Some good friends created a very imaginative "sympathy card". This card is one of the most cherished "awards" won by that SPAD. Just goes to show that no matter what happens you have to have fun!



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Pilot Error !!!!!

Now, reflecting on events gone by. I was fortunate enough to have been able to attend three scale events in Oregon over the summer. First was Doolittle Day, an annual event held at the Duster's in Woodburn. This event celebrates the life and times of Jimmy Doolittle with Golden Age Racers and Warbirds taking to the air. Next was the annual USSMA Evergreen Qualifier hosted by the Sky Knights at Grant Sharps' field in Molalla. Talk about **HOT!!!!** Extra rounds could have been flown on Saturday, but the heat got the best of everyone. Unanimous vote of fliers and judges was to head for the shade and hope for cooler temperatures on Sunday. Our pleas were heard. Temperature dropped about 10° and three rounds were flown. Many thanks to the Sky Knights for a great weekend.

One weekend later was the Dawn Patrol at the Henry Estate Winery in Umpqua. Attendance was low, but the fun through the roof. Bruce Harlow puts on a great event! This year saw WWI, WWII, and vintage aircraft flying together and participating in pylon races. Bruce had a phenomenal line-up of pilot gifts and awards, including kits from Proctor Enterprises and Balsa USA. Turns out Mike Mosbrooker, our AMA District XI VP, is a scale enthusiast! Mike was down from Oak Harbor, WA with his 1/4 scale Balsa USA Sopwith Pup to enjoy the weekend. Did I mention the event was at the Henry Estate Winery? The tasting room was a popular destination when flying was done.

Looking to the future I see change coming to scale in Oregon. The traditional Evergreen Qualifier sponsored by the SkyKnights is at risk this year. This event has been an Oregon tradition for nearly 20 years, and is the only USSMA qualifier in Oregon. Fortunately, the NW region is rich with multiple qualifiers within reasonable driving distance. As we move into 2013 I hope we can find a way to either preserve the Evergreen Qualifier or start a new tradition.

Hope to see you soon!

Scott Enochs, Oregon Coordinator

## TIPS, TRICKS & HINTS

### DLE Engine Throttles

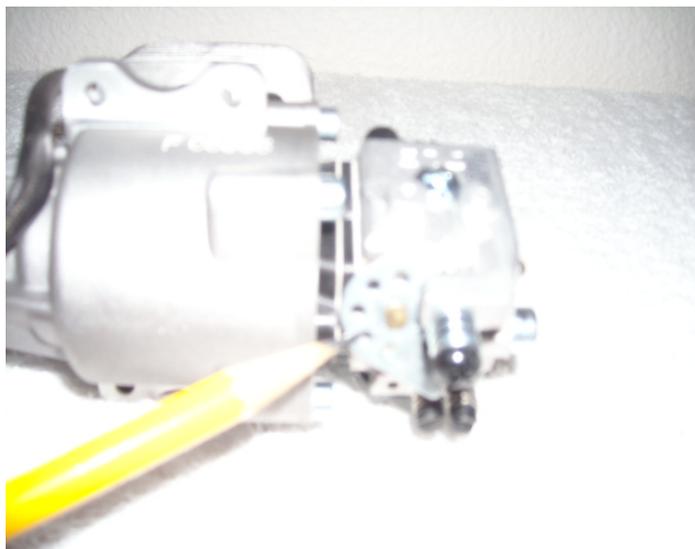
By Mike Ingram

When setting up the throttle and choke linkages on DLE engines (as well as many others) it is important to remove the throttle return spring. This is the little spring that is wrapped around the shaft of the throttle stop. (Opposite of the throttle arm) So, why is it important to remove the spring? Our throttles operate off a servo. If the servo is always fighting the spring, it will drain your battery and you will not get smooth throttle transitions. To remove the spring, simply grab it with a set of pliers and pull. It is also important and very convenient to either extend or replace the throttle and choke arms with longer arms. I believe Valley View R/C sells replacement arms that will fit most carbs. DLE includes an extension with each engine. It is also not that hard to make your own.

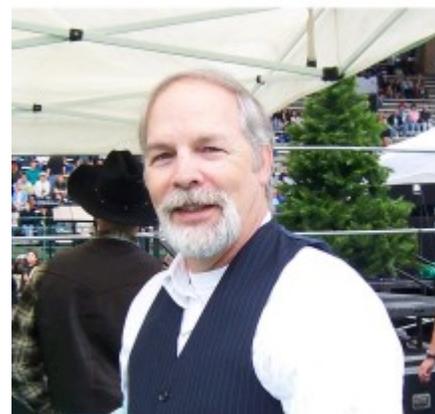


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## Musing from the Editor



The following is a reprint from the Clark County (WA) R/C Society newsletter.

### **MODE I or "What it is and why I fly that way"**

By Dave Rawlings

During the course of the development of Radio Control and the radios in particular, there was a period when controls advanced from a single control surface (usually rudder) to a more manageable number of controls commonly called "full house" meaning the pilot had control over throttle, rudder, elevator and aileron. Today, we simply call it a "4-channel" radio.

In the beginning, an r/c pilot had to have an FCC 1<sup>st</sup> Class Radio operators license, not so much to keep track of all the r/c'ers (there weren't really all that many) but because you had to be licensed to tune any kind of transmitter whether it was for r/c or some other activity. Flying an r/c plane in the mid 50's pretty much required a pit crew to set things up and if you got in one successful flight a day, you were doing great. First you had to setup your antenna and it's required grounding plane. This was about 9' tall and the grounding plane was about 9' in diameter. The transmitter itself was the size of today's plastic milk cartons and was connected to the antenna with a coaxial cable about 10-15' long; the controls were connected to the transmitter with another cable. Once set up, you had to tune the antenna to the proper r/c frequency and even standing in the wrong

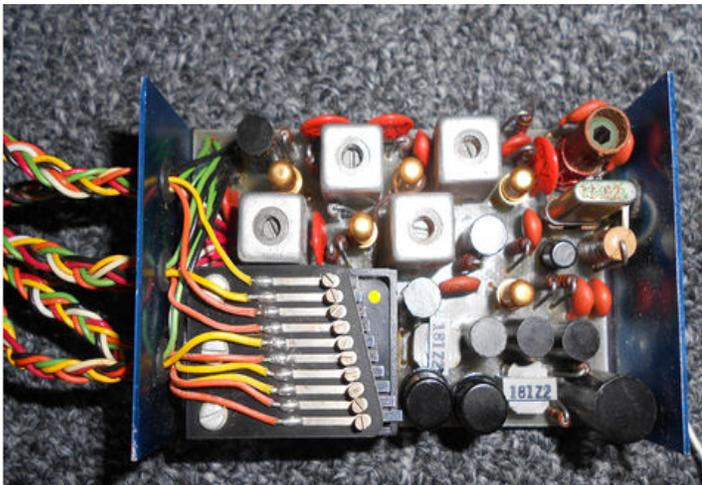
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place in relationship to the antenna could require retuning. Not exactly the same as today's range checking. Remember, all this was just for a rudder-only airplane!

Later, as electronics shrunk in size (still before today's integrated circuits), electronic engineers began tinkering with the possibility of multi channels on one frequency and the reed system was developed. The reed system allowed as many as 7 channels on the same frequency, but there was a slight drawback – it required LOTS of maintenance. It was a fairly simple concept in design, but a nightmare in execution.

Inside the receiver was a bank of thin metal reeds, each a different length and tuned to a specific frequency. There were two reeds assigned to each function. When a switch was thrown on the transmitter, it sent a signal that when received, was decoded and caused the corresponding reed to vibrate. That vibrating reed activated a switch that would cause its assigned servo to move in one direction. Moving the transmitter's switch the other direction, would activate the second reed for that channel and cause the servo to move in the other direction.



Notice the bank of reeds on the lower left. This is the insides of a 5-channel radio.

Another drawback was that none of the servos were proportional and only the elevator had trim and that was from a separate servo. Again, not exactly like the trim tabs on today's transmitters.

But what has that to do with Mode I – throttle and aileron on the right stick, rudder and elevator on the left?

Take a look at the picture of an early transmitter. Remember, when these were used, they were ALL equal to today's Mode I and **everyone** flew that way!



Each control had a three-way spring loaded switch – center (off) and momentary left or right. If you simply let go of the switch, it would return to the center or off position. As long as the switch was held in one position, the servo would remain at one end or the other. Look at the picture and notice the AIL switch on the upper right corner. The labels would indicate the switch (currently in the center or off position) moved to the left or right just like today's sticks and would give left or right aileron. If you look at the switch on the left side (second one down), you'll see it labeled ELE and moves back for up and forward for down, again just like today's transmitters. The RUD control is on the right under the aileron switch and the throttle was on the left above the elevator. It was pretty common for these transmitters to have both turning controls on the same side. But, the thing you should notice was that the two main controls – aileron and elevator – were on opposite sides of

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the transmitter so that the pilot could control each at the same time. No, you didn't have to decide which control to activate in which order. The cool thing about reeds was that since each control activation was determined by which reed was vibrating, you could control all 4 channels at the same time if you had 4 thumbs; usually two at a time was plenty and elevator and aileron were (as is today) the main controls.

When proportional radios came on the scene in the mid 60's, reeds were still found at all flying fields and would remain for another 5-6 years because they were fairly inexpensive compared to the "new" proportional radios with 2 sticks. A 4-channel radio would cost in the neighborhood of \$400 and would NOT have any of the features we take for granted today, namely no end point adjustment, no travel throw adjustment, no mixing of any kind, not even servo reverse. If you wanted a control to move in the opposite direction, you had to buy a servo wired to run in the opposite direction. With the advent of stick controlled radios, someone got the idea that they should be configured just like a real airplane and put the elevator and aileron on the same stick with throttle and rudder on the other, hence the birth of Mode II.

Because there were so many reed fliers that eventually switched to proportional and didn't want to re-learn their controls, Mode I configurations were just as popular as the new Mode II. As the number of reed fliers were no longer increasing and new fliers who had never flown reeds was growing, Mode II became the popular set up we see today.

So, what has all this got to do with why I fly Mode I, an antiquated Mode that has nothing to do with how a real airplane is controlled? Well, there are two main reasons. First, we aren't flying real airplanes so having the sticks set up like a full scale plane is not necessary. Second, by separating the two main controls – aileron and elevator – most, if not all maneuvers can be smoothed out tremendously. A case in point: I worked in a hobby shop in NE Portland in the late 70's when Mode I was still very much in favor. One of our best

customers would come in almost every Monday and buy a new kit. I thought he was just stocking up like so many others. Not so. It seems he was **replacing** the plane he bought the previous week. After about a month of this buying pattern I asked Rick why he was replacing planes so fast. "I just can't seem to get the hang of landing. Take-offs are fine, but landings don't work so well."

A day or two later I went to Delta Park to watch Rick fly. Sure enough, his take-off was right down the middle of the runway and his flying was pretty good, but when it came time to land, I could see his problem in a heart-beat: he was flying Mode I. Now before I start getting nasty emails, allow me to explain. With elevator and aileron on the same stick, you have an easier chance of mixing things up pretty easily. Coming in to land, a pilot usually uses the ailerons to line up with the runway and elevator to control the descent. The problem for Rick was that whenever he gave elevator command, he was also moving the stick just enough to give aileron control. His approaches were all over the place; it looked he was on a roller coaster. When he finally got it down, I explained what he was doing and how we could fix it.

He came out the next weekend after having switched things around in the plane (we switched his transmitter to Mode I in the shop) and I took it up for him. I talked him through a couple of maneuvers while he got used to the elevator and aileron being on opposite sticks. When it came time to land he was understandably nervous; I talked him in to the pattern: "Pull the throttle back a bit, pull the elevator back to set up your glide angle and HOLD the stick right there. Use the ailerons to keep it lined up and bump the throttle up a bit if you're coming in short or pull back a bit if you're long." He put it right dead center of the runway. By having the elevator separate from the aileron stick, he could set up his glide and as long as he held the stick in the same place, he could rock the ailerons all he needed and the glide slope remained pretty much the same. He eliminated the tendency to wander all over the place. We had lost a customer who bought a plane every week, but since he was now a better flier, Rick bought more expensive planes and all the goodies to

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go with them. A win-win for everyone.

I had switched to Mode I about a year earlier when I started to fly Pattern events. With Mode I, I could perform much more graceful and clean maneuvers. Rolls for example were simply a matter of setting my roll rate with the right stick and **holding** it. Then, with the elevator separate from the ailerons, I could keep the plane level while maintain the same roll rate. Yes, I totally agree it can be done with Mode II and I've seen many excellent fliers fly that way, but they also told me it takes a lot of practice to make it look smooth. They too, also agree that Mode I would make it easier, but they said they didn't want to re-learn. Each to his own, but when I switched over, within about 4 flights I was as comfortable with Mode I as I ever was with Mode II. It's not as difficult as one would think with the right instructor and the right plane to learn the conversion; something like a Kadet being excellent.

Smooth rolls and landings aren't the only reason to fly Mode I; only flying consistently can one find the differences and whether it would work for you. Besides, you'll find yourself in a very elite group of pilots – Mode I – the **original** r/c fliers!

For those interested in switching over, there may be a bit of homework involved and it basically involves what brand radio you are using to switch over. Some radios lend themselves easily for the change as it's only a matter of moving the throttle detent from one stick to the other and moving the elevator springs to the other stick. The Spektrum DX8, for example, is "Mode-less" meaning it can be configured to Mode 1 thru 4 (although the default is Mode 2). Instructions are in the manual and should take less than an hour. This includes reprogramming the computer to the proper mode. The Spektrum DX18 must be either sent in to the factory for the change or purchased in the Mode you desire. It cannot be done at home. Check your radio's manual to see if it shows how the switch may be made. If it can't and you don't want to buy a Mode I radio and would like to try it out, check with your local club members and see if there is at least one who would be willing to give you the sticks on his/her plane. Obviously, a buddy-box setup would be advantageous for all involved.

**NWSAM in B.C.****Time for another newsletter-**

I have made it my New Year's resolution to be more active with the NWSAM newsletter. I hope to be able to bring you more information, not just my latest project. This of course, means I need to make more contact with other clubs and other scale modellers; this is a very large resolution indeed. We are not there yet, so for this issue, I must resort to giving you the details on my latest project.

I have, for many years, been very interested in building a large-scale Norseman. When I was young, way back in middle of the last century, I lived up in northern BC in logging camps. Our mode of transportation was either Bush plane or ship.

The majority of our airplane transportation was supplied by a company called BC airlines. They had a few Norseman and I actually got to ride in some of them.

I have decided to build my Norseman in 1/5 scale from a set of plans drawn by Bob Schweitzer. I had the plans blown up from the original drawings and I have managed to acquire all the full-scale maintenance books for the airplane. So, I have no excuse if it's not quite scale.

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I have chosen to model CF-GUE. This plane was on the west coast before it went back to Ontario and was repainted in the Northway Aviation colors and made its way onto every box cover of every Norseman kit, plastic or flying that was ever made.

Even though I only have the stabilizer and wings framed up, some decisions have been made about the final form of the airplane. It will be on floats only. The foldout landing lights will be operational as well as all doors. I already have the 55 CC twin power and a nice scale prop with adjustable blades. I also have the correct dope for the color scheme.

Gregg LaWarne, BC Coordinator



NWSAM in Washington

Lots of exciting stuff coming up later this flying season. See the flyers for two of our biggest.

The Cascade ScaleMasters Regional in May is getting better and bigger every year.

The Dawn Patrol is becoming the place to be in the Spring with a relaxing fly-in for anything scale combined with a swap meet. Who could ask for more? Oh,yeah. Great weather every weekend!

Bob Bailey, WA Coordinator



There's something terribly wrong with this picture... Can anyone tell what it its? There's only one build project on the bench! (Ed.)

# CASCADE

## DAWN PATROL & SCALE

### THE SPRING FLY-IN & SWAP MEET



All scale airplanes welcome.  
Non-competitive event

***SWAP MEET INCLUDED!  
BRING YOUR STUFF!***

Directions and more info-

[www.cascadefamilyflyers.com](http://www.cascadefamilyflyers.com)

[www.washingtonscalesquadron.org](http://www.washingtonscalesquadron.org)

Hosted by:  
Washington Scale Squadron &  
Cascade Family Flyers  
Snohomish, WA

**\*\*Note: Frequencies must be  
odd #'s or 2.4 GHz**

Bob Bailey CD  
253-854-5247  
Cell-253-579-4068  
rlbailey822000@yahoo.com

SCHEDULE:

**APRIL 20, 2013**

(April 21 rain date)

*Start time 9AM*



**LANDING FEE \$15 PER PILOT — AMA CARD REQUIRED**

# CASCADE SCALE

## RALLY

MAY 17-19, 2013



Hosted by:  
Washington Scale Squadron &  
Cascade Family Flyers  
Snohomish, WA

**Directions and more info-**

[www.cascadefamilyflyers.com](http://www.cascadefamilyflyers.com)

[www.washingtonscalesquadron.org](http://www.washingtonscalesquadron.org)

Dry camping and lunch available on site

**\*\*\*NOTE ON FREQUENCIES: ODD #'S OR  
2.4 ONLY**

Bob Bailey CD  
253-854-5247  
Cell-253-579-4068  
rbailey822000@yahoo.com

**FUN SCALE COMPETITION  
& USSMA QUALIFIER**

*Classes:*

Fun Scale

Open

Advanced

Expert

Team

( All categories will be judged per USSMA  
rules) NEWCOMERS WELCOME !!

**SCHEDULE:**

Friday May 17

Static 11:00-5:00

Saturday May 18

Flying 9:00-4:00

Sunday May 19

Flying 9:00-1:00

Awards 2:00



**LANDING FEE \$25 PER ENTRY — AMA CARD REQUIRED**