

HCRC Flyer



AMA Chapter #341



January 2019

*Figure 1 Right
:Alan M Crawford
awarded the
broken prop
award for 2018
for crashing the
most planes this
season, as well as
making big
contributions to
the club but
mainly crashing
the most planes
(kidding), Former
President Tyler
West shared in the
honor as well for
2018*



ATTENTION!

**As of this
newsletter all
further issues
will be digital
only, feel free
to print them
at home If you
want the
paper copy,
we encourage
any comments
as well as
content for
monthly issues
email
[alan crawford197@
yahoo.com](mailto:alan crawford197@yahoo.com) for
submissions.
Thank you.**

The club encourages all our members to visit the club's Facebook and check out the latest content, announcements and club event's www.facebook.com/groups/148353592007739.

Hampshire County Radio Controllers
Business Meeting – December 6, 2018
MINUTES

Vice Pres. Mike chaired the meeting tonight and brought it to order at 7 PM with the attendance to be taken.

26 members reported present showing a quorum for voting purposes. As there were no guests present he asked for the minutes to be read. D. Sherman motioned to waive the reading. M/S/P Treas. Ron gave his financial report for the month of November commenting only on the request for annual membership dues renewals and the request for additional calendar raffle tickets to be purchased soon. He will start the daily drawings no later than Jan 1st. After a few questions asked and answered a motion was made to accept the report without change.

M/S/P Old Business – Treas. Ron reviewed the items completed for winter storage and the servicing / repairs to the new mower. This year we also put away the newly repainted entrance sign, the tent canopy and the new bag of first aid supplies. Next, Mike mentioned the E. Mountain Country Club Christmas party with 17 members signed up to go on the 15th. A short review of where we are on the club website by Mike included the work done by Mark Wasielewski on a prototype site that can be seen on hampshirecounty.rc.com (not .org). As Mark was not in attendance we moved on to other topics including: the New Years Day flying fun for anyone willing to brave the weather and then to the issue of publication of the club newsletter. Agreement was reached by a consensus of the group and the newsletter editor, that we would publish a digital newsletter each month starting with the January issue. Also, for those few members not on email the secretary would print out and mail paper copies. As discussed, communication with members would continue on FaceBook, the HCRC website and email “blasts” for rapid notification. Newsletter Editor, Alan Crawford encouraged all members to feed him interesting material such as photos, articles and ideas for topics to make his task easier each month.

Mike then turned the election of Officers and one Director over to the secretary for any further nominations and then a vote. As there were no further nominations the vote was for the following nominees: One year terms for officers were as follows: for President – Mike Shaw, for Vice President – Santiago Mercado, for Treasurer – Ron Paul and for Secretary – Gordon Lauder. M/S/P. Next, a vote for a three year term for the one director vacancy was unanimous for Mark Mundie as applause was heard for all elected tonight. Mike extended thanks to Tyler West for his dedication and service to the club over the last three years as President. Under New Business, Mike presented in detail another variation of bringing power into the flying site by utilizing a more up-to-date generator powered by propane. This presentation and lengthy discussion touched on issues of cost comparisons (with grid power), security, ease of use by members, power produced that may not be compatible with electronics being charged and noise levels. Most of the questions were covered in the presentation, however, the issue on compatibility with electronics (clean electricity) will be determined by a member who has agreed to do a test. Two votes were taken to address this new proposal. The first was a motion to approve the new power source with 16 members (a majority) approving based on a positive report of the “clean electricity” question that was left unanswered. The second vote was to rescind the original vote to approve grid power. Once again, a majority of the members present voted for the motion. Under other New Business Mike informed the group that the Executive Committee had approved the purchase of an almost new 18x18 galvanized steel two bay shelter to be erected in the Spring. As he said, “It will be quite a good upgrade to the 10x20 tent we are now using”. The Broken Prop Award was presented tonight to two individuals (not in attendance) who certainly fit the requirements for the award: Tyler West and Alan Crawford.

New member vote: Members voted unanimously tonight for Carol-Ann Walker, wife of member Dennis Walker who live in Amherst. Meeting adjourned for Pizza!

Respectfully submitted,
Gordie Lauder, Secretary

Upcoming Events:

January 1st: New Year's Day Fly in (Weather Permitted) 10am Starting time

January 3rd: Club meeting at VFW in Florence 7pm

January 6th: Second Christmas Party at Salem Cross Inn/West Brookfield 12:30pm

February 7th: Club meeting VFW Florence 7pm

Message from The Newly Appointed President

Hello All,

Just a quick few words.....

Firstly, I hope everyone enjoyed spending the holidays with their family and friends and I want to wish everyone a safe and Happy New Year! I'm excited for the upcoming flying season at the field. There are a lot of club projects and improvements in the works for this year including a new pavilion, getting power on to the property, a new and improved web site and our newsletter going all digital and back to a monthly publication and that's just to name a few. We also have some fun events planned for this year starting with the New Year's Day Fly-In that's right around the corner (weather permitting of course) and a revival of a previously held event, a Chicken BBQ, among others. A full schedule to be released shortly. Finally, I'm looking forward to the upcoming flying season and seeing the field busy with activity, planes everywhere, the new planes that were built or bought over the winter.

Did I mention planes everywhere? The club members enjoying each other's company, support and camaraderie. Let's hope for great flying weather and I'll see you out there!

Mike

Airplane of the month (January):

German Horten Ho 229

Another unusual Nazi project, the Horten Ho 229 was developed near the end of the war, after German scientists had developed jet technology. By 1943, Luftwaffe commanders realized they had made a huge mistake in choosing not to develop a long-range heavy bomber like the American B-17 or the British Lancaster. To fill this role, Luftwaffe boss Hermann Goering issued the “3×1000” requirement, demanding a bomber that could carry 1,000 kilograms (2,200 lb) of bombs over a range of 1,000 kilometers (620 mi) at a speed of at least 1,000 kilometers per hour (620 mph).



Article for your enjoyment submitted by Ron Paul

Radio Fundamentals: fly better with dual rates, expo & mixing

[Debra Cleghorn](#)

[Featured News](#), [Getting Started](#), [Radio Systems](#)

[3 Comments](#)

Utilizing your radio’s built-in programming will let you fly better with more control of your model. This article is intended for new and intermediate fliers and highlights three important features you need to understand, dual rates, exponential, and mixing.

LET’S GET STARTED

First of all, when holding your radio during your flight, it’s a good idea to have the “standard” position on all

switches be “away” from you. Another way to say this is to have the switches located on the top of your transmitter toward the back of the case and those on the front of the transmitter toward their top position. Establishing this allows you to always return to your most comfortable flying parameters should your flight get on the edge of your control abilities for whatever reason.

EXPONENTIAL

Simply stated, exponential in our radios gives stick inputs a softer “feel” around the center of stick travel. The greater distance we move the stick away from center, the less effect any programmed expo has. Expo works in concert with rate settings and is another piece of the puzzle in getting your radio controls exactly the way you want them.

Sneaking up on how much expo to use is a good way to do it if you’ve never tried it before. Entering a 10% value would be a good start. You will hardly notice that amount of input on the bench or in the air. But once you figure out the procedure for setting it, there’s no mystery about going into the menus and increasing it to +15 or +20, or even more. Some of the best pilots use +70 or more on expo to fly 3D. Most sport flyers will and should be in the range of +20 to +40. The type of aircraft you fly will determine how much expo you should use, if any. Even trainer aircraft and novice fliers can use some expo to advantage.

Have no fear of exponential. The softer feel around stick center will make you a smoother flier; just don’t overdo it. For most helicopters, it’s a must. For most sport aircraft and sport fliers, it really helps a lot in advancing your flying skills.

DUAL RATES

Dual rates are one of the neat features of our modern radios. The elevator dual rate switch is usually in the upper left front corner of the transmitter; the aileron switch is in the upper right front corner; and the rudder switch, if you have one, is in the upper right top. The purpose of these switches is to establish a limited servo travel position when the switch is moved to either of its two positions. For example, the switch “away” from you might give 100% servo travel, and if you click it toward you, your dual rate setting might provide 70% travel of that same servo (surface).

Here’s a specific example. Let’s say you are flying a tail-dragger and that you need to input small amounts of rudder on takeoffs. You might program your standard position rudder rate at 70% of available rudder throw (the switch would be away from you, toward the back of the transmitter). Your second rate might be 100% (or even more) so that when you want to fly aerobatics, clicking the switch forward will give you almost double the throw on rudder. The result of this setup is that your ground handling and basic maneuvers will be very smooth on your standard setting, but your rudder authority for maneuvers will be very powerful on your high rate setting. The amount of travel that you set needs to be adjusted after flight experimentation. As you know, servo arm and surface horn length are also factors that control surface deflection amounts. Programming “rates” are the final step in tuning your aircraft to your liking.

Dual rates are not to be ignored! This feature is an important component provided by our modern radios that make us smoother, more accomplished fliers. They are easy to program, and even the beginner-level transmitters sport dual rates. Top shelf radios have triple rates! Several radios can combine all rates on one switch. In my opinion, that’s a really nice feature that might be used after[ITAL] you program individual rates/switches and get them where you want them. Then, one switch sets all three surfaces to do either high or low settings, or any combination you want.

MIXING

Mixing presents more of a challenge. It also requires more patience to get it the way we want it, but the effort is worth it.

Most modern radios feature mixing circuitry. Some radios even have pre-programmed mixes. One of the examples of how mixing can help make you a better pilot is the knife-edge mix between rudder and elevator. Knife-edge flight is a very cool maneuver, and really cool when you don't have to constantly input elevator to hold the plane in position as it flies down the flightline on its side! So how is this accomplished?

Let's start by assuming you have the rate switch the way you want it. That means it's set to hold the nose of your aircraft up a bit and level with the ground as the plane flies by you rolled over on its side. You might have fine-tuned your "normal" rate setting to achieve this. Now let's get more specific. Let's say you are at the field, and the wind is blowing right to left. You are going to fly your knife-edge maneuver from left to right, into the wind. You enter by giving the aircraft right aileron, making it bank to the right a quarter turn, and left rudder to hold up the nose. All is going well at first, but in a second or two you see the nose of the plane going off line and pulling toward the canopy as you fly by. You need to correct with a bit of down-elevator. After a few passes, you get the feel of what is required to make the knife-edge look good. But you are constantly correcting, and the flyby looks ragged when you over/under-correct. The solution to this condition is a rudder/elevator mix.

What you need to do is program about 5% of down-elevator to automatically input into your aircraft when you hold rudder. Since you don't want this to happen all the time when you use rudder, you put the mix on a switch on the transmitter. Now, just before entering knife-edge, you hit the switch, roll a quarter turn, and when you enter your rudder command, the elevator deflects downward to whatever value you have entered in the mixing program. Five percent is a good starting point, but it may take more or less, and sometimes it may even take a "negative" mix, meaning the plane was moving toward the landing gear, not the canopy. In that case, you program up-elevator mixed with rudder. It sounds complicated, but it really isn't. The best advice is for you to read the manual that came with the radio, and try it on the bench, then out at the field. I like to take some written notes also, so when I get to the field I can remember what I did, and how to add or subtract more input if necessary.

There are many mixes you can use. Flap/elevator is a common one, and so is aileron/spoilers. Give mixing a try; like rates and expo, you are going to like it when you get it right.

Most important, any radio inputs or changes should be done by you, the modeler, owner, and flier of the radio and aircraft. It's OK and even preferred if someone with experience is looking over your shoulder, giving instructions or making suggestions, but don't let them make the changes. Hands-on experience is a basic tenet of effective learning.

We have these features and many more in our radios. It might be time for you to give them a detailed look, with the goal of making your flying the best it can be. Master your radio; don't let it master you!

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Thank you to our sponsors



Hobby World

171 Grove St. Rte. 8

Adams, MA 01220

Tel: 413-743-7223

hworld556@gmail.com

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President

Mike Shaw

15 Overlea Drive

Springfield, MA 01119

(413) 330-1827

mshaw.spfld@gmail.com

Vice President

Santiago Mercado

8 Brookside Circle

Wilbraham MA 01095

(413) 627-9250

santme2000@hotmail.com

Secretary

Gordie Lauder

19 Cypress Drive

S. Hadley, MA 01075

(413) 532-0135

gordonlauder@comcast.net

Treasurer

Ron Paul

367 Ware Street

Palmer, MA 01069

(413) 374-3212

rpm3xlm@comcast.net

Board OF Directors

Edward Kopec 413/532-7071

Leo Dube 413-315-1466

Mark Wasielewski mwasielewski@behindthetrees.com

Dave Sherman 413-774-7375 dsher10578@gmail.com

Dave Lampron AllseasHVA@aol.com

Mark Mundie marktm442@comcast.net

Alan Crawford (Editor) alancrawford197@yahoo.com