

# HCRC Flyer



July 2019



AMA Charter #341



*Happy Fourth of July  
Everyone!*

“The Fourth of July Reminds me of the great country I stay in, It is the spirit and glory of the nation, The day of sacrifice and pride, It is the day of struggle and strive, so, celebrate it in a grand way, And together wish and say, I love my country, Happy Independence Day, Happy 4<sup>th</sup> of July!”-  
Anonymous



**ATTENTION**

!

**We encourage any comments as well as content for monthly issues Please email [alanhrc@gmail.com](mailto:alanhrc@gmail.com) for submissions.**

**Thank you.**

The club encourages all our members to visit the club's Facebook page and check out the latest content, announcements and club event's [www.facebook.com/groups/148353592007739](https://www.facebook.com/groups/148353592007739). Also check out the clubs website at [www.hampshirecountyrc.com](http://www.hampshirecountyrc.com)

Hampshire County Radio Controllers  
Business Meeting – June 6, 2019  
MINUTES

The meeting was chaired tonight by Pres. Mike S. who brought it to order promptly at 7pm and asked for the attendance to be taken. Fourteen members reported present, however two more came within minutes resulting in a quorum. A guest, Edwin Rivera, was introduced and indicated he may join at a later date.

Next, a motion was heard to waive the reading of the minutes. M/S/P Treas. Ron P. gave his monthly financial report with only a question about the method of paying for the servicing of the portable toilet given to the club recently by the SPARKS r/c club. He said we were only obligated for a \$25 cleaning charge every two weeks or as needed during peak usage such as events. M/S/P

Under Old Business - Mike had a number of things listed on the agenda and asked for volunteers to help out with planned tree cutting and removal of certain trees considered dangerous along the west property line. The club has permission to remove the trees from the property owner, Len Bladjda, and now needs help by forming a work party. V.P. Santiago M. gave a quick report on the field mowing and thanked the volunteers who have been mowing twice per week to keep up with the growth. “A real team effort” he said. He also commented on the good condition of the grass this year and that a decision was made to mow the runway at 2” and all the rest at 3”. Other old business included: the recent family picnic –“everyone had a good time in spite of the low turnout”. Mike then discussed the barbecue planned for July 13<sup>th</sup> (Rain Date July 14<sup>th</sup>) for all members and their families. There will be an RSVP requirement in the announcement (on the Internet) in order to get a good headcount. Under New Business - Mike made the announcement that Secretary Gordie has made a request to retire after serving almost 40 years in all of the elected positions at HCRC, except for treasurer. Gordie made the comment that being secretary was probably the most enjoyable, as he has had the privilege of meeting folks from all walks of life, learn about their interests and help them to participate in this great hobby called model aviation. (Note: he plans to finish his elected term and be available for anyone selected for the position during the remaining time.) Santiago, at this time, reviewed some of the good things that came out of the Annual Fly-In last year with the hope that more volunteers will help with the event this year. He needs other members to join in with the regular (seasoned) members who go out to spread the word in the local communities for donations, sponsorships or just to give out information about our annual event. Positive feedback about our club and its approach to promoting the hobby shows that these visits are important and long lasting, as he said.

Ron P. had some questions about the new steel pavilion being delayed for lack of a permit from the Town of Hadley. Other alternatives are being discussed and will be presented.

The meeting was adjourned after the free raffle prize tickets were drawn and awarded.

Respectfully submitted,  
Gordie Lauder, Secretary

## *Upcoming Events:*

*July 6<sup>th</sup> : “Electric fly in” @ Wintonbury Flying Club (Bloomfield Ct)*

*July 11<sup>th</sup>: Club Meeting @ The Field 7pm*

*July 13<sup>th</sup>: Club Summer BBQ at the field (rain date 7/14/19)*

*August 24/25<sup>th</sup>: Wings Over Hadley two day “fun fly”*

*Airplane of the month (July): Northrop A-17*



The first military design by Northrop, the A-17 was a development of the Gamma and Delta commercial monoplanes. Delivery of 110 A-17s (the design never seems to have acquired a name) began in late 1935, with another 129 improved A-17As ordered in 1936. The A-17s were

powered by on less successful Pratt & Whitney engines, the R-1535, rated from 750 to 825 horsepower in the versions fitted. By mid-1940 most were removed from active U.S. service and many ended up in British service in South Africa. Two were re-engined with 600 hp P&W R-1340-45s and used as three-seat command transports under the designation A-17AS

*Article for your enjoyment submitted by Ron Paul*

## RC Model Aerobatics: Conquer the Three-turn Negative Spin

[Model Airplane News](#)

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In the early days of aviation, spins were often fatal because most pilots did not understand how to properly recover from a spin. While in an upright spin, the pilot would pull back on the elevator stick in an effort to save the airplane (and their life!) and only make the situation worse. Since the spin occurs when the aircraft is in a stalled state, adding elevator just keeps the airplane stalled.

Let's examine the key control inputs in executing the three-turn negative spin. A proper negative spin entry begins from inverted horizontal flight at a fairly high altitude while flying parallel to the runway. Then you must decrease throttle and feed in enough down-elevator to maintain altitude. Eventually, elevator authority will not be effective and the airplane will stall. At that instant, the nose will fall and a wingtip will drop in the direction that the spin rotation should be flown. If the left wingtip drops, the pilot should perform the spin to the left, which will require left aileron, right rudder and down-elevator. Similarly, if the right wing tip drops, the pilot should apply right aileron, left rudder, and down-elevator.

Let's start by taking a look at how your aircraft has been set up. Then, we will go over all vital inputs needed to execute this maneuver, as well as a few key flight techniques. After all, the goal is to make you a better pilot!

### **First things first**

I like to use flight modes. In the simplest form, this means that all dual and/or triple rates can be found on one switch. If you want to perform a maneuver like the spin, you don't need to remember which independent switch setting you used for the rudder, elevator and ailerons. Instead, you can apply all of these deflection and exponential amounts to one switch position and simplify your life.

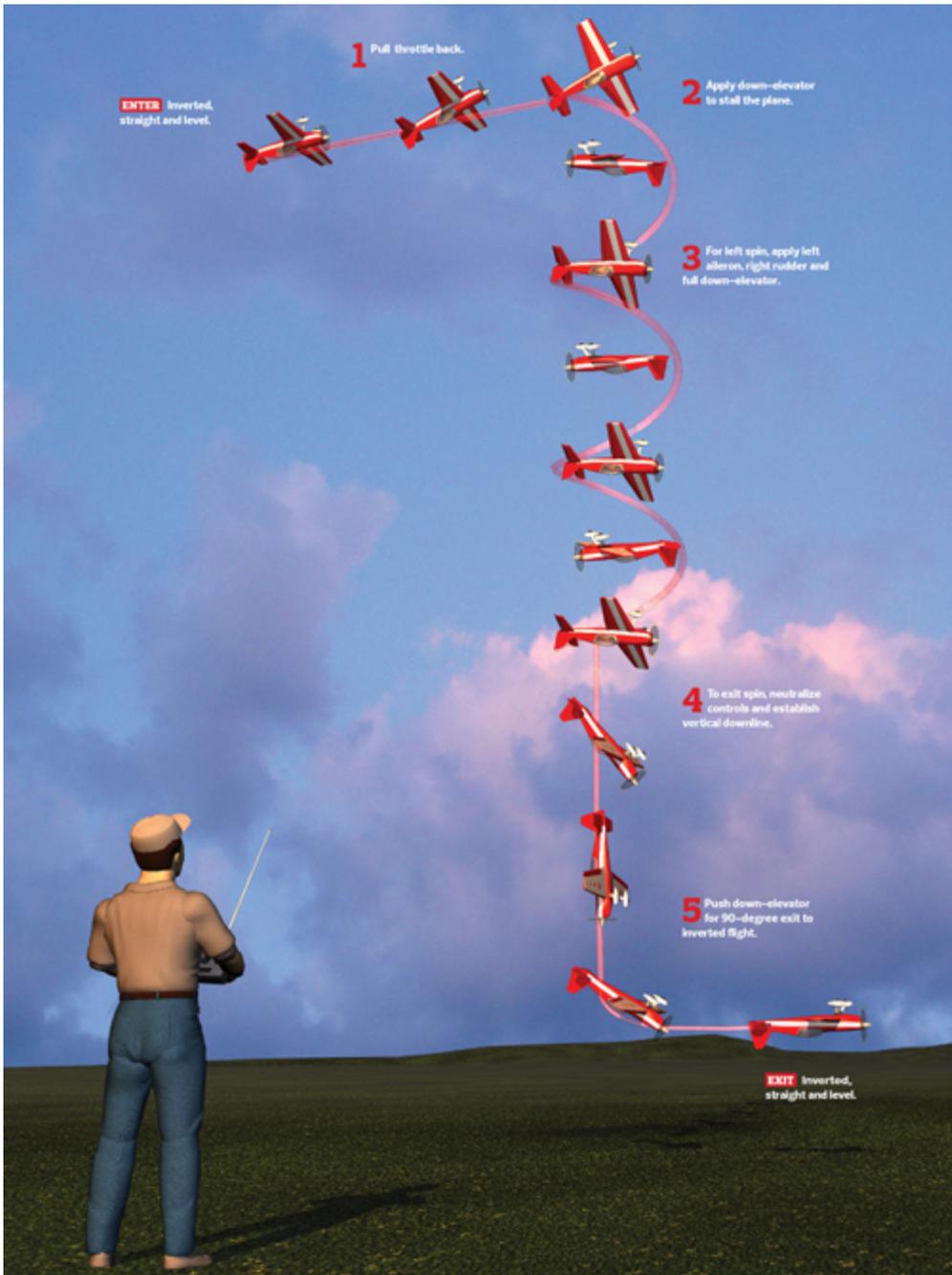
If your transmitter does not have the ability to use a flight mode, or something to the same extent, I recommend that you make your low-rate settings applicable to the spin. Then you can make your high-rate settings apply to only extreme 3D maneuvers. I think it is critical to minimize the amount of time you spend searching for rate switches so you can concentrate on flying the aircraft!

The amount of control throw that's required to spin the aircraft will differ between airframes. To start, I recommend 15 degrees of aileron deflection with 20% exponential, 20 degrees of elevator deflection with 35% exponential, and 35 degrees of rudder deflection with 50% exponential for the low rate setting.

Please remember that exponential (expo) should be used with care. Expo "softens" the feel of the aircraft around center stick on a given control surface to make the aircraft less erratic. A lot of exponential should only be used with a lot of control throw; otherwise, the aircraft may be extremely sluggish. Start with small increments and increase the percentage until you are content with how your aircraft feels.

### **The three-turn negative spin**

Begin by climbing to a safe altitude, which for a typical park flyer that has a wingspan between 48 and 52 inches, is between 500 and 600 feet. Your entry altitude needs to allow us enough space to establish a brief vertical downline after the spin rotations have been completed. Once the airplane is at altitude, fly it inverted and parallel to the runway at about 25% throttle. When the airplane is about 100 feet away, decrease throttle slowly to the idle position. Feed in enough down-elevator to hold altitude. At some point, you will run out of down-elevator and the airplane will stall. This should occur while the aircraft is directly in front of you. At this point, both the nose of the aircraft and a wingtip will drop. Now, let's say that the left wing drops first. This means that the direction of the spin should be to the left. Use left aileron, right rudder, and down-elevator to complete three rotations. Then, neutralize all inputs to establish a vertical downline. Push 90 degrees and increase throttle to exit the maneuver in inverted, level flight.



### Four steps to success

Now that you have a brief overview of the general control inputs that are required, let's explore this maneuver as well as a few key flight tips by breaking this stunt into four steps:

- **STEP 1.** Align the aircraft parallel to the runway and inverted. If the airplane is travelling with some airspeed, pull the throttle back to idle and slow the aircraft down as it approaches you. Now, if applicable, activate your "spin" flight mode. While the aircraft is slowing down, you'll need to feed in down-elevator to sustain altitude. It is important to time this portion of the entry so the airplane stalls directly in front of you. When the airplane stalls, one wing will drop to determine the direction of the spin. In this example, we are spinning to the left, which requires left aileron, right rudder, and down-elevator.
- **STEP 2.** Most aerobatic airplanes will spin using only a touch of aileron input. Using too much aileron may accelerate the spin rotation at times, which is not the desired result. Rather, we want to obtain a

constant rate of rotation. At most, use about 10 degrees or so of aileron deflection, but hold in full down-elevator and full rudder input.

- **STEP 3.** With your throttle still in the idle position, keep track of the amount of rotations the airplane has performed and maintain the same control inputs.
- **STEP 4.** As the last rotation nears completion, you'll need to neutralize all control inputs and establish a vertical downline. Then, after a brief line segment is shown, perform a gentle 90-degree push to exit inverted in horizontal flight. It is important to realize that heavier airplanes take longer to exit a maneuver like the spin. Once you neutralize control inputs, the aircraft may complete another portion of a spin rotation. When you know the tendencies of your plane, you will be able to compensate for this by timing your inputs properly so the rotation stops at exactly three rotations.

### **Flight advice**

When watching various pilots performing the spin, I have seen a few problematic areas arise. One major issue I've encountered is having the airplane's engine quit during the maneuver. This often happens as the pilot has a relatively low idle when using a glow or gas-powered model. When flying an airplane with an internal combustion engine, set a safe idle before you take to the skies. If you are using an electric aircraft, I prefer to have an idle where the prop is spinning at a very low rpm. I know that some pilots prefer to have the motor stop completely in the idle position, but I do not like the delay that it sometimes takes for the motor to activate. After all, it's better to be safe than sorry!

Before entering into the spin, the airplane must stall. As I mentioned, this is shown by having the wingtip and nose of the aircraft drop before you enter the spin rotations. If this doesn't happen, it means that you had too much airspeed going into the maneuver and a forced entry is applied.

Now that you have learned the basic fundamentals in performing the three-turn negative spin, go out and practice! The cliché practice makes perfect is true! If you have trouble performing this maneuver, break it down into steps, examine the setup of your aircraft and use the tips in this column to serve as a guide. BY JOHN GLEZELLIS

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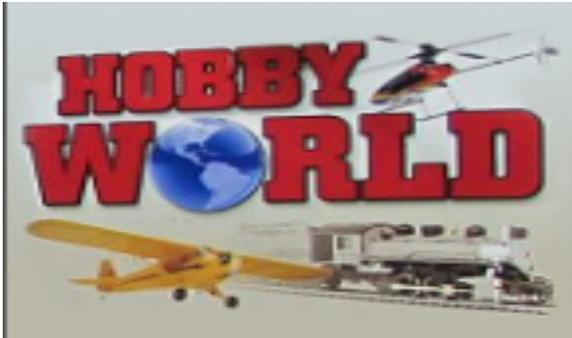
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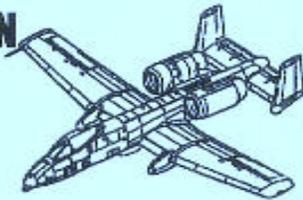
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