



Newsletter of The River Valley Flyers

Club #948

January 2019

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| President.....  | Don Danczyk                 |
| Vice President/Secretary.....                         | Bob Barclay                 |
| Treasurer.....  | Bob O'Connor                |
| Safety Officer.....                                   | Larry Chamberlin            |
| Web Master.....                                       | Bob O'Connor                |
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**From the President and Editor:** As we start the new year, I want to wish everyone a Happy New Year in 2019. I hope that everybody had a wonderful Christmas season in 2018, and hope that the coming year is great one for everyone.

With the winter season now upon us in Central Wisconsin, this is the down time of the year for us outdoor fliers. I know that some of our members have in the past, been brave enough to get outdoors during the nicer days during the winter. But most of us are waiting for the warmer days coming in a few months. The indoor flying on Friday evenings is one version of "winter flying", and you don't have to freeze your fingers or shiver to do it. So, I invite you to come on out and join us on Friday evenings this winter season in the gym. Even if you don't fly, it is a great time to just have some fun and talk to some of the other flyers who come out. I hope you can make some time this winter and check this event out on Friday evenings.

With the start of a new year, we as a club need to set our goals for the new year. We need to start thinking about what our goals shall be for our club this season. We need to develop a plan for the maintenance and upkeep of our flying site for 2019. We also need to think about what club activities we may or may not want to do this year or in the future.

Our club is fortunate to have a core group of dedicated members who have done a great job with the maintaining of our flying site in past years. We hope we can get others involved this year too.

At last month's meeting, we briefly discussed some possible events for the 2019 season, as well as ideas to increase the interest in our hobby. These are things that we should be talking about in the coming year.

Now that the new year is upon us, I hope that some new model aircraft projects are being worked on in the middle of this winter season. It is always interesting to see the new aircraft that come out in the spring. Please note that we will not have an RVF club meeting for the month of January. Our next meeting is scheduled for February 6<sup>th</sup> 2019.

That's all I have for now, stay warm and I'll see you at the indoor flying.

Don

### **Remaining Indoor Flying 2018-2019**

Indoor flying continues at the East Junior High gym in Wisconsin Rapids. Flying will be on these dates listed below, from 7PM - 10:30PM. You must be a member of the AMA, but not a member of RVF to use the gym. The cost to fly will be \$5.00 per pilot, or \$10.00 per flying family. Rules are the same as in previous years. Here are the remaining dates for this season:

Jan. 11, 18, 25, 2019

Feb. 1, 8, 22, 2019

March. 1, 8, 15, 22, 2019

April. 4, 12, 2019

Roger Denne'e  
RVF Indoor Flying Coordinator

## **Electric-Diagnostics-Solutions**

Written by Greg Gimlick

In my last column, I covered some basic thought processes necessary to diagnose a problem with our electric systems. I will continue that thread with a focus on some common problems.

### **Excessive Current**

Excessive current is something we all eventually run into. Whether it's truly excessive or simply what we should expect, can be the stumper.

Assuming you've used the exact components recommended by a manufacturer, you should closely match their performance and duration. If you've done that and are not seeing the expected results, then you need to look for the reason. Be sure that it is excessive and not an unrealistic expectation.



These magnets became loose and broken, causing excessive current, friction, erratic operation, and heat, which destroyed the motor.

Here are some common causes for which you should check:

- Ducted fan: check to be sure the blades in your fan unit are not contacting the shroud. This can cause friction and force the motor

to work harder, which means more current.

- Geared or helicopter applications: setting the gear lash or belt tension too tight will cause the motor to pull excess current. Check to see that they are properly set.
- Worn bearings: this causes friction and will pull more current. Boca Bearings is a good source for replacements.

### **Poor Solder Joints**

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Whether you or the factory made them, look over the solder joints and see if they are secure and done well. If they are dull and rough looking, they are “cold joints” and will affect the circuit. The only recourse is to correctly re-solder them.

### **Motor Mounting**

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Check to see that the motor is spinning freely when it is mounted in the airplane. That last part is important, so read it again!

I recently ran into a situation where the motor spun freely on the bench, but when installed in the airplane, the shaft's retaining collar rubbed the hole it fit through on the firewall/mount. This caused friction on the shaft when installed and drew extra current. Had I not checked while it was installed, I would have missed this problem.

The shaft collar barely clears the opening in the mount, but it's smooth and doesn't touch the edge. The wires exit along the side of the motor and must be secured to prevent contact with the rotating motor body.



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### **Vibration**

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We've come to expect a smooth-running aircraft because of electric power, so when it doesn't run smoothly, there has to be a problem. The biggest culprit is often the spinner. Just because you bought an aluminum spinner doesn't mean it will run true. Quality is all over the place, and some cheap imports have shown me real challenges.

Remove the spinner if you're using one and check the vibration again. Don't forget to remove the spinner backplate. If it runs smoothly, work on the spinner with a balancer, etc. until it is right. If you still have a vibration, check the propeller balance. Always balance a propeller before using it! I frequently use APC “E” propellers and one will be perfect while the next might be slightly off. Never assume they're all balanced, even if it seems that way.

### **Bent Motor Shaft**

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This is sometimes easy to see and other times it takes a dial indicator and test setup to see if it's a problem. If you can see the shaft wobbling as you rotate the motor, it needs to be replaced. Many manufacturers make this an easy task, while others make it easier to throw the motor away.

### **More Vibration**

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Sometimes it seems fine on the ground, but in the air, we notice a vibration or “dance” that doesn't appear normal. Think about airframe reasons.

Loose landing gear and wheel pants can cause in-flight movement. Are you using a

stabilization system? If the gains are set too high, it will wag or roll. If the gains are right, but the receiver/stabilizer is moving because of poor mounting, that will cause it, too.



The blades of a ducted-fan unit have close tolerance and can contact the shroud. Fan units require balancing and close tolerance monitoring.

### **Erratic Motor Performance**

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This could be a column in itself, but I'll try to cover it briefly.

- Check your connectors from the motor to the ESC and ensure they aren't shorting to each other. Often bullet connectors are slightly exposed when connected. Although there is heat shrink over the main section, if all three connectors are next to each other, they can arc and cause weird electrical voodoo.
- Check your ESC settings to ensure you have them properly set for the motor setup. Factory defaults are correct 99% of the time. Understand what each setting means and read the help files for your ESC.
- Did you wind your own motor? Many hobbyists enjoy doing that and there are great motor kits available.

The wires in the motor have extremely thin insulation on them so they are easily nicked. This can cause a short that is often erratic rather than a dead short, preventing it from

running. Check the continuity of your circuits if you wind your own motors.

- Check your battery packs. Connect a meter to the pack and see if flexing it, shaking it, etc. has any effect on the voltage reading. If so, that is a major problem and must be fixed or replaced. I don't advocate cutting open LiPo packs, so talk to your vendor about a replacement if it's a new pack. If you attached the connectors, check to be sure they were properly done.
- Check your motor wires to ensure that they aren't rubbing against the rotating case of an outrunner motor. This is especially easy to have happen in the narrow nose of an electric-powered sailplane. Secure all of the wires out of the way and add an extra layer of tape just to be sure.

### **Excessive Heat**

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Assuming the timing is properly set in your ESC settings, the motor shouldn't get scorching hot, nor should your ESC. Provide adequate cooling air intake to the motor/ESC and equally important, allow a spot for the air to get out! The rule of thumb is to have twice the outlet area for the inlet air.

In other words, if your inlet air hole is 4 square inches, your outlet hole should be 8 square inches. Don't pack your ESC so tightly into the fuselage that it can't get any air. Some have heat sinks and others don't, but all of them need some airflow.

### **Wrapping Up**

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The list of possible problems grows and grows, but none of it is beyond the scope of the average modeler to find and fix. Hey, if I can do it, you can too!

## Upcoming Area Events

### January 2019

**01/20/2019**—Green Bay Wisconsin. (E) Green Bay Model Airplane Swap Meet: Site:3002 Bay Settlement Rd. Holy Cross Parish, Steve Doubek CD 920-606-3248 email [stevedoubek@yahoo.com](mailto:stevedoubek@yahoo.com) Visit [www.gbmac.com](http://www.gbmac.com) Swap meet and auction at Holy Cross School Gym in Green Bay WI. Doors open @ 8:00 a.m. and will run until 11:30 a.m. \$5 admission, 12 and under free. No table fees, but donations are appreciated. Nice raffle prizes. Contact Steve for more info: Sponsors, Green Bay Model Airplane Club.

**01/27/2019**---West Bend Wi. (E) West Bend WI. RC Auction and Swap Site: 3000 Pleasant Valley RD. Washington County Fair Park. Scott D Jones CD. 414—446-5809 Email [onehobby@happyhobby.com](mailto:onehobby@happyhobby.com) Location: 3000 Pleasant Valley Rd. Washington County Fair Park Pavillion. 9 a.m.-2 p.m. 45 entry, all tables \$20 EACH. For reservations call Laurie @ 414-315-7229. Sponsor: Milwaukee Association of RC Clubs.

### March 2019

**3/03/2019**—Appleton Wi. (E) Valley Aero Modelers 34<sup>th</sup> Annual R/C Show and Auction. Site: 2311 W. Spencer Street, Grand Chute, Wisconsin. Tim Statler CD 8 A.M. till 12 P.M. Doors open at 8 A.M, \$5 admission fee, Auction at 11 A.M. Visit [www.flyvam.com](http://www.flyvam.com) or e-mail [timflight1@aol.com](mailto:timflight1@aol.com) for more information.

## 2019 RVF Club Membership Renewal

It's time to be thinking about renewing your club membership for 2019. Club membership runs from January 1st through December 31st of each year, and getting your renewal in early will avoid a lapse in membership. Memberships may be renewed at our monthly meetings or mailed to our club treasurer. See attached form in this newsletter.

## River Valley Flyers Winter Meeting Notice:

**PLEASE NOTE: THERE WILL NOT BE A JANUARY MEETING!!  
OUR NEXT MEETING WILL BE ON FEBRUARY 6<sup>TH</sup> 2019**

# River Valley Flyers Model Aircraft Club

## 2019 Membership Form

The "River Valley Flyers" are a model aircraft flying group interested in all aspects of Model Aviation and are located in Central Wisconsin. We are a chartered Academy of Model Aeronautics [AMA] club. All club members must also be AMA Members. We maintain a flying site in southern Portage County in the Township of Grant in the Central Wisconsin area.

### Membership Categories and Dues

**Full Adult Membership....\$40**

Age eighteen years and older by January 1<sup>st</sup> of the year of application. Includes voting rights and club field usage rights.

**Family/Group Membership....\$45**

All members covered by a Family/Group Membership must have a direct spouse or offspring relationship, Father-Son, Husband –Wife and or Junior Member. Includes voting rights [except for junior members] and club field usage rights.

**Junior Membership....\$15**

Under age eighteen years old by January 1<sup>st</sup> of year of application. All junior members need to be sponsored by a Full Adult Member even though they are not related by an offspring relationship. Includes field usage rights but no voting rights.

**Guest Membership:....\$20** For someone who belongs to another local club but wishes to access our field for flying as well. Includes field usage rights but no voting rights. Must send a copy of current AMA and Local Club Membership Cards with application.

#### MEMBERSHIP APPLICATION (PLEASE PRINT CLEARLY)

Please bring completed application form below with proof of AMA to RVF meeting or mail to:

**Bob O'Connor 2220 Lovewood Drive Wisconsin Rapids Wisconsin 54494**

Make checks payable to **River Valley Flyers** (Only Cash or Check Accepted)

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ E-Mail \_\_\_\_\_

AMA# \_\_\_\_\_ Membership Category: \_\_\_\_\_

Dues Enclosed: \_\_\_\_\_ (Cash or Check Only)