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TaleSpins

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**Next Meeting: August 13th 2015,
at 7:30 pm at the Hospitality House.**

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NO FLYING BEFORE 12:00 PM ON SUNDAY

Fredericksburg Aeromasters Meeting Minutes

July 9, 2015

Call to Order: Dan - Welcome and call to order at 7:30 P.M. with 10 members and two guests were present. Guests were Walt and Wayne from the FB Area RC Club... Thanks for attending our meeting.

Secretary Report: Minutes of June meeting were approved and motion to accept by Dan and seconded by Hank.

Treasurers Report: Read by Dan Cox and was reported as of 7/9/2015.

- Checking account balance \$ 1021.79
- Savings account balance \$ 563.18
- **Total** **\$ 1584.97**
- Paid members: 32 current clubs members and 32 AMA paid members.

Dan made the motion to accept the Report, seconded by Jerry.

Committee Reports:

- **Safety - Jim Braithwaite:** Don't fly close to the house, and make your turns away from the pitt.
- **Field - Bruce Simpson:** Mower needs belts. Bruce took the action.
- **Training - Jim Chandler:** – Going slow and we need to follow-up with AMA and Club dues.
- **Newsletter - Jerry Gillis:** Transitioned to Derek Cox this month.
- **Website - Brian Mausolf** – Model Aviation Day is posted on our website.

Old Business:

1. Shelter project on hold.
2. Jim Chandler has requested service for Porta pot, pending, lots of rain. He followed up today.
3. Hank has registered club for 2015 National Model Aviation Day – Celebrate Model Aviation to be held August 15, and is now on the AMA Website Mr. Campbell will provide ice, bring your ice chest to his house and fill it up.
4. Jim Braithwaite has scheduled club trip to Richmond Aviation Museum for Saturday June 13, 2015. No show... Cancelled.
5. We set a date for breakfast at Shannon Airport, July 11th at 10:00. Meet at the field after for a day of flying. This activity is postponed, new date will be established.
6. Club Patches: need to re-supply, two quotes obtained estimated cost \$300. We will continue to investigate cost effective supplier. On hold.

7. Larry Lycett is not available for a couple of months due to illness; I will pick up for him. Membership agreed and I contacted the AMA and change me as club POC for the rest of the year.
8. Larry Lycett provided an estimate on a walk behind brush cutter rental. They are equal to a small bush hog and are effective in removing small brush like we have. Rental \$85.00 per day. He believes a good bit of what field needs addressed and could be done in one or two days. Machine is self propelled but can be physically hard on body. If we have 3 or 4 people to spread out work would be best. Membership will schedule a work day for September or October.

New Business:

1. **National Model Aviation Day.** We need to provide: Jimmy and Jim volunteered to pick up the following items.
 - Sliced Onions
 - Sliced Tomato's
 - Chips
 - Fork, knives, spoons
 - Plates
 - Napkins
 - Additional hamburgers, and hotdogs
 - Additional deserts
 - Any extra sides would be great

Show and tell:

Brian demonstrated a table saw he built from a Dremel tool and his 3D printer. What a project... nice work!

Announcements:

- Fluvanna County RC Fun Fly... July 19th.
- National Model Aviation Day August 15th

Motion to adjourn: Dan made a motion to adjourn at 8:15, seconded by Dan Cox. All were in favor.

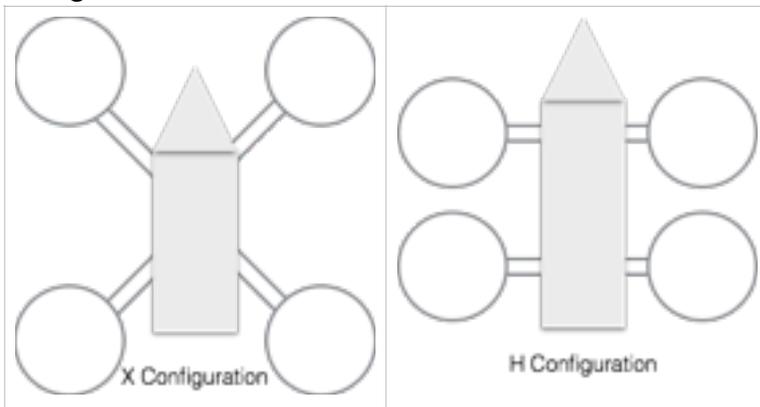
Buy/Sell/Trade

Buy/Sell/Trade	Item	Contact
For Sale:	Four Star 40 with OS 46 AX engine	Ken Burnett at 540 972 1477 or knjburnett@comcast.net
For Sale:	Super Sportster with OS 61 LA engine	Ken Burnett at 540 972 1477 or knjburnett@comcast.net
For Sale:	Semi Scale SE 5 Biplane with OS 91 4 stroke	Ken Burnett at 540 972 1477 or knjburnett@comcast.net
For Sale:	Pica Semi Scale FW 190 with SuperTigre 61 engine	Ken Burnett at 540 972 1477 or knjburnett@comcast.net

Quadcopter Basics

The recent advancements in technology has lead to the explosion of multi-rotor aircraft. Multi-rotor aircraft are growing rapidly in popularity and bring a different dynamic to the hobby. Multi rotor aircraft come in a variety of configurations including tri-copters, quadcopters, hexcopters, octocopters, among other configurations. This article is focused primarily on quadcopters, the most common configuration.

All quadcopters are configured to have four blades arranged symmetrically around the quadcopter. Pairs of blades spin clockwise while the other pair spin counter-clockwise. Blades across the diagonal spin in the same direction. Typically these blades are configured a H or X configuration.



All multirotor aircraft work on the same basic principles:

- Pitch and Roll is provided by changes in thrust. For example to roll to right blades on the left side of the quadcopter increase in speed and the blades on the right decrease in speed. Similarly, pitching forward is achieved by having the rear pair of blades spin faster and the

front blades spin slightly slower.

- Yaw is created as a torque effect. One pair of diagonal blades spins faster while the opposing set spins slower, resulting in quadcopter turning as a result of the torque.

Quadcopters utilize three axis gyros to maintain level flight. These gyros quickly adjust for minute changes in pitch, yaw, and roll, by varying the speed of each of the individual blades. Many quadcopters, such as [Blade Nano QX](#) support multiple flight modes. These include: a) limits to roll and pitch angles to make the quadcopter easier to fly; b) full acrobatic mode that allows the quadcopter to perform flips. Some more advanced quadcopters also include GPS receivers to allow for way-point control, automatic landing, and other advanced features.

Most current generation quadcopters support multiple flight modes. One common use of quadcopters is as in-flight camera platforms. These quadcopters typically support speciality modes to limit pitch/roll and maintain constant altitude for better video quality. Other quadcopters contain acrobatic modes that allow for different degrees of agile flight, including full 3D control.

Quadcopter aerobatics are similar to helicopter aerobatics in many respects. More capable quads have the ability to perform full 3D aerobatics. For example, the [Blade 200 QX](#) with a software upgrade and equipped with symmetrical or semi-symmetrical blades has the ability to reverse its motors in flight to produce reversed thrust. This allows the quadcopter to hover inverted, perform loops, rolls, and other collective pitch helicopter-like aerobatics.

Flying a quadcopter inverted does require understanding of what the controls do when the thrust is reversed. First and foremost yaw, pitch, and throttle are reversed. This can result in hysterical if not expensive crashes when correcting the wrong way. For example, I was flying my [Nano Qx3D](#) in my living room in full 3D mode. I accidentally clipped the ceiling fan and flipped it inverted. The tiny quadcopter screamed towards the floor, I quickly reacted by cutting the throttle... resulting in the quad shooting back up and crashing in the ceiling. Clearly not learning for my mistake, I threw the throttle to full up thrust resulting in a shower of parts as the unwitting quadcopter made contact with the floor. My two year-old son thought it was hysterical!

Quadcopters can be an immense amount of fun. Pilots of these devices need to make sure to operate them safely and legally.

Authors Note:

Photo's on the front page are from a Saturday in July, courtesy of Dan Cox.

The newsletter layout will continue to evolve over the next few months, please contact me DLCDRAGON@hotmail.com if you have any suggestions!