

Lake County Radio Control Club

# *Fly Paper*



AMA CHARTER CLUB #777

November, 2018

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## RADIO CHATTER

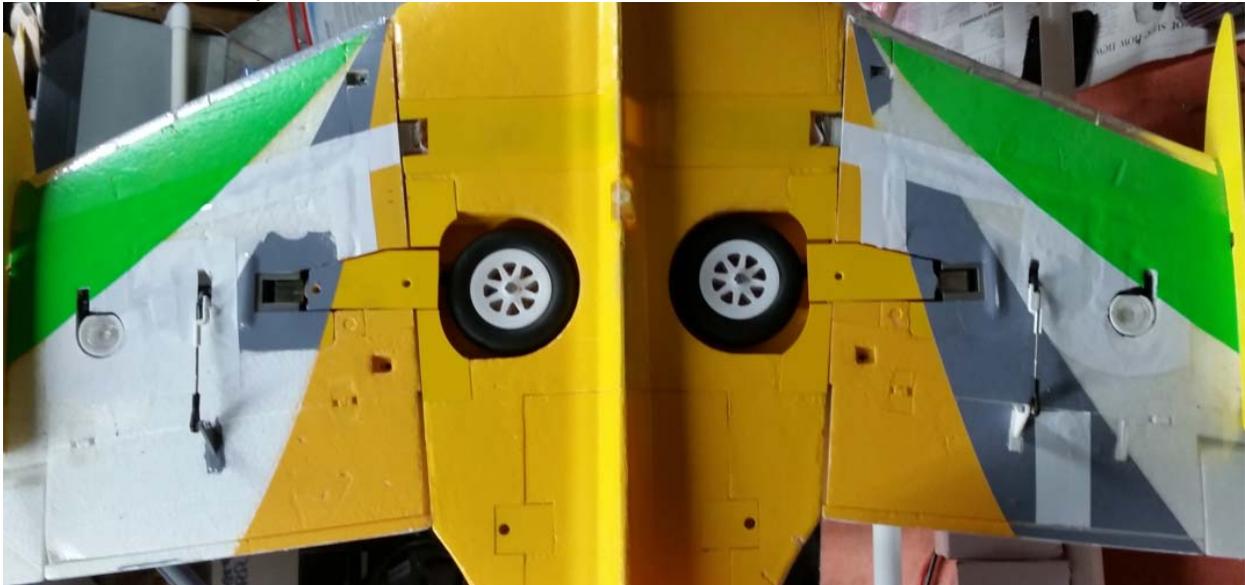
**Flypaper invites your contributions.** If you get a new aircraft, or do something of which you are proud, or have a . . . uh . . .uh . . . “learning experience” with a plane or heli, or anything good or noteworthy to share, let Jack Cutrone know and he will write it up in the next Flypaper. His email and phone number appear in the masthead at the top.

**Indoor Flying** - This winter’s indoor flying season began November 11<sup>th</sup>. The author had a conflict so cannot report on it or post pictures. We will aim for the next one on December 9, 2018. The events are held at the Beach Park Middle School, 40667 North Green Bay Road, Beach Park, Illinois. Current AMA membership required. Costs is \$10.00 to fly (spectators free). Sundays from 12:30pm - 3:30pm. The remaining dates are: 12/9/18, 1/13/19, 1/27/19, 2/10/19. 2/24/19, 3/10/19 and 3/24/19. For more information contact Dave Taylor (847) 651-6135.

**Our resident engineering and scale building wizard Chuck Smith shared some information about a modification to his Freewing Avanti S (or one of them anyway.):**

### FREEWING AVANTI S LANDING LIGHTS AND SBUS CONVERSION

The online build threads for the FreeWing Avanti S have lots of interesting information, but there’s almost too much sometimes since the RCGROUPS thread has 6736 posts on 450 pages (a lot to wade through). Many guys have used the Motion RC LED controller and LEDs to add a landing light to the nose gear strut. One guy also added retractable landing lights in the bottoms of the wings and I was intrigued by that. I ordered up all the parts about a year ago and they sat in the box until recently. When I started looking at doing this to my Avanti, the devil was in the details that I hadn’t anticipated. For starters, I hadn’t noticed that the flap servos are located in different places and orientations on the right and left wings (I guess so Freewing didn’t have to use a reverse servo on one of them). My solution was to relocate the left wing flap servo to the center of the flap and flip it over so the wings would be mirror images of each other. This mod left room just outboard of the flap servos to mount the landing light servos as seen in the photo below.



Landing Lights and Relocated Flap servo (the left wing’s flap now has the control horn in the center).

This is my first Avanti so it has had a lot of flights and the gray decals were falling off. A new decal set is on order.

The next gotcha was getting five extra wires to each wing in a convenient way since I transport my Avanti with the wings off. As it turns out, many guys have replaced the flap servos to correct the well known problem of one of the flaps not retracting after landing (or worse yet in the air). Since I was planning to replace the flap servos anyway, the idea of using SBUS servos occurred to me as a way to potentially add a servo and a light to each wing without any extra wiring. With a few mods to the connector board in the wing root, I managed to get all the signals to the wings with the existing wiring. The Futaba SBUS micro servos are \$70 each so replacing all eight servos with Futaba SBUS ones would cost way more than the original Avanti. Fortunately, Corona makes a very nice \$11 SBUS microservo, the SB-9039 but no one had them in stock. I was able to buy some directly from the Corona factory using Alibaba, but that's another story (and a surprisingly pleasant one). These servos are not only SBUS but they are programmable for centering, endpoint, and direction using the Futaba PC-Link and free software for the 1<sup>st</sup> generation of Futaba SBUS servos.

I decided to also use these Corona SBUS servos for the ailerons so that I could invoke "crow" for less chance of a tip stall on those nice slow landings. Eventually, it occurred to me that the electric landing gear was not SBUS. The solution was a \$10 Frsky SBUS to PWM converter that is about the size of the servo connector. You just cut the servo lead in a convenient place and solder this gizmo inline. Actually, I have the Frsky converter in a Y adapter and drive both the gear and the landing light servo on the same channel. I could have gone whole hog and converted the rest of the Avanti to SBUS but instead, I opted for a hybrid solution where the wings are SBUS and all the original servos in the fuselage are connected to the regular outputs of the receiver. This also allowed me to use two separate channels for the elevator halves for convenience of setup (in place of the stock Y connection). Here's a photo of the landing lights in action.



The landing lights should be visible in sunlight!

Another mod from the build threads that I have added to both my Avantis is finishing off the ducting just in front of the fan. This is a piece of purple insulation foam cut to the right shape and mounted with FoamTac so it can be removed if necessary. I covered it with UltraCote. The guys who did this mod on their Avanti said it changed the sound (hopefully for the better).



View up the tailpipe with the fan removed showing the “wedge of cheddar” mod to the inlet ducting.

**(Editor’s note:** I got tired just reading about what Chuck did, yet alone actually doing all of it. As usual, superb work Chuck.)

**Star Trek propulsion has arrived.** So, how about a propulsion system with no moving parts? Yes, that’s right – no moving parts. An engineer developed a way to power an RC plane with only electrical power exciting ions in the air and, once launched, moving them backward to provide propulsion. No, the system is not yet practical for flight but ?????? (Undoubtedly Chuck Smith will mount the system on one of his Avantis as soon as it is perfected.) For a video of the first flight and an explanation of how it

works, see: <https://www.youtube.com/watch?v=boB6qu5dcCw>. “Beam me up Scotty, then go to Warp Speed.”

**My wife and I both like watching birds.** She found a cool Facebook group called the Illinois Birders Network which has some amazing photos. This one, by Adam Mutolo is of a group of Sandhill Cranes:



**Treasurer's Report For  
November 2018**  
(Represents October 2018 Activity)

<b>Opening Checking Balance</b>	<b>\$ 6,087.44</b>
Dues	
50/50 Raffle	15.00
Sticker Sales	
<b>Total Receipts</b>	<hr/> <b>15.00</b>
Red Matson (picnic pop & ice)	\$ (64.62)
Wally Szempruch (October picnic)	(114.90)
Wally Szempruch (award)	(35.08)
Pats Services	(94.95)
<b>Total Disbursements</b>	<b>(309.55)</b>
<b>Ending Checking Balance</b>	<hr/> <b>\$ 5,792.89</b> <hr/>
<b>Bank Balance</b>	<b>\$ 5,832.89</b>
<b>Difference</b> (unpresented check)	<b>\$ 40.00</b>

## November 1, 2018 LCRCC Meeting Minutes

The monthly meeting of the Lake County Radio Control Club was held at the Lake Villa Library, 1001 East Grand Ave, Lindenhurst, IL. **Chuck Smith** called the meeting to order at 7:15 pm with 8 members present.

### **Secretary's Report:**

The previous month's minutes were accepted as written in the monthly "FlyPaper"

### **Treasurer's Report:**

The treasurer's report was presented by **Chuck Smith** was accepted as written.

### **Field officer's Report:**

Mowing is over for 2018, field looks good – both lawnmowers working well.

### **Field Safety Officer's Report:**

No issues to report

### **Events Director's Report:**

Next event New Year's Day at the field.

### **Old Business:**

Tractor needs blades replaced, Steve says replacements are in the shed.

### **New Business:**

All current officers have been nominated, if you would like to run for office now's your chance. Elections will take place at the December meeting.

### **New Members:**

No new members.

### **Show & Tell:**

**Dave Harrington** showed his Motion RC Opterra 2M flying wing \$229.99 fetches this BNF aircraft.

On a motion and second Chuck ended the meeting 7:56 pm

**Bill Rago** Recording Secretary

## 2018 Upcoming Events Schedule

- **NEXT MEETING** – December 6, 2018 7:15 pm. Lake Villa Library, Room A, 1001 East Grand Ave, Lindenhurst, IL.
- **Indoor flying** at Beach Park Middle School, , 40667 North Green Bay Road, Beach Park, Illinois. Current AMA membership required. Costs is \$10.00 to fly (spectators free). Sundays from 12:30pm - 3:30pm.
  - December 9, 2018
  - January 13, 2019
  - January 27, 2019
  - February 10, 2019
  - February 24, 2019
  - March 10, 2019
  - March 24, 2019
- **Opening Day** - TBA



### Lake County Radio Control Club Officers

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Events Director: Wally Szempruch	(847) 340-5641	<a href="mailto:walter.szempruch@comcast.net">walter.szempruch@comcast.net</a>
Secretary: Bill Rago	(847) 489-8871	<a href="mailto:recumbentmister@gmail.com">recumbentmister@gmail.com</a>
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