



# The R/C Flyer

Volume 39, Issue 1

January, 2014

**Next Meeting – January 9th, 2014, Clear Lake Park Building– 7:00 PM**



## IN THE PITS

by Mike Laible

Another year starts for the JSC RC Club. It sure does seem like 2013 was fast in some respects but in others I couldn't wait for it to get over. I am sure that is a common feeling with some. However, let's look forward and do some flying.

This year we have several items planned. We have the March 29, 2014 Swap Meet. We have the oak pavilion reserved and ready to go with the AMA magazine, should be in the February issue titled "Iron Mike Swap Meet". Then right on its heels is the April 12 Spring Fling – JSCRC Fun Fly and Hot Dogs. The Fall fun fly is scheduled for October 11<sup>th</sup>.

The full year of meeting dates are listed below with the December date being the annual party:

1-9, 2-13, 3-13, 4-10, 5-8, 6-12, 7-10, 8-14, 9-11, 10-9, 11-13, 12-11

There ya go guys, lets mark the calendars. In addition, at the end of the newsletter I highlighted some important warbird events. Warbirds are my interest so that's what I look for, please submit others if you find them – like electric events, SAMS events, etc.

You know we do have a backward snowbird in our club. Yah, he heads North in the winter and South in the summer – go figure.

I won't mention Bill's name for his protection. Anyway, he must have been hitting the wild turkey to much because he swears he saw Rudolph in his back yard. He snapped a picture and sent it to me right after I sent out the December Newsletter. I don't know it does look like Rudolph.



So I expect the club to pick up a few members this year. So let's be safe, practice safe habits and help new members. All the by-laws and safety rules are on the net so please review them. I have two items I would like to review in January – pilot boxes and safety rule review. In addition I am planning a meeting with JSC to review our security process.

As always, Godspeed and safe landings.

Mike L.

## DECEMBER CHRISTMAS PARTY

by Mike Laible and Kent Stromberg

On December 12, 2013, the JSC Club held its annual Christmas Party. The get together is always held on the second Thursday of December. So mark your calendars for next year.

The club provided the main BBQ and all members brought an appetizer or desert. The food was great and everybody had plenty. Plenty to do for kids and adults.

This year we did have a special guest. His name was "Pluggie". He was quit the character. He had blinking lights, Christmas music, blinking and winking eyes, and just followed everyone around. I do believe he was related to Larry Bailey because old Pluggie seemed to be biased to the Bell 230!!



Of course the kids had a lot to do playing with the Lionel train and American Bricks.

In addition to annual party, we had a couple of birthdays to celebrate. First we had the Litjen twins, Grant and Parker. In the picture you can see the twins taking care of business with the candles. The second is Lars wife Maria. The day of the party was actually her birthday. I don't know Lars, that is really nice

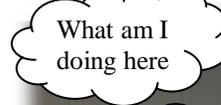
to get Maria to come to the club party on her birthday!



The kids playing with the toys.



Birthday celebrations.



Maria making her birthday wish - Jetcat P120



Larry Bailey and his Bell 230, 2<sup>nd</sup> place MOY



Dave Bacque and his Hotser. I've seen it fly and it is fast.



Mike Laible and his Zivoli B-25, 1<sup>st</sup> Place MOY



Fitz entry for MOY, Ki-46 Dinah



Don White with his shared third place Buzz 400



Fitz Walker with his shared third place MOY, F-8 Crusader.

Everyone had a great time and the model of the year was a close contest with 6 beautiful models. The competition was tough and the model description took on a good old ribbing between the contestants

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## **IT'S MORE THAN MODEL AIRPLANES**

*by Mike Laible*

As most know, the B-25 pictured below was built by my father and then I picked it up from St. Louis to detail and paint. The last time he saw this model it was in the primary and needed final sanding plus numerous mechanical items.

Over Christmas he planned to be at my brother's house in Frisco Texas. I decided to visit on 12-27 to 12-30 and bring the B-25 along. I was wondering why I was doing this but when I saw the look on Pops face when he saw the completed model in person, it was all worth it. I was hoping to fly it at the North Dallas field (I contacted them for permission), but decided I should wait. I just got the new mufflers I was waiting for and I got a bad case of the stomach flu over Christmas. I just wasn't my old self yet and decided it must wait for another day.

The picture below gives you a hint of the smile on his face. It was well worth the travels. This old model has travelled over 1500 miles in a car already and hasn't even been in a warbird contest.



Anyway, as of this writing I am heading out to JSC at 4 PM to do the final taxi test. The mufflers are on, props balanced and I am going to perform final engine test.



## **EDF POWER SYSTEMS AND JETS**

*by Russel Shanks*

RC Electric Jets are commonly referred to as EDF's or Electric Ducted Fans. They are, of course, not to be confused with RC Turbine jets which are really almost small REAL jets.

I was nervous about making the transition to EDF's from prop planes because of what I perceived as the complexity of the parts and because I thought they would be too fast for me to handle. I now prefer to fly my electric jets most. The power train is very similar to electric prop planes but there is a whole

different set of jargon to be learned. There are blistering fast edf's and there are trainer edf's, just like in prop planes, so don't be nervous about making the jump to jets!



One of the biggest thrills for me is flying Korean era jets. I don't know why I just really like the styling of them. My Starmax F-86 is a big foamie edf that has a big presence in the air for an electric jet. In its stock form, it is a relatively slow and a very stable flyer. It utilizes a 4 cell 40C-3850 lipo to fly around in a very scale-like manner. It has a 5-blade, 70mm ducted fan on a 2836 motor with 2770 kv (rpm per volt). The "2836" is the number of winds of wire around the motor and is generally used to denote the power of the motor. Here is a YouTube from Tony at Nitroplanes to explain kv on electric motors, it's simple and short:

<http://youtu.be/RmrtV8YHSFY>

I also found a short video by Tony on how to choose electronic speed controls or ESC's that I'd like to share:

<http://youtu.be/F7TK5oy4j4>

It's a good review of previous information about electric flight in general.

Okay, one more YouTube video about electric power plants in general:

<http://youtu.be/RwxQyU6zEFc>

You are REALLY getting your money's worth in this month's issue!

For electric motors, including edf motors, you have to consider how many cells lipo battery that you need. If you are buying a motor, or one is included in the plane that you are buying, the specifications will tell you the range of lipo cells. Most motors will use a single type of lipo such as 3 cell or 3S. But some use a range like 4S to 5S (4 cell to 5 cell lipos). Here is a general rule of thumb when looking at watts to the type of lipo that you would need:

*Up to 50w: 1s~2s  
50 up to 100w: 2s~3s  
100w Up to 500w: 3s (This is the practical upper limit for 3s Lipo's, so basically, models of 5lb AUW (all up weight including battery)  
500w up to 800w: 4s (This is the 0.40~0.46 glow equivalent)  
800w up to 1000w: 5s  
900w up to 1500w: 6s (this is the 0.60~0.90 equivalent range)  
8s~12s packs are for very large and generally specialized models.*

Now let's talk EDF fans. It's basically similar to props, the more blades you have the higher the torque and the more amps it will draw on the motor. The more amps you draw on the motor, the bigger the ESC you need. Also when you have higher amp draw you need a lipo that can handle that kind of power being sucked out of it. That's when you look at the "C" rating of the battery. A 20C battery is fine for prop planes with a 2-bladed prop like most electric warbirds and electric sport planes. But when you have 8, 10, and 12-blade fans, I recommend at least a 65C rated battery to keep the battery, the ESC, and the motor at their coolest. Remember heat is the enemy of electric planes, especially EDFs. The stock fan on most ARF electric jets is five. I guess it's the sweet spot for speed and lower amps. Back to my stock F-86... it had a five blade fan with a 45 amp ESC with a 5

amp BEC (because anything using a 4 cell battery and above generally needs a separate BEC, depending on the number of servos the plane has). I upgraded the power plant to an inrunner motor that uses 4S or 5S and a 10-blade fan with a 100 amp ESC with a 6 amp BEC and it's about



1500 watts total. It

made the F-86 quicker off the runway and a little faster but the airframe limits speed so it's not much. But the shorter takeoff is well worth it and I can cruise around at half power instead of almost full power on a 4S



motor/battery.

The last thing is the major drawback of edf power plants...the flight time is much reduced over prop planes, probably by half. Most of my edfs get from 3 minutes flat to 4 minutes max.



There is nothing like hearing the whine or the whoosh of an edf flying around the field, in my humble opinion. I started with a Dynam A-10 from Nitroplanes that is a 3S-40C-2200 lipo version with static gear.

<http://www.nitroplanes.com/60a-dy8933-a10-green-arf.html>

It's VERY docile, has two motors and is a great electric jet trainer that I would recommend to any competent prop plane pilot.

**Always fly two mistakes high!**

## **Upcoming Events**

April 19 Alvin Warbird  
April 26-27 New Waverly Warbird  
June 6 Monaville Warbird, all sizes  
June/13-14 TCRC Big Bird  
June/13-15 Warbirds over Texas  
June/28 Rosenberg Big Bird  
Sept/18-20 B-17 Monaville

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## **The R/C Flyer**

Articles and Want Ads may be submitted to the Editor, MikeLaible at [mrlaible@sbcglobal.net](mailto:mrlaible@sbcglobal.net)

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## **Club Homepage**

<http://www.jscrcc.com>

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## **ITEMS OF INTEREST**

Supported Special Interest Groups:  
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