



Newsletter of the Pikes Peak Radio Control Club
AMA Club Number 179
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Next Club Meeting:
Wednesday, December 2nd 2008
7:00 PM at the ELIC
(East Library Info Center)
Pikes Peak Public Library on Union

Newsletter Editor

By Keith Davis

As most of you may or may not know, Dave Smith has been the club's newsletter editor for the past few years. However, due to his increasing busy work schedule, he is reluctantly handing over the duties.

So I volunteered to assume the duties, and I hope to do a job as well as Dave has done for the club in the past. So if you ever run into Dave out in the world, tell him "Thanks" for a job well done.

That leads to my next topic. If you have an article, picture or information that may be of interest to the club, you can email it to me at: Lkdavis02@msn.com

Make sure that it is in a Microsoft Word format, or you can type it directly on email and I can then cut and paste. Sorry, I do not have MAC capabilities. Try to get all entries in by the 15th of each month in order to make the next month's newsletter.

Who Will Be PPRC's Next VP?

At the next club meeting (December) we will vote on our next VP. The two candidates are: Ben Woofter and James Murphy.

In addition, the 2009 Bob Burrow's Award recipient will be announced. The current 2008

holder is Greg Moore. So show up to vote and congratulate the winners.

Jim Terry, the current VP will be moving up to become the new PPRC President for 2009.

Adam Heffington has completed his 12 month tour of being the PPRC President. Adam has accomplished many feats this past year, including the goal of field maintenance and runway repair. The field was in perfect shape this past summer, just in time for our annual Warbird event. Thanks Adam!

The Warbird Corner

By Keith Davis

Have you wondered who ever thought up the "Black & White" invasion stripes that you always see on Allied aircraft back in WWII?

Well believe it or not, they were used long before the Normandy invasion on June 6, 1944, and here's the story:

Back in 1942, the Germans came out with the deadly FW-190. It was far superior to any Allied fighter at the time, including the Spitfire. The British had to come up with something fast to counter it, and they came up with the Hawker Typhoon.

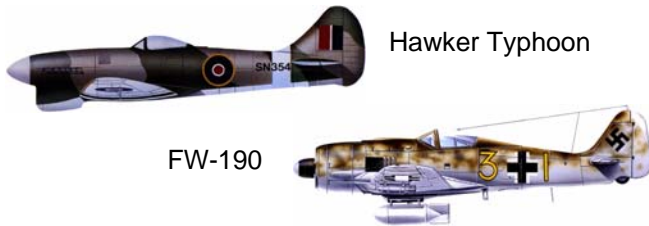
The Typhoon had many problems, to include being outperformed by the FW-190 at higher altitudes, but it was an even match at lower altitudes. However there was still one major problem, the British pilots and ground gunners thought that the Typhoon closely resembled the FW-190 at certain angles and because of that, many Typhoons were shot down due to friendly fire.

So once again British minds had to come up with a quick fix. After numerous tests, the best results for quick identification was to paint stripes on the Typhoons. They decided to paint 2 foot wide "Black & White" stripes on the bottom of the wings. After that, Typhoon loses due to friendly fire went down dramatically.

Two years later, the same "Black & White" stripe concept was used on all Allied aircraft participating in the Normandy invasion, hoping to reduce losses because of friendly fire.

Today, you can see on many RC planes, that the "Black & White" stripes really stands out at a distance, making it easier to see what your plane is doing. Good idea!

Do They Look Similar To You?



Did You Know? The Lavochkin LA-7 was Russia's only fighter in WWII to shoot down a ME-262 jet fighter. (Feb 15th 1945)

Did you Know? The F-18 Hornet is such a successful combat jet, that it has been modified to an F/A-18 Super Hornet and soon to be further modified to become an F/A-18G Growler. Its new additional role will be replacing the aging EA-6B Prowler.

Don't Give Me Any Static!

By Larry Laughlin

Recently, while attempting to fly my jet at Jeffco's field in Chatfield State Park, my JetCat Titan engine quit for no apparent reason. I wasn't off the ground yet, but I've had several unexplained flame outs along the Front Range, one just after lift off at PPRC (another story in it). This time, however, I plugged in the Ground Support Unit for the engine and read the message "WATCHDOG" glaring back at me. "Huh? Never saw that one before..." I thought to myself.

With no way to confirm what the error message meant, I just continued and tried to start the engine again, flying anyway if possible. Fortunately, I was able to fly another 4 or 5 times with no problem and the error message did not reappear.

Come Monday, I contacted Bob Wilcox at JetCat USA and he told me that "Watchdog" is a failsafe shut down procedure built into the engine computer's software when it detects "static electricity present and it's designed to shut down so as not to damage the engine, software programming, etc.". The engine's computer is set to recalibrate and reset everything to the previous set up the next time it's turned on.

Bob Wilcox went on to tell me how static electricity discharge has been a huge problem in the UAV stuff, no matter if it's turbine or piston/propeller powered. In fact, static electricity discharge issues generally dominate most UAV discussions among engineers & pilots. Fuel flowing through plastic tubing being the major contributor, followed closely by anything else spinning (wheels mainly, then propellers, etc.).

His first question to me was, is it dry up there in Denver right now?" Heck yes it's dry! Zippo moisture and winter's a coming.

"Yep, your Lightning Jet experienced the most typical occurrence in composite jet airplanes. Static build up and you zapped your engine's computer" .Static electricity is going to be more prevalent in our dry air anyway. Winter just makes it more intense.

I've experienced a pretty good Static Discharge jolt while fueling my jets. It often shows up when I touch the digital voltmeter to the battery charge leads after a flight or two. I never paid much attention to it, but those were all clues that Static Electricity is in the airplane and to beware.

I recall Static Whips on my Bonanza. Without them, my airplane created lots of static build up too, depending on the weather and where I was flying. It makes sense that our slick little plastic (composite) model airplanes could indeed, experience static build-up and a discharge. In

my case recently, it was more noticeable than usual, thereby causing my engine's computer to shut down.

Bob Wilcox actually has a 'static electricity energy meter' device that works much like a stand off temperature probe. According to Bob, he can walk through a typical event pit area and point to every airplane, detecting high readings of 'static electricity energy' in every airplane and it's down right scary. Some of the models he has measured just pegged the needle and often times, it was those that were experiencing weird engine and radio problems.

"So what does this have to do with me, Larry..." you ask? Well, it occurred to me that we've all experienced the occasional radio interference. Some of us have lost control and crashed when the radio didn't respond, and there are lots of cases where 2.4 Spread Spectrum radios have failed for no apparent reason. Could any of those incidences been related to the presence of high Static Electricity Discharge?

After talking with Bob Wilcox, I'm convinced that yes, the present of high static electricity discharge could indeed, cause a problem with any radio, especially 2.4 Spectrum types that require 1 to 3 seconds to 'reboot' themselves.

Here's what the head chemist at Innospec had to say to me recently regarding static electricity and the automotive industry:

The main problem is the plane is in the air thus cannot be bonded or grounded, and the tubing in the fuel system is made of non conductive material. Fuel can become charged due to pumping and or movement of the fuel through non-conductive tubing.

The movement of dissimilar materials against each other (i.e. fuel through plastic tubing) will result in fuel charging. If this fuel is shielded in a non conductive environment (such as plastic tubing) there will be very little opportunity for the charge to dissipate.

In non-conductive plastic tubing the only way for charge to dissipate is out the ends of the flowing fuel. There were a lot of difficulties with electrostatics some years ago when auto

manufacturers began to use nylon tubing in cars and pickups.

Electrostatic discharges through the tubing would cause pinhole leaks; fuel could then ignite; especially a problem when vehicles idled in one spot and leaked gasoline pooled under the vehicle before igniting. There was discussion on use of conductivity additives, but the fuel industry pushed the auto industry to correct the problem they created rather than change fuel properties. The issues went away but we do not know what mechanical changes were instituted to resolve the problem.

So what's the fix? There is a product that can be added to the kerosene to greatly reduce or eliminate the static charge build up that occurs when transferring fuel from a plastic jug into the airplane tanks. That's where it happens first, thereby energizing the fuel system and the airplane itself.

We're working on obtaining this product (Stadis 450), but it's ridiculously expensive. The other, very effective aid is to obtain a good commercial anti-static chemical and spray the wheels, landing gear, fuel hoses and your fuel jug. I tried the anti-static chemical (such as you would use to treat high static carpeting).

I was able to knock out the static discharge almost entirely (but I really have no way of measuring, other than my finger tips). So if you've experienced a static electricity discharge while handling your model, now you have an idea why perhaps.

2009 RC Events

By Rick Paquin

It's That time again to start thinking about the new year and the events coming up.

For those of you that didn't make to the air museum in Denver this year, think about next year. There were 16 or 17 clubs from around the state and the variety of planes on display was awesome, including our own group. It's a great way to meet other people from the clubs around the Denver area and beyond.

So think about going and show off your favorite planes and meet some very nice people. Talk about the hobby you pour heart and soul into, to the general public that come out to see the displays of planes. If you like to people watch, what a great place to do it also. So think about it, go, you'll be glad you went.

The next events that are coming up is Warbirds over Denver, Warbirds over Pikes Peak, the scale fly-in here, Scale Masters Qualifier in Pueblo, Warbirds over Pueblo and the biggie, Warbirds over the Rockies in Ft. Collins.

If you have trouble deciding on which one to go to, other than our very own awesome extravaganza, then go to as many as you can. So think about what you are going to build over the winter. The events that are coming up are truly a lot of fun.

Try and make at least one or two events, and have a great year of flying, talking about the hobby (sport) that you spend your hard earned money on. It's more than going to the field and flying. If you think that you aren't good enough to go! Well, the best of the best crash, take out props, bounce their way down the runway and yes, take out a gear or two.

So, have fun next year on what ever you do and hope to see all of at these up coming events.

1st Annual PPRC Digital Airplane Contest

By Keith Davis

OK, so what is this 1st Annual Digital Airplane Contest all about? Here's the first time that you can participate in a RC event without even being there. Let me explain.

All you have to do is send in a photo of your airplane, jet, helicopter, electric, or what ever you fly and get it posted in the newsletter. You do not have to bring in your aircraft to get reviewed, and there is no flying involved. It's all digital!

Get the picture to me by the 15th of each month. I will post as many as I get. You can either email me a photo or you can drop off a hard

copy at Dan's store, if Dan does not mind. I can scan in the photo into the newsletter.
Lkdavis02@msn.com

Then in December 2009 at the club meeting, 1st, 2nd and 3rd place winners will be announced and trophies will be awarded to the recipients. I hope to have some real nice trophies for the winners.

At the meeting, all photo entries will be placed in a box. The current President will then pull three photos out of the box, one at a time. The first draw will be the 1st place winner, the second draw will be the 2nd place winner and the 3rd draw will be the 3rd place winner. Here are the ground rules:

1. It will cost \$1.00 entry fee. You will be allowed to submit one photo per month of a different aircraft each month. NO duplicates of the same item! So in total, you can have up to 12 different entries. ALL money will go to the 3 trophies. The more participants, the better the trophies. If there are 100 participants, the \$100.00 will go to the trophies. Also if there are 100 participants, and they all submit 12 entries, there will be 1200 entries! That's why there will be 3 trophies awarded.
2. The aircraft that you submit must be in "Flying Condition". Photos of aircraft with missing engines, partially built, or still new in the box does not count. If the aircraft is destroyed, sold, or just not in flying condition after your photo has been submitted, then your entry(s) are still good.
3. You must be present to win. If your photo is selected and you are not present, then the President will draw another photo.
4. The photo entry must have your name, name of the aircraft and wingspan. If any of these are not listed, then that photo is disqualified.
5. It must be a color photo. Even though the pictures will be black & white in the newsletter, it will be in color on the website. People will have a good opportunity to see what you fly.
6. The photo must be close enough so that the aircraft can be identifiable and legible.

7. You do not have to be a PPRC member to participate, but you must have a valid AMA card.

So break out those digital cameras, clean up those planes and start taking pictures. The contest starts January 2009!

“Sample Photo”



Larry Laughlin's 103" WS Tucano

“Sample Photo”



Keith Davis' 80" WS Zero

Do you have any articles, pictures or information that you would like to share with your fellow club members? Email me at: Lkdavis02@msn.com

Aerobatic Airplanes

By Keith Davis

Well as most of you know, I pretty much fly warbirds, sometimes not very good, but I still like to fly warbirds. Recently, I bought my very first scale aerobatic airplane, the Sukoi SU-26.

But I'm not writing to talk about my plane, I'm writing to talk about aerobatic airplanes. After a little bit of reading, I found out some very interesting info that I would like to pass on.

These aerobatic airplanes (the full-size ones) that you see at air shows all of the time, CAPs, EXTRAs, YAKs, and EDGEs have only been around for about 25 years. The early airplanes were heavy due to the metals used in the airframes and engine designs. And I think it was the Extra that was first built for the French Air Force, the article did not say what it was used for.

But as time went on light weight aluminum and titanium were found to be the ideal, strong metals, which reduced the weight dramatically.

The Extra, the Cap and the Edge are basically the cheapest to maintain while the YAK and the Sukoi's are quite expensive to upkeep. That's why you will see plenty of Extras and Caps at airshows than you would see the YAKs and Sukois. And for a short time, for a reason that I could not find, the YAK was restricted from flying in the U.S.

The Yaks and the Sukois are now found at plenty of the big air races like the "Red Bull" races in California and the major races in Europe. And currently the YAK-54 holds the world's record for the fastest roll rate of any aerobatic airplane.

Hungarian Aerobatic pilots holds the most world aerobatic trophies, flying the YAK and the Sukoi. The U.S. has won several World aerobatic trophies flying the Edge 540.

So that's all I know about these airplanes, they seem ok, but I'm sticking to warbirds for awhile!

Upcoming Events:

(Exact dates will be posted when established)

- **Jan 1 2009 – PPRC Frozen Needle Valve Fly-In**
- **Feb 2008 - Jeffco Auction**
- **Feb 21 2009 – Denver Air & Space Museum RC Clubs Display**
- **Jun 20 & 21 2009 – PPRC Warbird Event**
- **Jul 19 2009 – PPRC Scale Fly-In**
- **Sep 2009 – Pueblo Warbird Event**