



## Newsletter

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**Here's wishing you all a Very Merry Christmas and a Happy New Year. These holidays only come once a year but they are worth waiting for. ( And please remember the Reason for the Season )....**

## THIS'N THAT

► **Before going any further,** I have to make a correction for the November issue. **Randy Philipps** sent me some pictures of **Eddie Smith's** river adventure but **Eric Waluska was the one who sent the pictures** to **Randy** and **Randy** forwarded them to me. When I saved the pictures for use in the November issue I inadvertently gave **Randy** credit for them.... I'm sorry about that, **Eric**. When I can, I always try to give credit for everything I get because if I don't, people might stop sending me stuff. Again I apologize for not giving you credit for a great picture.

► **..Election time** again. It sneaked up on me this year and I didn't get a list of candidates from the Executive Committee. Usually I try to get the list and put it in the November issue so you can think about it before you vote in December. I'll put it in this issue and it'll give you a week or so to think before time to vote. I'm sure you'll vote for the folks you think will be

## 2014 Elected officers

Pres.....Phil Cope.....[philipcope@bellsouth.net](mailto:philipcope@bellsouth.net)

Secretary..Phil Spelt.....[chuenkan@comcast.net](mailto:chuenkan@comcast.net)

Treasurer...Joel Hebert.....[hebertjj@gmail.com](mailto:hebertjj@gmail.com)

### EXECUTIVE BOARD

Bill Leonard.....[bill283@Gmail.com](mailto:bill283@Gmail.com)

Jeff Prorise.....[jeffpro@wintellect.com](mailto:jeffpro@wintellect.com)

Ralph Holder.....[holderrf@charter.net](mailto:holderrf@charter.net)

### Safety Officer

Ralph Colon.....[ralphcolon@bellsouth.net](mailto:ralphcolon@bellsouth.net)

Historian...JuneCope...[phillipcope@bellsouth.net](mailto:phillipcope@bellsouth.net)

best able to lead us through 2015....

► **We are rolling into** the winter season and that means it's time to start thinking seriously about that project you intend to fly in the spring. The cold short days coming up is a good time to get into the building mode and do something about it.

If you have something you intend to work on, I would be very happy to hear about it. If you have questions or comment about a certain model, send it to me. Maybe I can't help but there are people in the club who are interested and are able to help. We would definitely like to hear about your project.

► Got a call recently from **Jeff Elliott**. He had some literature he'd found about an airshow KCRC put on in 1997 and wondered if I wanted it. **Jeff** had been in charge of promoting it and he did a famous job of it. Local newspapers, television and radio all promoted the effort and according to the KCRC newsletter of November 1997 ( which was edited by 1997 KCRC president **Joe Parrott** ), it was a successful venture.

**Jeff** had some pictures from the air show and it was fun remembering the guys and planes from seventeen years ago. Some of those members are still active.

► **Ed Dumas** sent an address for some pictures he took in **New Zealand** at **The Old Stick and Rudder Company**. Check them out at

<http://eddumas.smugmug.com/Aviation/Old-Stick/>

They're pretty awesome! I absolutely love those old WWI planes.....

## A SIMPLE TIP

I'm hoping to include some tips into each newsletter for products or methods for easing your work. **Allan Veleo** contributed a good idea for making identical wing ribs last month and I thought I'd put something in this month about covering the model. I'm not going to talk about the process of putting the film on the structure since there are people who are much better at it than me. I'm going to talk about a film I used recently..

There is Coverite, Monocote, 21<sup>st</sup> Century,

etc. etc. on the market and they are all very good coverings, but I tried one from Hobby King that they just called Covering Film that impressed me.. The film is thin, light and tough and the roll is tightly wound and in the usual form of film with the glue side covered by a transparent plastic film. There isn't the usual edge where the films can be easily separated for ironing on, so I wondered about the difficulty of separating them. It turned out to be no problem at all. I remembered a tip I've seen somewhere about taking two pieces of electrical tape about two inches long. Folding over a half inch of one end for a handle and sticking the tape pieces facing each other on each side of a corner of the piece of film you've cut to use, and then gently pulling them apart. The transparent cover pulls off quite easily. The tape pieces can be reused several times.

The film has deep color, irons on very well, shrinks well at what seemed like lower heat than most other premium brands, and is good about not wrinkling afterward.

Why use this film you ask? Because it comes in a 6 meter ( almost 20 foot ) rolls that cost about \$10. Most all the other films come in six foot rolls that cost about \$12 or more. That is about \$2/ft versus ~ 50 cents/ft.

I used this film on a 70 inch wingspan Sig Cub and had no complaints at all. I covered the whole model on one roll. It always takes two rolls of any other covering to cover the same size model.

Give it a try if you're trying to cut costs a bit. I think you'll like it.....Jim ■

## Swatting the Turbine Bug by Jeff Prosise



*Illustration 1: Jeff and his impressive F-5..I think the picture is by Charles Wilson or Randy Philipps.*

Ever experienced a seminal moment in your career as an RC modeler that influenced everything you did thereafter? My moment came in summer 2006, when I and some other KCRCers attended a warbird fly-in in Chattanooga. There, I saw a turbine-powered jet fly for the first time: a beautiful 1/6<sup>th</sup>-scale F-5

flown by **David Payne**. I decided then and there that I wanted to fly turbines. And RC hasn't been the same for me since.

I love everything about turbines. I love the sound. I love the smell. I love the engineering behind them. I love the fact that when you look inside a turbine jet for the first time and see all the wires, pumps, and valves, it looks like something out of Star Wars. And I love seeing jaws drop when other people witness turbine flight for the first time.



*Illustration 2: Jeff's beautiful F-16. A great picture..I don't know who took it..*

From a skills standpoint, flying turbines isn't that much different from flying fixed-wing prop planes; after all, it still comes down to controlling yaw, pitch, and roll with elevator, ailerons, and rudder. However, turbines do tend to have higher wing loadings, so flying a typical jet is more like flying a heavy-metal warbird than an Avistar. The biggest difference is throttle lag. Like full-scale jet engines, model turbines take time to spool up. You can't set up on final, chop the throttle, and then apply a little power if you discover you're coming up short of the runway. Spool-up times vary, but on a typical turbine, you don't get power for 3 to 4 seconds AFTER you push the throttle stick up from idle. That's why landing a turbine requires a different technique. Instead of chopping the throttle and gliding to the runway, you try to maintain a nose-up attitude on final and "drag" the jet in at about 1/4 power. Spool-up time is much shorter from 1/4 throttle, so you can make small adjustments to the power as you shoot for the perfect touch-down.

Another difference between flying props and jets is the take-off. Because there's no prop to push air over the elevator, you typically hold AT LEAST half a stick of up-elevator during the take-off roll. Fail to do so and the nose wheel becomes so heavy that the jet may be virtually uncontrollable on the ground.



Holding that much elevator is counter-intuitive to most pilots, because doing it on a prop plane could cause the plane to jump into the air before it's ready to fly.

Model turbines have come a long way in recent years. In the early days, turbines had to be started manually by performing a complex dance with valves, buttons, and switches. Today, you flip a switch on your radio and the turbine starts, thanks to smarts in the ECU (Electronic Control Unit), integrated electric starter motors, and a feedback loop that continually transmits RPM and temperature data back to the ECU. The advances keep coming with faster spool-up times and simplified plumbing and installation. Many of the components that used to be external to the turbine such as fuel pumps, solenoid valves, and even ECUs are now being built into the turbine housing, meaning that turbine installation is sometimes as simple as installing four screws and plugging in a fuel line and electrical lead.

Turbines aren't for everyone. You need longer runways to take off and land, and you need to find a source for jet fuel (or learn to make it yourself). More importantly, you have to be comfortable with the thought that if a jet goes down, there may be nothing left of the thousands of dollars you put into it.

If that doesn't put you off, you'll find turbine flying to be perhaps the most gratifying flying you've ever done. And it might just change your life a little bit...like it did for me.....Jeff ■

## **How I got interested in RC**

**by Ralph Holder**



*Illustration 3: Ralph and grandson Zack starting out. Picture by Bill Leonard.*

To make a long story short, my interest in RC did not flower until my grandson and I were watching

my son-in-law, visiting from Virginia, flying a couple of planes that he had brought with him. He and his late father (a ret. Marine pilot) had been involved in RC for years. He asked my grandson if he would like to fly one with his assistance. Of course a 12 year old would jump on this right away.

This is all it took, after my son-in-law left, Zack, my grandson looked at me and said "Papaw, why don't you and I try this sport?". This was June, 2013, when I made contact with Larry Hayes, President of KCRC and he hooked me up with Frank Allemand who setup lessons for both of us. After a short period of time, we were both flying and are now members.

The only previous model flying experience I had was with a u-line plane at the age of 10 (58 yrs ago). I was very involved in sports most of my youth and never returned or had interest in model airplanes.. What made me continue after Zack went back to school, was the fellowship of members, the club setting and my enjoyment/excitement to continue my growth and skills in RC. My interest in flying is leaning more toward Sport flyers. After starting with a few foam planes, I have been building ARF's, starting with a 52" Electric Stix from Great Planes followed by a 68" Escapade. I recently built a Phoenix 66" Decathalon and have almost completed a Great Planes 59" Revolver. All my interest have been with electric planes.....Ralph Holder..

( Editors note::: Ralph's reason for staying in RC is a good one. The friendships and camaradery are reason enough..) ■

## **Minutes of KCRC Meeting November 11, 2014**

President Phil Cope called the meeting to order at 7:00pm. A call for visitors yielded no response. In a few minutes, Jack Cooper walked into the room. Jack is an import from Kansas, who produces R/C gliders and other kinds of RC planes.

This day being Veterans Day, Phil then asked that all veterans rise and be recognized. About 8 or 10 fellows rose.

Joel Hebert gave the Treasurer's Report, along with several other documents dealing with this year's income and expenditures. The report was approved unanimously.

### **Old Business:**

Picking up a discussion from the February meeting, KCRC's level of income relative to our expenses was resumed. Joel indicated that KCRC is running slightly in the red, and that a dues increase would really benefit the Club. There was some

discussion about the benefits of going to \$84 vs. \$72 per year, with the majority voting to go to the latter. Joel then moved that the KCRC Annual Dues be increased from \$60.00 per year to \$72.00 per year, with Family dues being set at \$84.00 a year, and students' dues at \$36.00 a year. A second was heard from Charles Wilson and Frank Allemand simultaneously. After just a bit of discussion, during which we agreed that if there was too big a surplus in the treasury, we could always lower the dues in a year or two. The motion also carried the declaration that a Club vote would occur at the December meeting, to comply with our ByLaws. The motion to vote at the December meeting to raise the dues to \$72.00 per month passed unanimously.

#### **New Business:**

President Phil Cope announced that the Marines' League had donated \$250.00 to the Club for their use of the field in September for the annual Mud Run. The Club is very appreciative of this donation, and Secretary Phil Spelt was tasked to write a letter of thanks to Mr. Laimon Godel, Jr., Paymaster of the Lieutenant Alexander Bonnyman Detachment.

The need to present a slate of officers to the Club for vote at the December meeting was raised. Pres. Cope and some of the Executive Committee had created a set of officers (one per office), with the exception of Secretary. It seems no one is willing to do any real work for the Club except Joel! The candidates as presented are:

**President, Ralph Holder**

**Vice President, Ralph Colon**

**Secretary,**

**Treasurer, Joel Hebert**

**BoD, Jeff Prosis and Randy Philipps, with Phil Cope as Past President**

The issue of Saturday meetings during the summer came up, as Phil Spelt agreed to run as secretary if meetings returned to Tuesday evenings all year 'round. The trial period for Saturday morning meetings expired with the October meeting, so no action was actually required. Never-the-less, the consensus of the meeting was that our schedule should return to Tuesday evenings. Therefore, Phil Spelt agreed to run for Secretary for another year. The issue with Saturday morning meetings is that both Phil's, as well as some others, go to other clubs for contests and events, as ambassadors from KCRC, and Saturday meetings occasionally conflict with that activity.

At the end of the formal meeting, President Cope praised and thanked the two Ralphs, Holder & Colon, and John Basalone for their recent service to the Club, building airplane assembly tables, creating larger shelves for charging in the pit shelter and adding two additional charging stations, as well as some other things. KCRC owes them a big "Thank You!" for their service.

The Club agreed to hold the January Banquet at the Golden Oak Café in Oak Ridge, as we have done for the past several years.

#### **Crash of the Month:**

There were no eligible crashes this month. Phil Spelt collected the glue "won" from the crash of his Curare at the SPA Masters Contest in October.

#### **Model of the Month:**

There were four planes shown for show and tell



*Illustration 4: Phil's Revolver. MOM pictures by Phil Spelt.*



*Illustration 5: Ralph Holder's Revolver.*



*Illustration 6: Frank Allemand's Yak-130.*

and model of the month. Phil Cope had a "rescue" Great Planes Revolver, purchased through Tower Hobbies' Scratch & Dent, which he repaired.

Ralph Holder also had an Great Planes Revolver he had assembled with an electric propulsion system.

Frank Allemand showed a molded foam jet





*Illustration 7: Steve Jones's S-Back.*

90mm ducted fan from Ready2Fly in Switzerland. The jet has a 47-inch wing span.

Finally, Steve Jones had the fuselage of an S Back for which he wanted some advice about mounting his glow engine, a SuperTigre .75. Of Course, there was plenty of that advice to be given...

MOM was won by Frank Allemand..

Meeting was adjourned about 7:55pm.

Respectfully submitted, Philip F. Spelt, Secretary

### **PROPOSAL BY ED DUMAS**

As some of you may know I work for the National Oceanic and Atmospheric Administration's Atmospheric Turbulence and Diffusion Division (NOAA/ATDD) in Oak Ridge. ATDD has recently purchased a DJI S-1000 octocopter with NOAA funds to do low-altitude environmental research and I have been designated as the S-1000 pilot. I am looking for a safe place to do instrument checkout flights and pilot currency flights that is close to ATDD. I think KCRC would be a great place to do it.

Because the copter was purchased with government funds, we have to comply with a myriad of regulations before it can be flown. NOAA has a memorandum of understanding (MOU) with the Federal Aviation Administration (FAA) that allows certain operations in class G (uncontrolled) airspace as long as they are not within 5 nautical miles of any airport depicted on FAA aeronautical charts. KCRC fits this requirement since the closest charted airport is Oliver Springs, 6.4 nm away.

The operating restrictions are exactly the same as the AMA safety code. We will operate the S-1000 within line of sight, no higher than 400 feet above the ground and only in day VFR conditions. No different than any other normal model aircraft...

There is a long process of government approvals that needs to happen before we can actually fly the S-1000 at KCRC. The first step in this process is to gain approval from the landowner (Knox County) and the KCRC membership. I have been in touch with the KCRC executive council and have their preliminary approval

and would like to bring it up for a vote of the membership at the next club meeting.

We expect the paperwork process to take 3-6 months and it currently will involve at least three federal agencies (NOAA, DOE, and the FAA), for starters. The process will include gaining approval from Knox County and KCRC, ORAU (my employer), DOE, NOAA, and will culminate with the FAA issuing a certificate of authorization (COA) that will allow the S-1000 to operate from KCRC. Please keep in mind that any (or all) of these agencies can veto the opportunity for us to fly at any point along the way, so it is far from a done deal. This veto power also extends to the KCRC membership, if they so desire.

*I have talked to Rich Hansen of the AMA's government affairs office and he saw no problems with my proposed plan. I have forwarded his responses to the KCRC executive council and leadership. His only concern was that the pilot(s) of the S-1000 be members of AMA and KCRC and that an FAA COA be obtained before we fly at KCRC.*

At this point I am the only designated pilot for this aircraft and will remain so for the foreseeable future. Among other requirements, I have to renew my FAA 2nd class medical to validate my commercial pilot certificate before I can be approved to fly the octocopter.

*I don't see any downside for KCRC. In fact, if it goes through, KCRC could become the first AMA-chartered club in the country to gain FAA approval to allow operation of a government-owned UAV, which would be a feather in KCRC's cap*

We will use the S-1000 primarily for atmospheric research projects away from KCRC, but as you know having a place to fly that is close to home is very important. At KCRC we will be testing the instruments that we will be flying for our research. These include a downward-looking GoPro Hero 3 camera, a downward-looking FLIR Tau-2 infrared camera, and a system to measure air temperature and relative humidity. Our goal is to use the S-1000 to make measurements of air temperature and humidity as a function of altitude and also to make pictures in both visible and infrared wavelengths of the Earth's surface below the copter. Our first project will take place in central Florida in the summer of 2015 and involves research into what causes afternoon thunderstorms to form on summer days. If anyone is interested in learning more, just ask!

***Thanks! .....Ed Dumas***

**Ed's proposal will be discussed and voted on at the December meeting..**

**COME TO THE DEC MEETING AT THE FELLOWSHIP CHURCH ON MIDDLEBROOKE PIKE ON TUESDAY, DECEMBER 9<sup>th</sup> AT 7:00PM.**

**Since the nominating committee found only one candidate for each office, perhaps you might want to offer your services before the election. Seems a shame we don't have more members offering to run.**