

#### My Journey into Modeling by building a Quadcopter -Ray Bacon, KCRC

7 months ago I learned about RC multirotor aircraft. Their low price and ease to fly were very appealing for a beginner. Quadcopters, a type of multirotor aircraft, are a great platform for helicopter training. You learn basic orientation skills and forward flight flying a multirotor. Custom multirotors can be built to have similar characteristics to a fixed pitch helicopter. Their low parts count and durability make the price of learning to fly much cheaper than traditional methods. In this article, I will try to summarize my experiences and build of my first quadcopter.

Thanks to the wonders of the internet I was able to find quadcopters that suited my needs. I wanted to fly fast and aggressive and wanted a quadcopter that would meet my requirements. I started with toy grade ready to fly quadcopters. They are cheap, very durable, and teach you the basic skills necessary to maintain orientation while in flight.

I practiced and practiced. Every flight I gained more confidence and tried new things. I then reached a peak flying toy quadcopters and could not progress any further. I was ready to take the next step. I decided to build a quadcopter from parts. I needed a safe place to fly my creation. A custom built quadcopter is not cute and cuddly like a toy quad. They can have much larger propellers and are capable for very fast forward flight. As a result I joined the AMA and KCRC where I could fly safely.

I knew nothing about building a hobby grade quadcopter. Lots of research was needed. I joined a forum, I watched videos, I asked questions. Once again the Internet was the best resource. For starters, quads have very few moving parts. Quadcopters can be built in many configurations and serve many functions. By far the most well known quadcopters are ones designed for aerial video and photography. Unfortunately they are also infamous for the problems they have caused in recent times. I cannot stress enough how important it is to educate yourself and talk to experienced RC pilots before you get any large flying aircraft.

In addition to aerial video and photography, you

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can build a multirotor for racing and acrobatics as well. I will focus on acrobatic guadcopters. When configured correctly, acrobatic guads can make great trainers for anyone looking to fly RC helicopters. They can be built to do flips and rolls and are very agile and responsive. Their major advantage is the fact they have very few moving parts. To maximize learning and minimize downtime anything that can be easily repaired after a crash is a must for a beginner. These are the reasons why I chose to build a guadcopter geared for acrobatics. I have had many crashes and so far. Repairs were not difficult or costly. I was usually back and flying the next day after a crash. However I'm pleased to report that his has been less frequent after some tuning and practice. Every flight I learn something and I have gained more confidence as I work toward flying helicopters.

While assembly of anything new can be intimidating, it is very rewarding. In this hobby, building will play a major part in learning about your flying machine. It is a cliché to say this but if you put your mind to it, you can accomplish anything. I began my quadcopter build with a vision of the end result in less than a month I had the knowledge to move forward with my first build. I have met many interesting people along my journey. I have learned many things. Most of all, I have enjoyed myself and I look forward to every chance I can get out and fly. ...Ray



Illustration 1: Here is Ray's Quad. Very, very nice......

## THIS'N THAT

► Got the above article from a new KCRC member. I wish every member would do this. I get a big kick out of sharing the joy of modeling when somebody gets started.

Thanks, Ray. Hope to hear about your further experience as you progress.

▶. Well, on Saturday, May 7<sup>th</sup> we finally got to see the Society of Antique Modelers demonstration by KCRC Emeritus member George " Doc " Shacklett and his friend, fellow SAM member L.A. Johnston of Mount Juliet, Tennessee.



*Illustration 2: That's L,A. on the left and Doc on the right.* 

L.A. drove up Saturday morning from middle Tennessee and did the flying to illustrate Doc's commentary. Doc furnished the planes so that L.A. didn't have to bother with them. Some of them are seen here and L.A. flew most all of them..



L.A. did some very good flying in spite of a bit of wind. He would take off, climb steeply into the wind to altitude, cut the engine and glide back and land on the runway. The models excel at the glide; very slow and majestic and very responsive to the rudder. In competition, the time of glide determines the winner. L.A. was able to make some very impressive turns at just a few feet over the runway to land at his feet.

Doc identified the models and power supply and the rules governing the flying of the particular model in competition and we owe a large debt of gratitude to L.A. who went to a lot of trouble to help us out.

The turnout for the event was rewarding. My brother drove me up and he was impressed by the number of people there.

Of course, a very few of the attendees were there just for the food, but most thoroughly enjoyed the demonstration and was appreciative of the efforts of the SAM members. I saw several KCRC non-members who were there for the demo.

I hope that there might be some more of the KCRC members who are inspired to tackle an old timer construction project. It would be good if we had a few more members get involved with SAM. Maybe not necessarily for competition but just for the flying and building. They are impressive flyers!

► I mentioned the food. Charles Wilson is the head chef for KCRC; at least every time I've been there he is. He does such a great job on the grill that I don't think anybody would challenge him, plus there are always a number of members (member's wives?) who contribute by bringing dishes. Nobody leaves hungry.



Illustration 3: John Baselone is on the left and Charles Wilson is on the right.

.. In the picture above, John Baselone is mostly responsible for the beautiful condition of KCRC field. He and Pres Ralph Holder did most all of the new fence installation and the mowing.

# ► I'll be adding some pictures and text on Old Timers in the next few issues..

► Got some bad news at the demo; pres Ralph Holder tells me he is selling his house and moving to Florida. Ralph has done an excellent job during his two terms as president and he will be missed. He's moving to the Top of the World community where most residents are rc modelers. I think he said there are 65 members in the RC club there, so he won't be lonesome.....Jim

CRASH AND RESURECTION OF THE T-33 Yes, it was my crashed F-14 that was featured in last month's newsletter. And yes, this T-33 is another one of my jets that crashed on its maiden. Actually this happened about a week before the F-14 one. Looks like EDF jet maidens can be risky!

The Air Force T-33 trainer has always been special to me because it was my first flight experience in an Air Force jet. So with that memory in mind I paid up for the RC Lander T-33 model with a 66 inch wingspan, 90mm edf, and a 10s battery. That was three years ago. It was my most expensive model and I was always a little protective of it.

After three years, however, I finally decided it was time for it to fly and brought it out to the field. Phil Cope helped me check it over, and offered to do the maiden. I thought it would be fairly easy to fly, but decided to accept Phil's offer anyway.

Takeoff and climb-out were fairly quick, and Phil was very busy trying to get some trim problems under control. Just about the time he got things almost dialed in, Phil entered a 45 degree descent while parallel to the runway and the left wing folded up. Phil immediately cut the power and made what appeared to be a gentle landing on the grass. The actual ground contact was hidden by the hill, but we both thought there would be only minor damage. Unfortunately when we walked over the hill, we saw what seemed like a thousand pieces.

Pictures 1, 2, and 3 show the T-33 in its majestic beauty on the KCRC runway prior to takeoff.





Please note the afterburner on picture 3.

Picture 4 shows the main pieces after Phil and I loaded them into my car.

In spite of the tragic ending, Phil's test flight was done extremely well. In my opinion, he did everything





right. No one could have overcome the ill-fated circumstances. Even if the wing had somehow made it through the maiden flight, it would have probably cratered on the next flight or during the plane's first loop.

It is a long story and still somewhat of a mystery exactly why the wing failed. During construction I had some suspicions the wing structure might be weak, and wrote an email to the distributor (Max at Park RC Models) questioning the wing's strength and asking for some clarifications how the two wing half's should be joined. Max sent my email on to the factory in China. Tim Wan, the RC Lander Owner and President, replied directly back to me with specific details how the wings should be fastened together, and I followed all those instructions.

After the crash I contacted Max and sent him a few pictures. Because, it has been years since I bought the model, I did not expect him to do anything for me; I just wanted him and Tim to know what happened.

Over the next week Max asked numerous questions about the flight, and also had me take pictures of the various pieces. Max and Tim reviewed the results and then decided to replace the plane for me if I would just pay the freight. Instead of a PNP version, it would be a kit, but with the servos already installed. Also, I sent Max the edf fan and motor, the esc, the ubec, and the three retracts/struts. Max insisted they all be tested and indicated he would either repair or replace anything not right. In any case they would be as good as new for me to drop into the replacement T-33 kit.

Phil Cope and Craig Dieter both volunteered to do the wing construction for the new bird. They planned to use something stronger and beefier than what comes with the kit, and not to simply follow the instructions like I did. Several others have also volunteered to help make sure other problem areas in the kit get done perfectly.

During this last week I received the new kit from China, and Max also returned all the electronics. Phil finished and gave me the wing today, and it has got to be the strongest T-33 wing around. I am almost finished assembling the fuselage, which consists of 7 large separate pieces. So construction is well under way.

Thanks to everyone for their help, and to Tim and Max for replacing the plane. The resurrected T-33 will be ready soon, and hopefully will be a good flyer.

Phil has kindly agreed to again do the maiden, and perhaps this time it will be uneventful......Frank Allemand..."

► Wow!! Sounds like a pretty good company to do business with, and the help from KCRC members is pretty awesome too....

#### KCRC Meeting Minutes 5/10/2016

• The May 2016 KCRC Meeting was held at the KCRC Flying Field. President Ralph Holder called the meeting to order at 7:00PM.

• President Holder asked for approval or corrections to the April Meeting Minutes which were approved by unanimous voice vote.

• President Holder passed on a message from Phil Spelt asking for volunteers to help with the SPA contest to be held at the KCRC field next weekend May 14<sup>th</sup> and 15<sup>th</sup>. Several members raised their hands pledging to volunteer.

• Ralph Colon announced he will be hosting a float fly/fun fly soon, but no date has been set.

• Phil Cope announced 2016 Joe Nall is currently taking place in Woodruff, South Carolina. There are still a few days left to attend as it runs until May 14<sup>th</sup>.

• John Basalone brought up the possibility of replacing the names of deceased members under the flightline shed. Some of the letters are peeling.

• John Basalone, who furnished the 4 slabs comprising the new helipad, reported that it is in place but still needs to be bolted together and buried flush with the ground.

• Model of the Month single entry was a Grumman F7F Tigercat by John Williams.

• There were no Crash of the Month entries that anyone would admit to.

• President Holder announced he and his wife have decided to move to Florida. He will continue as KCRC President until such time as they move, but doesn't know how long that will be.....

Meeting was adjourned at 7:25PM. Minutes and MOM picture taken by Rick Thompson for Secretary Ed Dumas, who was out of town.



Illustration 4: John Williams's beautiful Tigercat

#### MORE THIS'N THAT

▶ Got this note from L.A. Johnston after the SAM demo;

" Jim, I would like for you to forward this to all the club members you think might be interested!!

First, I had a really great time flying at your field yesterday!! It's not often I get to have the whole sky to my self!!!

I have come to realize that so many of the modelers in this day and time have never actually seen models of this type, much less having actually seen them fly, so I feel privileged to introduce them to these models. I always have hopes that some may be interested enough to join us in flying the old timers, I don't care whether they fly them in competition or just for the relaxing nature of their flight, but if they never see one fly, I know they will never know what they are missing out on.

From the amount of interest shown at your field, I have high hopes that we have "flung a craving on some of them"!!!

Nothing is so beautiful as an old timer gliding in to a perfect landing just at sun down. "when you come to the end of a perfect day"!!!!...L.A, "

And this one from George Shacklett;

" Hi Jim.

I just want to thank the club for inviting input from us on old timer (SAM) airplanes. We really enjoyed doing it and hope the club members took home an idea of what SAM flying is all about. We of course would like to get people building old timers whether they are interested in SAM competition or not. LA especially was impressed by the cordial reception of the members, which is a good indicator of a flourishing club. Altogether a great day weather wise and we got to "show off" a little. The picnic lunch was also excellent and was a good ending for us with good interaction from fellow modelers

Thanks also to Jeff Elliott (former KCRC president) and Steve Fleetwood who helped 2 old geezers do the demo......George "

I think everyone enjoyed the experience of Old Time flying. Especially Craig Dieter, a long time KCRC member who is very familiar with the planes. L.A. Handed him the tranny and let him do a bit of the flying.



Illustration 5: Craig sent me this photo of him and L.A. That's Steve Fleetwood in back. You can see the size of the crowd in the background.



Illustration 6: Others enjoying the SAM demo. Phil Spelt on the left and Ralph Holder on the right. In back is Phil Cope and Warren Oliver. Further back is Sid Tibbs and Carroll Jernigan..

## Dennis Hunt

June 23, 1927 – May 15, 2016

Lifetime modeler Dennis Hunt, an Englishman, passed into eternity at 12:15 am on May 15, 2016, at Harriman Medical Center in Harriman, Tennessee. He has left a legacy of modeling accomplishments, many in Rhodesia (Zimbabwe), where he grew up after World War II, and many more in East Tennessee and around this country. During WW II in London, he worked as a teenager in the concrete boat-building pits along the Thames River, where his father was an engineer.

Sometime after moving to Rhodesia, Dennis got involved in model airplanes, and was an early radio control pilot, concentrating in aerobatics. Via letter and telephone, Dennis came to know Ed Kasmirski, a Hall of Fame modeler, designer, builder and pilot of two landmark pattern (aerobatic) models – the Orion and the Taurus. Dennis had built his own Taurus from handdrawn plans and notes from Ed. In 1962, Dennis brought Kasmirski and his two Taurus's to Africa, where they toured the continent doing aerobatics demonstrations and contests.

Over the years, Dennis had several model airplane factories, first in Zimbabwe and then in Oak Ridge, Tennessee. Dennis left Zimbabwe shortly after the transition from Rhodesia, and joined his brother in Knoxville, TN, about 1984. Dennis was an early and significant contributor to the Senior Pattern Association, a group founded to fly pattern the way pattern was flown during what many consider its "Golden Era", through 1975. His Daddy Rabbit short kits and almost-ready-tofly (ARF) planes are still very popular in the SPA. He and a friend in the South African Air Force marketed a pattern plane named the Panzer from about 1963 until well into the 21<sup>st</sup> century.

Dennis was preceded in death by his wife of



many decades, Margaret. They had three children, daughter Anne, son Barry, and late daughter Linda. Anne and Barry still live in the Harare area of Zimbabwe. Dennis has a grandson, Michael Stern, living in London, who is a world champion radio control discus launch glider competitor.

Eulogy written by friend and fellow KCRC Emeritus member, Phil Spelt

### 2016 Ben Oliver Memorial

The annual KCRC version of the SPA contest trail was held at KCRC field on the weekend on May 21<sup>st</sup> and 22<sup>nd</sup>. Although the weather was threatening on Friday, it cleared up enough on Saturday morning to allow the full four rounds scheduled for the day.

There were seventeen contestants who made the effort for this one, and everyone had a good time. SPA President Bruce Underwood, who I believe has made all 24 of the contests at KCRC, was there and had some good words for the KCRC effort..Co- CDs Phil Spelt and Warren Oliver did good work organizing things again and both competed in the flying.. Several KCRCers pitched in and helped staff the contest.

Before the contest at the pilots meeting, Phil went over the contest rules and gave a nice bow to recently departed KCRC Emeritus member Dennis Hunt. Dennis was a hard worker in the SPA almost from the beginning and produced several of the designs and models used by the competitors over the years and in this years competition. Dennis's version of the Daddy Rabbit is one of the more popular models in most of the contests.. A moment of silence in remembrance of Dennis was held before the competition started.

Although some of the usual competitors from KCRC were absent, there were some new novice pilots from our ranks. Jimmy Russell came in first in Novice, Dan Toombes came in second, and David Johnson came in third flying a vintage Daddy Rabbit that had both Ed Hartley and Dennis Hunt in its heritage.



Illustration 7: David Johnson and his Daddy Rabbit. I got the picture and most of the info from Bruce Underwoods write up..

Bill Dodge did some good flying to come in second in Advanced and co-CD Warren Oliver, flying his original " Oliver Twist ", cane in second in Senior Expert.

Joel Hebert did his usual fine work doing the scoring. Joel has done this as long as I can remember and I have a pretty long memory. Dennis Hunt was CD

for a long time with Ed Hartley helping and Phil Spelt and Warren Oliver have stepped in. As Bruce Underwood said, " KCRC, ya done good...again. "



This picture taken by Randy Philipps of the pit area during Saturday morning shows the line up of models and the threatening skies. Wet runway testifies to the rain which fell Friday and early Saturday morning.



*Illustration 8: Randy Philipps picture of Rick Thompson at the Joe Nall.* 



Illustration 9: And here is Randy