



KCRC Officers for 2006

President.....Phil Spelt.....Phone 435-1476
 Email chuenkan@comcast.net
 Vice Pres....Gary Lindner.....Phone 986-9050
 Email lindner2@bellsouth.net
 Secretary..Jim Scarbrough..Phone 986-3857
 Email jimscarbrough@charter.net
 Treasurer.....Joel Hebert.....Phone 927-1624
 Email hebertyj@comcast.net
 Safety Officer. .Bill Walters..Phone 406-3246
 Email williamwalters1@comcast.net

Board of Directors

.Mike Foley.....Phone 865-986-6153
 Email m_foley@bellsouth.net
 Gene Waters.....Phone 865-483-9698
 Email ehwaters.1@juno.com
 Jerel Zarestky..Phone 865-482-7953
 Email jerzee4@comcast.net

Historian.....June Cope.....694-8687
 Webmaster.....Phil Spelt.....435-1476
 Editor.....Jim Scarbrough.....986-3857

Mar, 2006 ---- Knoxville, Tennessee ---- AMA Chapter 594 Newsletter.....jimscarbrough@charter.net
KCRC website.....www.kcrctn.com
KCRC Newsletter(PDF) available on KCRC website for downloading

The meeting for March will be on Tuesday, March 14th, 2006, at Deane Hills Rec Center at 7:00 PM.

PROPWASH

by Phil Spelt

It is now SPRING!! And "young" people's thoughts turn naturally to...flying R/C airplanes!! What else?

As we head into the flying season, I think it would be good to review a few points of field courtesy. Flying R/C airplanes in not intended to be an unconscious or subconscious activity. You need to PAY ATTENTION at all times, as these planes can hurt if you rub them the wrong way.

Frequency clips are not designed to replace buttons on your shirt, and were not put in the pin cabinet for decoration. They indicate to other fliers what channel you are flying on. Think of them as shoot-down insurance for your plane.

Most pilots, no matter how hot the day, are not seeking to cool of with the oily blast from you propeller. Please watch the direction of your prop wash.

All the visitors to our field agree we have a very beautiful flying site. Most of us are in agreement that we do not need any additional "exterior decorating". Cigarette butts, broken props, glow plug wrappers, etc., do not make the field more beautiful. A wonderful rule of thumb is, "If you brought it to the field, take it home with you." George Campbell, while he is willing to police the field, would really rather fly, I'd bet. At the field, your trash is not someone else's treasure!!

While it may be true that the adult visitors to the field have heard every cuss word in the English language, their young children probably have not. In any event, it is not likely that they said to themselves, "Let's go out the KCRC and see if we learn new ways to swear." Our guests DO come out to watch us fly, and to learn something about our sport. It is good to be a KCRC and R/C ambassador -- go talk to them and offer to answer any questions they might have. Let's have another great year at KCRC!!

Meanwhile, this is The Wingman, turning final.....Phil

Meanwhile, this is The Wingman, turning final.....

Model of the Month entries are top picture is of MM winner Douglas and Michael Armitage and their Daddio racer.

Next picture is of Bud Weisser and his unique Canard The next



picture is of Steve Bayless and his ARF bashed Hangar 9 T-34. Looks a whole lot like a Beech Bonanza. Jeff Prosize's P-40 is on page 4.



AT THE FIELD

Watts Up ! by Scott Anderson

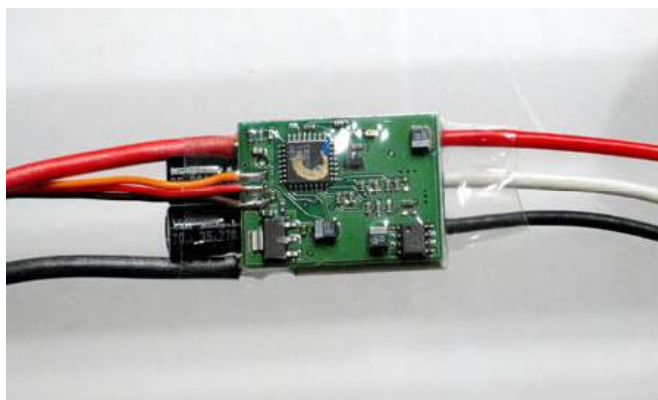
Well, here we go and another flying season is upon us. I have been busy with my new electric pattern plane and getting my lipo packs ready for another season. We are going to look at speed controllers in this article and the most popular one is the brushless ESCs for the brushless motor; either a "can" style or the "out runner".

The speed controller is the gatekeeper that controls the electricity to the motor via the throttle channel on your receiver. WOW, that was the easy version! Okay, the speed controller does several things. There are two types; with and without BEC (battery eliminator circuit). The other important issue is whether or not the ESC (electronic speed controller) is being used with Lipo's. If it is, the ESC must have a programmable low voltage cutoff because the voltage per cell should not drop below 3 volts per cell or the cell will be damaged. Also, remember when charging the battery, NEVER charge at a rate greater than 1C of battery rating!!!

Back to the BEC. With the 3 cell lipo's, the BEC takes the 11+ volts and regulates it down to 4.8 so you can run the RX and servos from one battery, and when the "low voltage" cutoff has been reached for the motor, there is still enough power left in the pack to run the flight controls.

A speed controller without the BEC needs a separate RX battery to run the flight controls, This can actually be a good thing since with the bigger planes, if something goes wrong with the motor pack you can still have power to the flight system for a landing.

There are many controllers on the market and almost all have features that can be programmed by either a computer or a card. I use the Castle Creations units and these have many features and are easy to program. This is the Phoenix-35 by Castle Creations.



In the picture, you see the two wires for the battery and

three wires on the other end for the motor. Remember that the brushless motor is AC and the controller converts the DC battery power into a 3-phase AC system.

The other thing that needs to be looked at is how to connect all of the components together. There are different size bullet connectors and if soldered correctly and kept clean, these are fine for the smaller systems. Every connector adds loss (because of electrical resistance) to the efficiency. With the larger setups, the best way to make the connection is to solder the ESC leads directly to the motor.

This leads us to soldering with poor "cold" solder joints which can create high resistance or even a broken joint and poor motor performance. When soldering, two things are important; first is the joint needs to be clean and the second is enough heat and solder to make a clean tight joint.

Well this should at least give everyone the basic idea and there are hundreds of threads on various websites and articles in the magazines for more info. If anyone needs numbers run for an electric conversion, let me know and I will run the numbers thru my software, or if you see me the field feel free to ask questions and look at my electrics.

Safe Charging!Scott



This is Charles Wilson's new P-51. It is the Top Flite Gold Edition Mustang and Charles has powered it with a Saito 150. The beautiful covering job was done by Denny Evans and the plane he chose to pattern the model after was the "Duchess Arlene" of the Tuskegee Airmen. The model is sitting on SpringAir Pneumatic retracts. Charles chose Hitec HS-645 servos to operate the control surfaces.

Good looking model, Charles, but just how many P-51's do you have?

Remember that the new gate combination is on the envelope that this newsletter came in.....Jim

MINUTES For FEBRUARY 14TH

The KCRC meeting for February took place at Deane Hills Rec Center n February 14th, 2006 with President Phil Spelt presiding. The meeting was called to order at 7:10PM and there was 21 present, although about 9 others came in late.

There were no minutes taken from the January meeting because of the banquet

Treasurer Joel.Hebert was not present due to illness, so there was no treasurer's report. Joel was having tests run at the Oak Ridge hospital.

Ed Hartley brought 2006 card stickers for the paid up members and these will be distributed by mail to paid up KCRC members with the March newsletter. The cost was \$75, and Phil paid Ed from the dues collected at the meeting.

OLD BUSINESS

Scott Anderson, although not attending the meeting because of work, sent word that the AMA pattern contest scheduled for August has been sanctioned. There will be a call for volunteers at a later time t staff the event.

Dennis Hunt said that the SPA contest scheduled for May was proceeding well, and that he also would be looking for help in conducting it. In both activities there will be a need for as many KCRC members as can help. Also, the SPA contest especially would be a good time to test your competition flying, as it is fairly low key anda good time to meet flyers from around the southeast.

There was a question abut electrifying the pit area. This was a project that Denny Evans had taken on. Unfortunately, this was before Denny was attacked by a motorcycle-jacking deer. Denny is recovering slowly from the injuries suffered in the accident. Perhaps Denny could supervise work done by more able bodied members and get it done?

Pres. Phil Spelt said that another Warbird Fly-in was being scheduled by the Tennessee Eagles in Harriman for this summer. There was no objection raised to KCRC being a co-sponsor for the event. More later.

NEW BUSINESS

Scott Anderson (by proxy)raised the question of acquiring a big tent or some kind of cover for the runway area for a cookout after the competition on Saturday for the AMA pattern contest. There was some discussion abut whether or not we wanted to do this again this year. Several members who attended last year felt it would be fun to repeat, but others felt that it would be better to have it at a local restuarant. No action at this time.

Phil Spelt and Jeff Prosize agreed to get up a Float Fly to be held this summer. Location at this time is uncertain and will be set at a later time. Phil will check on the availability of the flat water where the Tenn Vols do their regatta sculling on the Melton Hill backwater.

Several members mentioned that some vehicles

were coming in to the runway from the park area where the marines had their MudRun last summer. Apparently the gate has been taken down. Phil said he would get in touch with Park Director Doug Battiele and let him know about it.

Ed Hartley wants to get up a mail list consisting of as many local clubs and club members around east Tennessee as can be put together. Pass the word and have them get in touch with Ed at www.rcpattern.com.

Gary Lindner reminds that the gate combination will be changed around the first Saturday in March. The new combination is to be found on the envelope this newsletter came in.

Gary also said that a workday is needed to take care of some needed maintenance around the field. Some painting on the frequency pin box is one thing that is required. Also some pea gravel is needed around the benches to keep your feet out of mud.

Bill Walters did some laminating on AMA cards at the meeting.

MODEL OF THE MONTH

Several models were entered this month. The first was the newest(?) effort by Bud Weisser. The entry he had a couple months ago was damaged by a faulty stick movement, so he used the knowledge gained in the construction of it and built a canard. The fuse is aluminum channel and the wing is a salvaged unit from a previous bad landing. Canard and elevator, along with verticle stabilizers are of corru.gated plastic. Power is a .40 LA.

Next entry is a scratch built Daddio Racer by Douglas Armitage and son Michael. The plan was taken from a magazine and blown up. Michael did a considerable amount of the work himself. Power will be an OS .10.

Steve Bayless brought his ARF bashed version of a Beech Bonanza. Steve bashed a Hangar 9 T-34 ARF and did this beautiful work.Has flown it and says it did well.

Jeff Prosize brought his latest. A Hangar 9 P-40. This is a beautiful model that is enhanced by a working set of headers that take the exhaust out in a scale manner. Powered by a Saito 100 and has Century Jet retracts.

Michael Armitage won a gallon of fuel with the Daddio Racer.

CRASH OF THE MONTH

The only entry in this contest was by Bud "Crash" Weisser. Bud gave an account of the first crash of the month entry for 2006 of his Hangar 9 Twister. He brought along the pieces remaining of the crash and displayed them while recounting the last days of the poor model. Needless to say, Bud won the glue.

*Meeting was adjourned at 8:00 PM, February 14th, 2006
Minutes taken by Secretary Jim Scarbrough*

This'n That

Electric Happenings

I am not surprised at the interest in small electric models. It is a phenomenon that started when the first modeler put a rubber band and a free spinning prop on his latest effort in creativity. That worked, so the search began for more power. The wet engine, gas and later glow, came along and kept moving along getting better and better. The search for better, more efficient means of powering the models did not slow down but kept right on going. The free standing cell type battery, and an associated motor, was a dream that wouldn't die. The inefficient brushed motor was eventually improved by the way more powerful brushless type, and the graphite dry cell now is replaced by rechargeable nickel-cadmium and nickel metal hydrides and more recently by the wonderfully powerful lithium polymer batteries. It is now possible to power a .40 size sport model with an electric system that costs a little more than a good .40 size combustion engine but will perform as well! The price seems to be coming down as the quality goes up also. The time of a typical flight is increasing, and can be long enough to satisfy most any flyer.

The number of models available for most any kind of aerial activity boggles the mind. It now is not so much trying to find something that can be used, as trying to make up your mind as to which of a great many very good designs you want to buy. The radio and power systems are now available that are required to fly everything from 3.5 inch wingspan indoor models weighing less than a gram, to huge, awesome aerobatics and competition type models. The technology and engineering is always seeking new frontiers and they are succeeding.

Speaking of electrics, Scott Anderson did a couple of articles for the newsletter recently explaining some of the complexities of choosing a system to power your model. Recently I received a catalog from Hobbytown that had some good articles in it showing how to use some of the products they sell. They gave examples of power systems to fly various models they sell. The systems they showed gave parameters for choosing the system you need for the type flying you want to do. I found it to be very informative and expanded on the information that Scott put into his articles.

As an example, they showed a system that could be used to fly one of the Ultra Stick .40 models that are distributed by Horizon Hobbies. Using an E-Flite Power 46 brushless motor (\$110), Castle Creations Phoenix 60 ESC (\$118), APC 13X8 prop (\$5), and a 4 cell Lipo battery (~\$230), the weight comes in at ~ 5.5 pounds

and the input Watts/Pound is ~124. This thing will fly like it had a strong .40 glo engine on its nose and will do most anything you want it to do, but as you can see, it ain't cheap! For about \$600 you can have a complete, ready to go electric funster to put your radio in. You can cut the price down some by going with NiCd or Nimh batteries, but at a sacrifice in weight and power. To fly with wet power, the cost of the same model with a .46 glo engine in the nose would be about \$300. Of course, you also have to spend about half of that again to buy starter, starter battery, fuel, etc. etc.

You don't have to spend this much to have fun, however. There are any number of combinations of motors, both brushed and brushless, and ESCs to choose from, and unless you want competition style flying, you can have some lazy, relaxing flying on these upcoming spring days..... Jim

Jeff Prosize is accumulating data to form a frequency data base so that the number of units on a certain channel can be accessed. This way, a member buying a new unit can try to find one with a lesser amount of activity on it. So far, there hasn't been a problem with having flying time denied because of a frequency pin conflict, but it could happen in the future.

District V Vice President Tony Stillman of RadioSouth reminds us that the FCC says it is illegal to change the crystal in a transmitter in order to go to a different frequency. Changing the RF module in a transmitter that is designed for it is OK because you are not messing with the RF circuitry,. Also changing the frequency on a transmitter equipped with variable frequency synthesisers is apparently OK.

You can send a transmitter to a professional to get the channel changed fairly inexpensively. If you did it yourself, it is possible that the circuit could be detuned enough to create problems with adjacent channels.

Jeff is presently contacting all members of KCRC to get the frequency information for his data base. It is to your advantage to let Jeff know your channels....Jim

Belw is the business end of Jeff Prosize's Hangar 9 ARF P-40. Jeff has invested a pretty penny in the front end with a custom header that takes the exhaust out in a scale manner. The header is designed and fitted to the particular engine used. I haven't heard it run yet but I'm looking forward to the experience. Check out the Century Jet retracts also. Pretty nice, huh?

