



## Newsletter

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Please consider this my last effort at producing the KCRC newsletter. Because of age and various health issues, I have been unable to take an active part in club affairs for several years and find it increasingly difficult to fill the pages of the monthly issue so I feel it is time for me to step out.

To all my friends past and present, I remember you all and the great times we had at Blockhouse Valley Road, Lovell Road and the present site.. Especially those early days when a successful flight was an event to celebrate....Jim Scarbrough, proud Emeritus member of KCRC.

### THIS'N THAT

► Got a note from KCRC pres Ed Dumas on the Independence Day flying at the field. Unfortunately, Jerel and his Magnificent Ice Cream Machine was unable to get there this year.

Ed says: " Hey, the Fourth celebration went well Jim!

We had good weather, Charles Wilson and John Basalone cooked hot dogs and hamburgers, and we had about 15 or so folks flying and eating.



The festivities lasted until about 2:00 or so, when it got so hot that folks ran for the A/C.. When we got there (about 10:00 am), all the benches were full and it was standing room only for a little while. It was a fun day!

I've attached a few pictures....Ed"



► Got a Safety note from Denny Evans, KCRC's Safety Officer'

" Hello KCRC,Well it has been so hot lately with the temperature soaring into the 90's that not many pilots are staying at the field past 12 to 1 o'clock and by that time the heat has almost completely drained you.

With that being said; try to remember to put on sun screen (put some in your flight box) and wear a hat of some sort.

I have noticed on our planes that have Monocote type coverings on them, the direct sun will cause the covering to come loose and wrinkle, so try to keep your planes in the shade as much as possible when your not flying them.

I haven't been able to be at the field as much as I would like, but of the times that I have, I've not heard or seen any safety issues to report.

Stay hydrated, try to keep cool and have fun.

**Your safety officer, ....Denny"**

**Very good advice, Denny.**

► Ed Dumas has been working on the weather station..

“Hi Jim, Here's a quick tidbit about a modification I just made to the KCRC weather station.:

After some discussion with Randy about the performance of his new Waco biplane in the past few weeks, we started talking about the effects of lower air density (due to the higher air temperatures of summer, mostly) on the performance of models. I went ahead and added a density altitude calculation to the website so that folks can be more aware of the effects of high temperature and the resulting lower air density on the performance of their models. The density altitude, which is measured in feet above mean sea level (MSL), is now displayed on the KCRC website just below the battery voltage in the list on the right side of the page. It is also displayed in the same place on the mobile website.

The density altitude is simply the altitude in the standard atmosphere where the density of the air at the field right now is the same. The variables that affect the density altitude are the air pressure and the air temperature. As air pressure decreases and as air temperature increases, the density altitude will increase. Conversely, as air pressure increases and air temperature decreases, density altitude will decrease. Keep in mind the field elevation of KCRC is 938 feet MSL. So, on a cold day in the winter, the density altitude may be lower than the actual field elevation, indicating that the air that day behaves as if it were at a lower altitude in the standard atmosphere than the field elevation. Conversely, on a hot day, the density altitude most likely will be greater than the field elevation, sometimes by a significant margin. This accounts for longer takeoff rolls, reduced power from the engine (if it is nitro or gas), and less lift and drag produced by the propeller and airplane wing at a given flight speed.

Using density altitude, full-scale pilots can compute the performance of an airplane quite accurately. For example, knowing the density altitude at the time and place of takeoff is critical to be able to determine the amount of runway needed to takeoff and to determine the climb performance of the airplane once it is airborne. This calculation is critical when trying to takeoff with a fully-loaded aircraft on a hot summer's day from a high-altitude airport in the Western US and trying to clear the 50 foot trees at the end of the runway...

In a nutshell, hot days can seriously undermine the performance of your plane...

The following website is useful for gleaning more information about this subject.....Ed:

[https://wahiduddin.net/calc/calc\\_da.htm...](https://wahiduddin.net/calc/calc_da.htm...)

Thanks, Ed, for the station and for the work you do on it. Very useful and helpful. Michael Catlin has been posting the field weather on the KCRC Facebook page....

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## KCRC Meeting Minutes 7/10/2018

### OLD BUSINESS

The July 2018 KCRC meeting was held at the field. Vice President Paul Funk conducted the meeting due to President Ed Dumas being out of town. There were 17 in attendance .

Paul recognized new club member Jim Duke. We welcome Jim to KCRC.

The June minutes were approved by unanimous voice vote.

Michael Catlin gave the Treasurer's report which was accepted by unanimous voice vote.

Michael Catlin conveyed that the club's fuel supply is low but that Bill Dodge would like to have purchase commitments for about 20 gallons before ordering another drum of fuel. Those wanting to commit to purchasing fuel should contact Bill Dodge.

There was a discussion regarding repairing the plaque honoring Eddie Smith. The plaque has fallen from its mounting point on the fence and is in a state of disrepair. Phil Cope made a motion to replace it rather than trying to repair the old one. The motion carried by unanimous voice vote. Perhaps the new plaque will be mounted in a location where it is protected from the weather for better longevity.

Safety Officer Denny Evans reminded everyone to stay hydrated while the weather is so hot. He also reminded everyone to remember to call "runway". While the club is doing better at this, there is still room for improvement.

Phil Spelt reported that the SPA pattern contest will be held August 25<sup>th</sup> and 26<sup>th</sup>. Phil will CD the event and Jimmy Russell will assist. Registration will begin at about 8:30AM and Phil will need volunteers to help, especially during registration.

Phil Spelt announced that the Marine's Mud Run is set for September 15<sup>th</sup>. Allen Hunt, who mows the field is aware of the date and will mow the week before the event. Any flying done during the week before the event, while the Marines are preparing the site, should be done using extreme caution and in coordination with the Marines.

The Community Outreach Committee did not have a report, however Michael Catlin is looking for events in which KCRC might set up displays.

### NEW BUSINESS

One of the members found the gate had been left open on June 23<sup>rd</sup>. As a reminder - the last member

leaving the field should be sure the gate is always locked when they leave.

Paul conveyed that Ed Dumas would like to know if there is interest for another indoor fly-in. Members are encouraged to let Ed know your support therefore.

Paul announced that Evan Turner and his team, "Quad Force One" has been in Europe competing. In Munich, Germany they did not do too well in the 1<sup>st</sup> round due to a crash. In the 2<sup>nd</sup> round however, they came in 2<sup>nd</sup>. In Madrid, Spain they did extremely well, coming in 2<sup>nd</sup> in the 1<sup>st</sup> round and 1<sup>st</sup> in the 2<sup>nd</sup> round. Their next venue is Simatai, China where they will be competing near the Great Wall.

Kevin Turner, Evan's father, indicated to Paul that since the field has recently been cut, they may be able to start setting up the drone course next week.

Phil Cope announced that the "Jets Over Kentucky" event is currently in progress and will be running through this coming Sunday July 15<sup>th</sup>. The event is at the Lebanon Springfield Airport, 650 Airport Lane., Springfield, KY.



Model of the Month was won by Kay Kasemir for



*Illustration 1: Kay and his great looking Monsun*

his beautiful Monsun. Kay built the electric powered model from plans only, including vacuum forming the canopy and cowl.

There were two entrants for Crash of the Month. Gary Swigart lost an older nitro powered plane when it suddenly went in during the base to final turn. The plane was not recovered and likely went into the water. Gary is not sure exactly what happened, but radio failure is suspected.

Allan Valeo's Factor 3D plane was destroyed in a "spin into the ground" accident. Unfortunately there was simply not enough altitude to recover from the spin. Allan's accident was voted Crash of the Month winner and he already has another Factor on order.....

### Minutes taken bt Rick Thompson, KCRC Secretary

► **The Society of Antique Modelers, Chapter 43**, had its annual contest at Cedar Hill, Tennessee, on July 13<sup>th</sup> and 14<sup>th</sup> and, as usual, a couple of KCRC alumni attended. KCRC Emeritus member Doc Shacklett seldom misses one if there's any way he can get there. Also former KCRC president Jeff Elliott attended as well as KCRC friend L.A. Johnston..

Doc sent a note and a couple of pictures.

"**The 22nd SAM in Tennessee** contest was held at Cedar Hill TN, home field of the Cumberland Flyers club. There were 12 contestants from TN KY



*Illustration 2: Doc getting ready for a flight with Jeff Elliot holding and L.A. Johnston looking on.*

and OH. The weather was HOT but lots of good thermals were around and some were able to

partake of some of these.

LA Johnston flew my airplanes for me, since I no longer fly "in public". As usual, the friendly visits and interaction prevailed, which always pervades SAM contests. The group is older, resulting in fewer flyers in recent years. Bob Metzger from Cookeville (a California transplant) was the CD and as usual did a good job capped off by a great feast at a local watering hole with many flying yarns for desert.

Several contestants will be planning to attend the 50th SAM Champs in Muncie IN in September. The overall Champs contest manager, Tom Boise came down to fly with us. He is in overall charge, with individual CD's for free flight and RC. Hope TN flyers can do as well at Muncie.

As usual, you can edit as you see fit. I didn't see going into detail about winners, various events etc—thought the newsletter readers would be interested in just a TN SAM news item. If you need further help with the pictures, let me know.....George “

Thanks, Doc. Looks like you had a good time.

► **From KCRC President Ed Dumas::**

About a week ago, a man went missing in West Knoxville and a massive search was initiated to look for him. At the same time, KCRC was contacted about possibly providing assistance in the way of drone flights that could aid in the search. I assisted on Saturday morning, July 14, 2018.

There are several things that are different about this type of flying from the "normal" flying that we do everyday. First, and most obvious, is the flying did not take place at KCRC. I ended up flying over some thick woods near the corner of Fox Lonas Road and Cedar Bluff Road to do a systematic survey of the area and make geo-referenced photographs of any items of interest. This flying was done under FAA's Part 107 rules that govern operation of small UAS for commercial and non-recreational purposes.

To review, our flying at KCRC is done under the guidelines of a community-based organization, the AMA, and the FAA allows small aircraft to be flown under these rules using its Section 336 provision that was authorized by Congress in both 2012 and 2018. In order to operate under these rules, the pilot of an aircraft must be properly registered with the FAA and the registration number must be displayed on the aircraft and accessible without the use of tools. In this case, the pilot registers and puts his/her unique number on all of

his/her models.

Things are a little different when operating under Part 107... First, the pilot must be properly "rated" by passing an FAA written exam to show knowledge of the rules of airspace, FAA regulations, basic aerodynamics, and the rules of operating a drone under Part 107. Following that, each aircraft that is used for a Part 107 operation must also be registered with the FAA. In my case I used my DJI Phantom 3 Professional that is registered with the FAA for Part 107 operations.

When flying under Part 107 rules, several things have to be considered. First, the maximum altitude allowed is 400 feet AGL. When flying within Class G (uncontrolled) airspace, no prior ATC permission is required. If the aircraft is being flown in either class B, C, or D airspace, ATC permission must be obtained before the operation commences. The airspace type can be determined using a VFR sectional chart, or a variety of online tools (e.g. B4UFLY). Several other restrictions exist, such as no operations are allowed at night, there is no flying with external loads, and no flying over non-participating people. Additionally the aircraft must be kept within unaided visual sight of the pilot at all times.

In certain cases, pilots and organizations can apply for waivers to these rules, but the burden is on the pilot and organization to make a safety case to the FAA to show exactly how safety will not be compromised for the proposed operation. One of the most popular, but most difficult to obtain, waiver applications is to operate a sUAS beyond the pilot's visual line of sight (BVLOS)... The statistics (as of 07-17-2018) are of the more than 1000 applications for waivers to the BVLOS rule, only 13 have been granted! For more info, go here:

[https://www.faa.gov/uas/request\\_waiver/waivers\\_granted/](https://www.faa.gov/uas/request_waiver/waivers_granted/)

A technology called Low-Altitude Authorization and Notification Capability (LAANC, pronounced "Lance") is being tested that will issue authorization to fly in controlled airspace in near real-time for most drone operators. It isn't quite here in Knoxville yet, but it should help for operations that take place in and around the controlled airspace near airports.

Unfortunately the flights that I made for the missing person last Saturday didn't yield any useful information, but it did verify for his family that he and his car were not in the woods near Fox Lonas and Cedar Bluff. The search ended badly shortly after I wrote this.....Ed