



September 2019 Newsletter

Knoxville TN AMA #594

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KCRC Meeting Minutes

Since the KCRC executive committee did not meet in July there are no meeting minutes to present. But there has been a lot of activity with the club and the flying field.

First, at the field, John Basalone has been busy, very, very busy. The refrigerator has been moved from its sight blocking position to the corner of the pavilion. This will allow members a better line of sight during meetings. To move the refrigerator John had to build a weather shield and move an electrical outlet. John has also built 3 picnic tables to replace the existing and deteriorating tables. These new tables should be with us for years with their solid construction. In addition, John has hung shades on the West wall of the pavilion so evening meetings will not require squinting into the sun. Add to that the replacing of steps and floor boards and things are looking better and better. John has also erected a safety barrier around the race car track and replaced the rotting rope barrier which denotes the limit of the parking area. Great job John in keeping the flying field presentable.

2019 Elected Officers

Pres.....Ed Dumas.....ed@eddumas.com

Vpres.....Paul Funk.....paulfunk24@gmail.com

Secretary.....Roger Kroodsma.....rogkroods@att.net

TreasurerMike Catlin.....catlimi2000@gmail.com

Executive Board

Randy Philipps.....randy@accessolutionsinc.com

John Basalone.....jrbfarm@yahoo.com

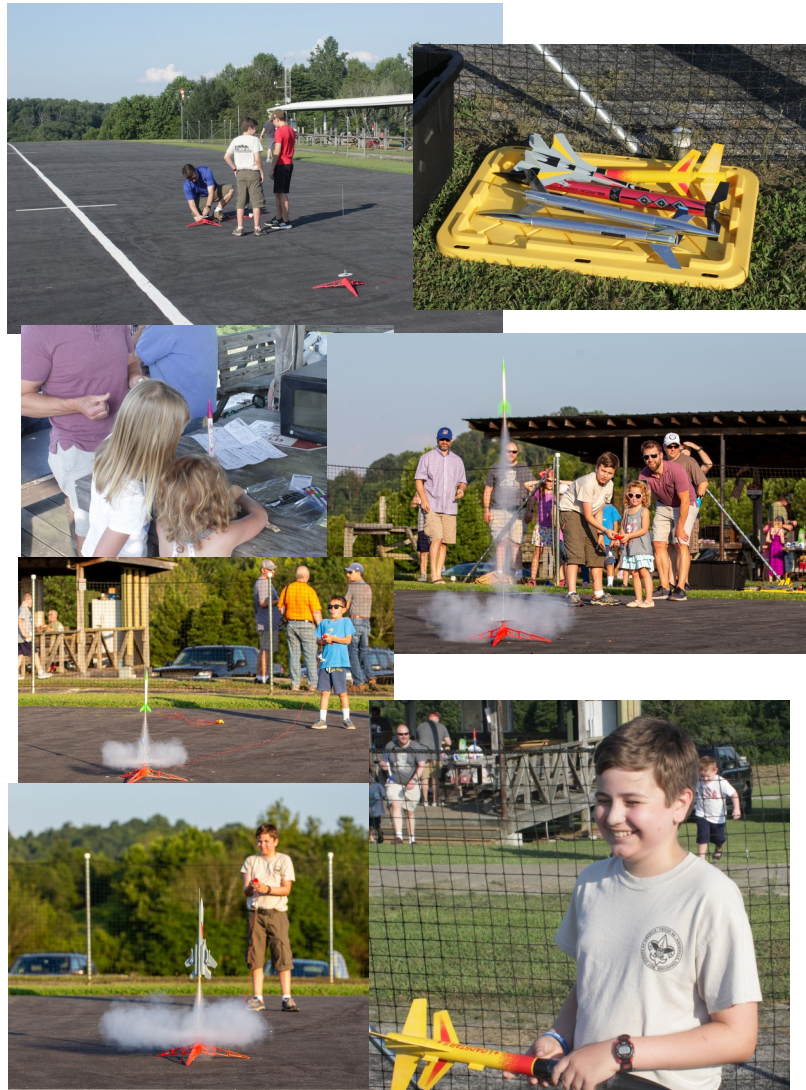
Safety Officer

Denny Evansevans9633@bellsouth.net

On July 27 KCRC hosted a scout rocket launching event which was well attended by children (and adults) of all ages.



The launch pads were set up in the middle of the runway near the West end to allow for parachute drift although with the nearly calm conditions drift was minimal. Some parachute deployment failures showed that keeping one's eye on a falling rocket was desirable.



If you are wondering about the August newsletter I had difficulty getting approved by the Executive Committee as an article and my reply was considered better to bring up at the September meeting. So, for this newsletter I have made a few observations concerning an event that happened at the field on August 31.

Tenerife Event

I have always been interested in air crash investigation and one of the first things I learned is that it is usually a chain of events that lead up to the crash. If something “breaks” the chain, no crash. But by investigating the whole chain that led up to the crash insight can be gained and corrective action can be taken to reduce the chance that that a link in the chain will never happen again.

Saturday an event happened at the field I'm going to call a Tenerife event and here is why.

On March 27, 1977, two Boeing 747 passenger jets, KLM Flight 4805 and Pan Am Flight 1736, collided on the runway at Los Rodeos Airport, on the Spanish island of Tenerife, Canary Islands, killing 583 people, making it the deadliest accident in aviation history. The KLM 747 began its takeoff in severe fog and without clearance. The KLM 747 was within 330 ft of the Pan Am and moving at approximately 160 mph, attempting to leapfrog, he pulls back on the elevators, dragging his tail along the pavement for 70 feet in a hail of sparks. when it left the ground. Its nose landing gear cleared the Pan Am, but its left-side engines, lower fuselage, and main landing gear struck the upper right side of the Pan Am's fuselage, ripping apart the center of the Pan Am jet almost directly above the wing. The right-side engines crashed through the Pan Am's upper deck immediately behind the cockpit.



The KLM plane remained briefly airborne, but the impact had sheared off the outer left engine, caused significant amounts of shredded materials to be ingested by the inner left engine, and damaged the wings. The plane immediately went into a stall, rolled sharply, and hit the ground approximately 500 ft past the collision, sliding down the runway for a further 1,000 ft in a ball of fire.

Now back to KCRC's Tenerife event. Flier 1 had just landed and turned around after the landing roll and was taxiing back towards the Eastern end of the runway on the center line. The flier 1's aircraft was electric and nearly silent during approach, landing and taxiing. Flier 2 had started his nitro aircraft and with the aid of a helper moved his aircraft onto the runway. I do not believe that either flier 2 nor the helper could have heard the "landing" call over the noise of the running engine and due to the distance between flier 1 and flier 2. It's at this point that flier 2 advanced the throttle, taxied to the runway center line and began taking off only to have flier 1's aircraft enter his field of view directly in front of flier 2's rapidly accelerating aircraft. Quick action by flier 2 prevented a collision. Flier 2's aircraft barely missed flier 1's aircraft by inches as seen from where I was sitting. Disaster averted but flier 2's aircraft could have stalled and snap rolled. Everyone breathed a sigh of relief and laughed about the averted close call. But, let's analyze the chain of events and see where in the future we can "break the chain".

First off let's analyze the event from the noise aspect. The noise of the running engine would have precluded hearing the electric motor but having a running engine would have been easily heard by flier 1.

Next, location on the runway. Flier 2 with the aid of a helper placed his aircraft on the runway at mid field by going through a opening in the barrier..

The helper needed to use caution that he didn't catch a wing or tail surface on one of the supporting posts. Flier 2 was also concentrating on his aircraft.

Flier 1 being at the far Eastern end would have been looking down the barrier fence at an oblique angle which hid much of flier 2 and the helper. Tunnel vision also plays a part here. Flier 1 was concentrating on his landing and roll out using primarily the center of his vision field. The human visual field of view is 200 degrees wide but the high-acuity part (central view) is about 6 degrees or 30 feet at 100 feet away. Similarly, flier 2 was concentrating on his aircraft while flier 1's aircraft was nearly out of his peripheral field of view to the left. One other factor comes into play here, movement. Some witnesses say flier 1's aircraft was taxiing others said it was stationary. If it were moving it probably would have attracted attention as humans peripheral vision is sensitive to movement. By being stationary this would have not come into effect and the aircraft could easily have been missed even though it was painted in bright colors. Peripheral vision lacks many of the eye's color sensors that are in the central view.

So how can we break the chain of events? By developing situational awareness. Flier 1 heard the engine start and although he might have thought that it was a test run the length of running time should have alerted him to be more vigilant. Flier 2 had time before starting his aircraft to scan the field for other fliers standing near the runway and been alerted to the possibility that other aircraft were in the air and be extra vigilant before starting the takeoff. Flier 1 at the end of his landing roll had the opportunity to stop and check the field. Looking for activity at the barrier or even an aircraft sitting on the runway. Flier 2 also had the opportunity to scan the field as the helper was returning through the barrier and the helper also provided an extra set of eyes to monitor the field.

What have I learned? Somethings I do now I have previously learned such as when flying with engined aircraft in the air I use my hearing and try to remain at the opposite end of the airspace. I never fly my small P-47 when larger aircraft are in the air as if I were to look away I may not recapture it in my central field of view and the pilots of larger and faster aircraft would probably never see my small toy.

Now, I will make a conscious effort to do these things. Move away from engine powered aircraft to minimize the sound impact and move toward other fliers so that I can hear them and they can hear me. Scan the flight line for other fliers and announce my intentions, by name if possible. Before taking off I will not only look down the runway in the takeoff direction for any problems but I will scan the approach end for landing aircraft. When I was learning to fly my instructor insisted I do this but I guess I had forgotten this important step. When taxiing back I will first stop and check the field and make a conscience effort to keep the aircraft moving for visibility and “pre-plan” to clear the runway away from the barrier if the need arises. Moving away from the barrier decreases the visual clutter, has a better chance of getting into the other pilots visual field and exiting the runway at speed into the grass will minimize damage. Remember “Safety Third!”

<https://www.ishn.com/articles/93505--dirty-jobs--guy-says-safety-third-is--a-conversation-worth-having->

From The Shop

I am slowly building my “fleet” of model planes by attending swap meets and buying aircraft that are used and are in need of some tender loving care. And, having a 3D printer to make replacement parts helps. All too much of my buying is “impulse” but good deals can be had. I picked up the “Sportsman” I am currently flying for \$30 (all included except the battery) and it just needed a part forward to hold the battery door, a battery door latch and some minor repairs where the foam joints had begun to come apart.

The other plane I am working to get back in the air is a Hobby King ZEPHYR. This plane had the aft wing mount broken and it looked cool with a an EDF motor pushing a V-tailed glider. Not too sure just how practical but I did like the looks.



One of the first thing I do is look up the manual for these planes to determine CG Location and what type of motor, battery and other equipment is called out. The Zephyr called for a 2800 mAh to 3300 mAh 3S battery. I checked Amazon for a 3S 3300 mAh battery and they had some Turnigy batteries for \$36. Before I parted with \$36 I decided to see if the larger battery would fit.

Product Specifications

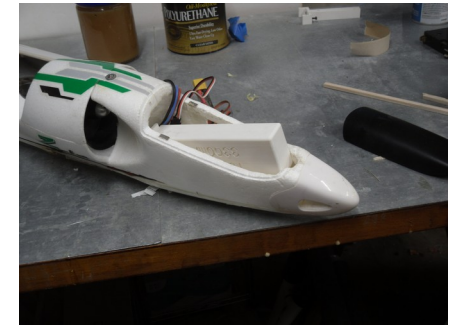
Fuselage length: 1000mm (39.4 in.)
 Wingspan: 1533mm (60.4 in.)
 Flying Weight: 1050-1150g (with battery)
 Power: 70mm EDF
 Motor: 2223 3400KV Brushless Outrunner
 ESC: 55 Amp
 Servo: 9g*4 micro servo
 Radio : 4/more channel
 Receiver: 4/more channel

Battery: 11.1V 2800-3500mah lipo 25c

Motor Spes:

Motor: 2223 KV:3400	
Technical Datas	
KV	3400
Configuration	9N6P
Stator Diameter	22mm
STator Length	23mm
Shaft Diameter	4mm
	Φ28×40m

I went to Turnigy's web site and copied down the size of the battery and then modeled it in 3D. Since I don't have a 3D model of the Zephyr I printed a battery simulator for a fit check. Good thing I did too because the battery didn't fit at all. I dug around in the box of other battery simulators I had already printed and found that a Zippy 3300 mAh battery wouldn't fit but a Zippy 2800 mAh would fit.





Up Coming Events cont.

Bradley County R/C Model Aircraft Club Fall Flyin & Swap Meet
Sept. 28th



I've found that having battery simulators are very helpful in trying out combinations of batteries without the expense and wasted time of buying them. I 3D print mine because I have a 3D printer but if you don't you can try cutting simulators out of foam or wood. Label them with capacity and manufacturer and store them where you can find them later. On my simulators I include a "nub" to represent the wires exiting the battery.

Up Coming Events

Next KCRC meeting September 10th at the field. 7:00 PM Bring a plane and get in some flying. Enter the Model of the Month and prepare your story for crash of the month!

ScoutFest Saturday October 19 at 0 Clubhouse Drive, Blaine, TN 37709

2019 Nall in the Fall September 27- October 5

Don't forget to visit KCRC Knox County Radio Control on Facebook! 188 members strong.

Daily 3 day weather predictions

Daily aviation photos

Event advertisement from other area clubs

Items for sale

Articles, information and aviation related videos.