



Crosswinds

December 2006



Newsletter for the SPring Area Radio Kontrol Society

SPARKS 2005 - 2006 Officers

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From the Cockpit by President Chris Fredona

Welcome to the December 2006 Crosswinds newsletter.

The SPARKS club was notified in early November that we would no longer be able to use the runway at the Simmaron Fish Farm for our RC flights. The management of the Fish Farm has changed and the people we made the agreement with are no longer a part of the operations there. As previously communicated, all entry and flying at Simmaron are stopped.

The situation at Simmaron illustrates the tenuous position we are in relative to our current flying site at Telge Rd. With house construction closing in on three sides of us, we could lose our field at any time or have our operations impacted severely by noise and safety issues involving our new neighbors. We should begin planning for this possibility immediately so as to have viable options should these situations arise. Please bring your ideas to the next club meeting for discussion. If you are unable to attend, please email or call me with whatever ideas you may want discussed at the meeting.

Our next membership meeting will be on Wednesday, December 6th at the Valley Ranch Grill.

Hope to see you all there.

Fly safe!

SPARKS Flight Instructors

Chief Instructor

Lee Dillenbeck 281-288-7661

Flight Instructors, Airplanes

Bob Allen 281-443-8779
Jim Greer 281-370-5615
Mark Hunt 281-290-0327
Paul Johnson 281-353-7930
Jack Jones 281-252-3159
Richard Lewis 281-351-8540
Bill Murad 281-290-8945
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Vic Baney 281-357-1357
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Helicopters

Charles Jones 832-978-3688
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SPARKS WEBSITE

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Highlights of the November meeting.....

It was noted that due to the heavy rains recently, the crawfish have invaded the runway again. An informal work day was planned for Saturday, November 4th to treat and smooth over their mounds.

Contest Director Mark Hunt reported the October Pattern Meet attracted 32 pilots and expenses were covered by the entry fees. We are looking forward to hosting in fall, 2007.

SPARKS stickers for the 2007 AMA cards were distributed to those members in attendance. They will be available at each meeting and any remaining ones mailed out after the first of the year.

Barry Rayborn from Bayou City Flyers presented a very informative program about turbine powered aircraft. He brought his F84 jet, a kit shipped from Amsterdam weighing in at 38 pounds and powered by 2 jet turbine engines. Barry is an experienced jet pilot who began R/C flying at age 14. He performs at various air shows including the recent "Wings over Houston".

Gift certificates to Larry's Hobbies and Randy's Hobbies were raffled to several lucky members.



Barry brought a couple of his jets including the huge one in the right hand photos. That's Mike Rose supporting the other landing gear.



November Model of the Month "Scratch Built Ugly Stick"

J.R. Carpenter won Model of the Month with his "Scratch built Ugly Stick". J.R. had written a series of "How to" articles for the newsletter and this was the finished product.



Out at the field....

New Solo Pilot...

Mike Meyer was all smiles after passing his FPE on Nov. 25th. Well done, Mike !



E-flite Brio 10

submitted by Nick Marson

My Brio is an E-flite kit from Horizon Hobby, it is a scaled down version of Quique Somenzini's Nats winning 2 meter plane. Horizon suggest either their 480 motor, or the 10 size. The 480 is for 3D and the 10 is for pattern. I did some research on RCUniverse, and most pilots are pleased with the results from the Hacker A30-16M. This is what I opted for, with an APC 10x7e prop. Power source is either Kokam 2000, or the new Thunder Power 2070 Lipos. There is a distinct difference is available power from the Thunder Power cells, these are rated at 25C and the Kokams are 15C. Flight times are about 8 minutes, when flying with a lot of throttle.

For radio I chose a JR 610 rx and JR 241 servos. The plane flies great, but I wouldn't attempt any 3D. Flying pattern is fun.

Photoshop or Real ??????

The web produces some really amazing sights. Some are just too good to be true...

"U S A" submitted by Jack Jones

The caption read.....

"Anyone that loves photography will appreciate the precision of this photo of an Air Force training squadron flying in a never-done-before "USA" formation over the control tower "Taj Mahal" (HQ building) of Randolph Air Force Base in San Antonio, Texas. The jets are probably moving at around 400 mph. It can't be an easy formation to hold, as the ones in the "S" are just a graduated degree behind the next one. "

But Jack discovered the following.....If you will check out the first website...

<http://www.snopes.com/photos/military/randolph.asp>

and the second one is a warbird forum of WWI I pilots and current military guys called "WW2aircraft.net". They were discussing the photo as well.

<http://www.ww2aircraft.net/forum/aircraft-pictures/usa-formation-5499.html>

Anyway the above photo with a jet plane formation is not genuine, but if you go to the first link above, you will see that the idea was taken from a old postcard which reflects similar flyover of bi planes from a 1930's movie.

The WWI I aircraft site is also a gem There are lots of photos and drawings of Warbirds and their pilots.



a

Photoshop or Real ?????? Con't

Strange heli shots submitted by Duane Neefe

Some people have a great imagination and Photoshop. I found these on RunRyder.com an RC helicopter forum.

<http://www.runryder.com/>



PCM versus PPM submitted by Glen Watson

Over the last few years I have been asked by many SPARKS club members what is the advantage to using PCM over PPM (FM) RC radios. The attached note is a dialogue from the NSRCA pattern chat forum which sums up what I have tried to explain. Due to my personal lack of technical expertise in the area of how radio waves are transmitted and received I am sure I did a poor job trying to explain the advantage. That is what I am submitting this to be considered as a future article in the Sparks newsletter.

The tests described in the article are by individuals who are not affiliated with the radio manufacturers. The test performed in the article may not be as scientific as some would like although the scenario seems easy to replicate if someone wanted to proof the results for themselves. I do not submit this as 100% proven factual information however the findings are similar to my own personal experience with using RC radios over the last 30+ years which have led me to use PCM configured systems especially in competition. Here is the article.....

"Bob, I understand how it works. The Carrier signal is still FM and I understand that. The fact that the signal is digitally encoded and how it is encoded rejects bad signal or noise or what ever you call it better than straight PPM. I spoke to a semi local Team JR guy at a contest and he told it was like a little email package with PCM to simplify it. If the email was formatted properly then the RX said OK you are my daddy. If the signal was not formatted properly it would reject it in favor of the proper format and if none was found it would do what the Failsafe setting told it to do. In some cases that is Hold the last input on the channel and if you program it to go to a specific position it would. In the case of straight PPM if the RX sees the signal it passes it through after its been filter and so on. This is why you see a glitch in FM(PPM) and not in PCM.

Am I right?

I know that F/S doesn't right the model but in reality if you are getting radio interference would you rather have the model do something predictable like low throttle and hold other controls or do something totally unpredictable. I have played with F/S in the air by turning my TX on and off. The return of the signal is very, very fast like a second or so. My thinking is that if you have enough interference to make the model go into hold "Lockout" for long enough to crash then I think its reasonable to assume this interference is bad enough that the model may very well not be controllable?

We did some testing last fall at my local club as guys had questions about this subject. This followed a serious accident in which a 40% model at a Giant Scale fly-in was controlled by a little \$60 FM RX and went to full power and cut through the pits and into another modeler. This guy almost died. A tragic event for sure but a \$3000 or \$4000 model controlled by a \$60 RX? One of our club members was a witness to the event and came home with a major agenda for our club to implement. Our club was looking at a PCM or aftermarket F/S device requirement to help mitigate issues. Our big concern is as with all flying sites the homes are getting closer and we don't want a model heading off to meet the local neighborhood.

PCM versus PPM, con't. submitted by Glen Watson

We flew some trainers and foamy models. We took models high and simulated PCM F/S and shoot down situations. For our tests we only used Futaba and JR radios. These were higher end TX's as we used the synth capabilities on some of the systems to create the issues (JR 9303, 8103, 10X and Futaba 9C'S and 9Z's also a 14MZ). We tried lots of different frequencies throughout the band. We used everything from little Hitec foamy size Rx's to the top of the line 14MZ 2048 stuff. In the cases of the PCM system we found that in most cases the Futaba and JR PCM stuff was pretty bullet proof even in a shoot down. It took a very close TX of the same brand to cause a PCM HOLD condition (our test had engine go to Idle so we could hear it go in and out). If the radio brands were mixed JR flying and Futaba as the shoot down it was a rare blip of throttle and the longest hold was on the order of maybe a couple seconds. In the case of same brand shoot down the model would go into PCM hold for longer until the shoot down TX was off. Then immediately the model was in full control again.

Sometimes we could not even tell the shoot down TX was on until its antenna was extended or the primary antenna was collapsed partially. If the primary was PCM and the shoot down TX was in FM mode it was almost a non existent problem. A very, very rare blip of power when the shoot down TX was closer to the model than the primary. And this was only with the shoot down antenna extended more than about 1/3 to 1/2 way. In other rare cases the shoot down TX actually became the primary and started controlling the model. This was rare but we did see it happen. The 2048 didn't do it but the 1024 JR and Futaba stuff could easily. In fact we had two 9303's and copied the program between them. We just swapped off the TX that was off, then the pilot that was flying would shut his TX off and the next guy turned his on. Man it really was a cool experiment and proved the reliability and consistency of the systems. Pilot saying ready off, #2 Ok I'm on, got it.

We conducted this testing on several weekends and with lots of club members present. Yes we took some risks but we really wanted to see if there was a difference. The result of this test made my local club hit the hobby shop with a huge order of PCM RX's. I think he sold like (25) JR R770's over the course of the next week. The old guys in the club found out their model was better protected using the PCM over their FM and it was a black and white comparison. Besides most sport models they guys are flying are in the \$400-800 range and what is the extra \$40 from the R700fm to the R770pcm. Now both of these are Synth so that is cool too.

Our club now has requirements for a F/S device or PCM on all models over 7lbs. Why 7lbs? well we felt that we didn't want to discourage trainers and new folks starting out, but we did want basically anything 60 sized and bigger to have some F/S capability and the club rule is a safety officer can ask you to show it before you fly. I know most of the GS fly-ins in our area and the Joe Nall now require this. Before you take off the flight line official asks you to turn off your TX to prove a low throttle setting. The groans came from the old guys for sure, but in the end they were the ones that really felt the clubs responsibility to our neighbors and to our selves was more important. The next thing was a phase in period of 1 yr. We are now coming up on that 1yr and the rate of crashes has dramatically reduced at our field.

PCM versus PPM, con't. submitted by Glen Watson

The concern was older FM TX's that could not use PCM well H9 answered the call with a \$20 F/S module for use on FM systems. Now I think there are 3-4 different brands out there. So for the cost of a gallon of fuel and a few props you can have PCM or a FS device for FM. We have a log book that you are suppose to log any crashes or mishaps. We use it to razz the guys and also to keep track if we have an issue on certain channels or with a specific brand or RX or the like. Well the 2005 log book was always an issue of radio quit, glitched or what ever. Since the testing and mass exodus to PCM the crashes are greatly reduced and top it off the crashes we are having with radio issues are the type of stuff than you would see like dead battery or bad switch not the mystery glitch or I got hit. Guys now know what radio problems look like and they are diagnosing crashes better and preventing them. Now with everybody flying PCM its really rare to see radio problems at the field. Our field is mostly JR thanks to our semi-local Team guy. The most common radio now is the 6102, 8103 and the 9303.

Seems that pattern guys tend to spare no expense in the TX department lots of 9Z's and 10X's as well as the 9303 and 9C systems yet I'm seeing many use a PPM RX. My curiosity was peaked as I would have expected nobody to use FM in this group. Before the NATs the young man was having issues with his system and when he told us what he was using for servos, leads and radio gear I was shocked. A competition level pilot using aftermarket extension leads and FM Rx'. I was always taught to stay within the brand. Servos are OK to mix brands with but for switches, extensions, and RX's stay in your own yard the OEM stuff is just a dollar more you have less trouble with it.

The models are expensive and we spend hours and hours building and trimming them up. The real cost in loss of a model is the time trimming and setting up a new plane to be just perfect. The Money is one side but to me its all the time and passion working toward the perfect flying model. It sucks when you are 1/2 way there or even 99.99999% and the model is gone hit the CLR key in the TX and start over with a new one.

Just passing on some experience we had with it. We proved to ourselves that PCM not only protected our people and neighbors better but it saved more airplanes too. I understand we really only tested a single condition shoot down situation and real interference is more random and rare in the real world. We felt that the shoot down was the worst case situation for our field as we are our away from industrial areas and other noisy environment stuff. We do have some homes about 1/2 mile back behind our pit area to the south but models are never flown back there. We have a rule to keep everything North of our runway.

By the way lots of guys locally are using the Spectrum DSM as it has a failsafe like PCM and it works great in those small park flyer models. One guy is even flying it in his 40 sized trainer converted to electric.

Great websites to check out....

2006 Haute Voltige Aerobatics Japan Grand Prix

submitted by Lee Dillenbeck

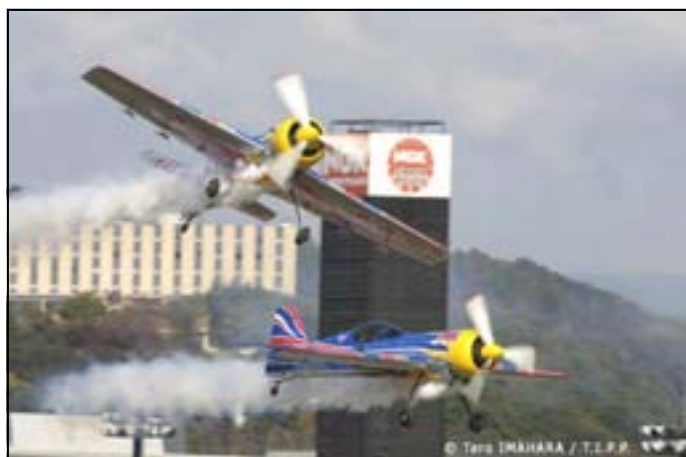
The event page is listed first and you can get all the facts, pilot interviews, events, etc. from the show held November 3—5th at Motegi in Japan.

<http://www.haute-voltige.com/en/fwgp/events/current/motegi06/home.htm>

This link will take you on a cockpit back seat ride with the thrilling and daring pilots who compete.

http://guyrevel.free.fr/WGP/Haute-Voltige_au_Japon.wmv

The next photos are genuine.....not Photoshop, see the website for more..



F/A- 22 Raptor Makes it's mark

submitted by Mike Rose

Back in May, 2005 the first operational F/A-22 fighter was delivered to its permanent home at Langley AFB in Virginia. Since then, Raptors as they are called, have been deployed to various USAF bases round the world. In 2007, the 27th Fighter Squadron at Langley will fly the first Raptors in combat.



For more information and photos of the Raptor go to.....

<http://www.langley.af.mil/photos/index.asp?page=5>

<http://www.af.mil/library/raptor/photos.asp?galleryID=40>

From their base at Elmendorf, Alaska, a P-51 Mustang, a F-15 eagle and A-10 Thunderbolt II flew with the Raptor at the Arctic Thunder Air show in August in a "Heritage Flight" .

Below- more great shots....





Shown is a Raptor from Nellis AFB in Nev., flying over Kill Devil Hills, N. C.

Editor's note— Actually the sand dunes at Kill Devil Hills was the site of the Wright Brother's first flight in 1903. The nearby town of Kitty Hawk was listed in the initial announcement.

Wouldn't Wilbur and Orville be amazed at this craft. My son, (retired Air force) and his family live 5 miles from Langley and Nick and I saw the Raptor in flight several times during our visit in August. The sound is deafening and rattles the windows.



The following members contributed to this issue of the *Crosswinds*

Lee Dillenbeck, Mark Hunt, Jack Jones, Nick Marson,

Duane Neefe, Mike Rose and Glen Watson.

I appreciate all the contributions through out the past year. Please continue to send them.... Diane dgmarson@earthlink.net

Mark Hunt and his new design...

Pentathlon

The Pentathlon started as a napkin sketch about a year ago. I began to design the model in 3D CAD software. Once I got the exact shape and size that I wanted, I began to break down the individual parts of the computer model.



I was able to interlock many of the fuselage parts making alignment and building easier. The individual parts in the computer model were then laid out on 2 dimensional drawing files (sheets) for laser cutting. The laser service had my kit done in less than one week.

The prototype went together very straight and quick (10 weeks). The finish is Monokote on the wings and stabs and paint on the fuse. My good friend Mr. Jim Sheffield fiber glassed and painted the fuselage and canopy. The airplane was test flown on 11/18/06 at SPARKS field. The flight characteristics are even better than I had hoped.

The specs on the prototype:

Span: 74"

Length: 78"

Weight: 10lbs. 6oz.

Radio: Futaba

Engine: OS160fx

I hope to have kits available sometime in January 2007. More info on my website.

<http://www.insightrc.com/>

Editor's note - there are several websites with discussions and a video taken the day of the maiden flight.....

Check these out...

http://www.rcuniverse.com/forum/m_5011209/mpage_1/key_/tm.htm

http://www.rcuvideos.com/view_video.php?viewkey=504740c3a6b10bb6d4fa

PLANES FOR SALE...Contact Jack Jones
 281-586-0865 (w) or 281-252-3159 (h)
 Or email to jnjones@pendulumenergy.com.



Aeroworks 60/90 - \$475

Engine Moki 120; Carbon fiber landing gear and wing tube; Servos: Hitec 605BB on each elevator half, 425BB on each aileron, 615MG on rudder; Wingspan: 64.00 inches Wing Area: 730.00 sq. inches Wing Loading: 26.8 oz./sq. ft. Length: 59.00 inches Weight: 8.5 Lbs. Airfoil: Fully Symmetrical



Harrier 3D 90 - \$450

Engine - YS91AC; Servos - All digital Hitec HS5625 2 ailerons, 2 elevators, HS5645 rudder; Prop - 15 x 4 APC wide blade; RX - Hitec RCD 3800 7 ch.; remote glow connector Wing Span: 60.5 in Overall Length: 66 in Wing Area: 948.4 sq in Flying Weight: 7-8 lb Wing Loading: 21 oz./sq. ft.



Wild Hare Edge 540 50cc - \$1,400

Engine - DA50R , Just broke-in; Slimline muffler; Truturn spinner; Servos - Hitec Digitals 5945MG on ailerons and elevator, 5735MG on rudder; Control rods - carbon fiber / titanium w/ ball-links; Mejzlik 23 x 8 carbon fiber prop; no RX; Wingspan: 84.00 inches Wing Area: 1390.00 sq. inches Wing Loading: 28 oz./sq. ft. Length: 76.00 inches Weight: 17.00 Lbs. Airfoil: Fully Symmetrical



Hangar 9 Cap 232 - \$650

Engine - Saito 180; Truturn spinner; Servos - Hitec HS645MG rudder, 2 HS605BB elevators, HS425BBm ailerons; Elevators and rudder are pull pull; RX - Hitec RCD 3200, 8 ch.; APC 16 x 8 prop; Remote Glow connector Wingspan: 73.00 inches Wing Area: 1031.00 sq. inches Wing Loading: 25 oz./sq. ft. Weight: 11.50 Lbs. Airfoil: Fully Symmetrical

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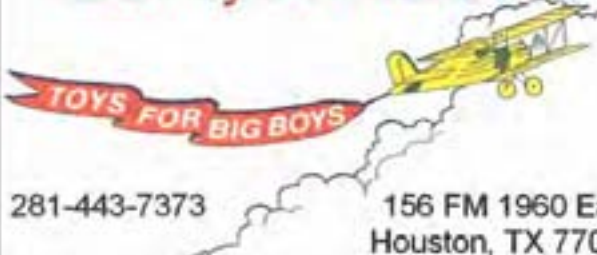
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Houston, TX 77073

Wishing you happiness, joy and cheer and a very Happy New Year...

Hopefully Santa has a new plane or engine for you on his list.....

