RC REPORT ONLINE!

August 2011
Issue 301

Do you know whats going on in your in your plane? Perhaps the DX 8 with telemetry is for you.

RC REPORT ONLINE

INDEX…PG 2

OFFICE NOTES…PG 3

SMILEY FACE CONTEST…PG 4

MAIL CALL…PG 6

IT'S CLASSIFIED…PG 8

PHOTO OPS…PG 10

SANDERSON FIELDRC FLYERS NEWS…ROYCE TIVEL…PG 17

A SPECTATOR'S GUIDE TO RC PYLON RACING…ROYCE TIVEL…PG 23

EVENT FLYERS…PG 30

THE OILY HAND…BRIAN WINCH…PG 38

FUN AEROBATICS…ED MOORMAN…PG 45

PYLON RACING AT SANDERSON FIELD…ROYCE TIVEL…PG 54

TAILS FROM THE OTHER SIDE…ISABELLE…PG 57

SPARKY'S REVOLT…TONY COBERLY…PG 63

PTR!!!…SPEKTRUM DX8…PG 65

OFFICE NOTES

August has arrived in North Alabama and in a couple of days school will be back in session. The summer really flew by quickly! W☺W!

Most of you know that I am the only one in the office on a daily basis, but recently; I have really been flying solo! Cassie is off making new friends. She will be returning in about a week. Tony was out of town on business for several days in mid-July and will be gone again by the time many of you read this. In short, I will have a couple of days with just me and the dogs and cats. I can't recall when that has ever happened before.

Good news for iPad users this month! Thanks to Jorge More! Take a look at Mail Call this month for instructions on how to view the PDF on your iPad. Nook users, hope you didn't miss last month's Mail Call! Skip back a month is you did!

I received an above average number of emails this month about issues with downloading the PDF. To ensure that every subscriber is satisfied with RC Report Online and doesn't dread the email announcing the new issue, I have decided to create a new distribution list in order to send out the PDF version via email each month. If you would like to be included on this distribution list, please just send me an email with "Email me the PDF" in the subject line. This option will be available starting with this issue.

Thanks to all of you who took the time to send in items for Photo-ops! Keep the pictures coming! We love to share!

In case you missed it before, here's a little technical news for you. Some subscribers have been experiencing some issues with Adobe X. At the moment, our site is not compatible with this software. We encourage you to stay with Adobe 9 for the time being

Communication is still the key word for 2011! If you don't contact me about a problem; I can't correct it. It seems that the main issue people have is the inability to login. It's a simple fix. An email is normally all it takes. On rare occasions, a phone call might be needed. The next biggest complaint is regarding the PDF download. Again, I can help you with this.

There is no reason, if you have a premium subscription, that you would not be able to download the PDF. I can't stress enough, if there is a problem; please contact me. I want you to be satisfied and be able to enjoy RC Report Online.

We are still socializing on Facebook. Join us! Click the Facebook icon to go directly to our home page!

Kindle and Nook users; email me if you would like to receive the Kindle version of the magazine via email.

Bye for now, Julia

Smile! You could be the next Winner!

Smiley Face Contest #8 2011!

Throughout this issue we have placed five or more Smiley Face Figures like the one shown here (☺), but as before this page doesn't count. Write us and tell us where at least five are, and you'll be eligible for a random drawing in which the winner will receive a free 12-month Premium Subscription to RC Report Online. The subscription may be used as a renewal or be gifted to someone else. Winners will be selected by a random drawing from all the correct entries received no later than August 31, 2011. No entries will be accepted after this date. Entries must be sent via US mail or E-mail only, and reference the correct contest number in subject line or address. Hobbico employees, RC Report Online employees, columnist and advertisers are ineligible for prizes. No Purchase Required. Valid in USA and Canada only. smileys@rcreport.net Subject line: Smiley Face Contest #8 2011

US Mail: Smiley Face Contest #8, 2011 PO Box 12051 Huntsville, Al 35815

All terms subject to change without notice. This contest is void in any area, state, or locality where taxed or prohibited.

Happy Fourth of July to RC Report Online

I have found 8 smiley's!

Thought there was none until page 60

Thanks for the fun fly poster in magazine

Larry Slowiak

Dear Julia,

Nice work getting me to comb through the entire magazine again; I discovered along the way that you have plenty of good reading in RCRO this month. I hope that you and Tony can keep up your good work! It was a relief to see Ed Moorman back in print - he always adds a lot of good material to your pages.

I found eight smileys on pages 60, 62, 64, 66, 67, 68, 69, and a skip to 72.

PS did you receive the photos I sent today? If not give me the correct email address and I'll try again.

Frank Maguire

South Portland, ME

Please note that not all Smiley Face entries will be published each month. On occasion, I finish this page early in the month, but all entries are considered when determining the winner.

Julia

Still loving the smileys! The winner will be contacted and announced in the September issue. The winner will receive a 12-month premium subscription to RC Report Online. Keep searching those articles and columns.

Total Smileys for the July 2☺11, issue was EIGHT.

June's winner is alumni, Larry Slowiak!

Thanks for your submission, Larry!

Julia Coberly

Mail Call

Well, folks keep your questions, comments and jokes coming.

This is the iPad assistance, from Jorge, I promised in Office Notes!

His email was very detailed and quite informative! Read on iPad users!

…The main issue is getting the PDF file into the iPad.

1. The easiest option would be to use a web browser on the iPad, go to www.rcreport.net and download the PDF file in the usual way; However, RC Report Online uses Flash so parts of the web page are missing.
The latest reports are that Apple will never implement Flash on the iPad.
Interestingly enough, the login page does not seem to use Flash so I can login, but then I am directed back to the main page, and the download button is not visible.
So, this option seems to be out unless you all find a workaround to this. My guess is that you only use Flash for the ads, so this should be possible. I do not use Macromedia, so I do not know if this option is possible.

2. The next option is to have a list of iPad users and you can email them PDF file directly. They can then open the attachment and use iBooks to read it. iBooks is an iPad app that comes with the iPad so this is not a problem. There are other apps to read PDF files on the iPad, but I like this one.

(Please email me, with "iPad distribution" in the subject line, if you would like to be put on the iPad distribution list. Julia)

3. Some user may have an iPad but not have Mail setup on the iPad. These clients would have to download the PDF file to some computer (their laptop, PC...) and then use Dropbox to transfer the file. Dropbox is free and is a great way to transfer files between different computers (PC, Mac, and Linux).

Got this one from my friend, Mel! Thanks, love!

Four old retired guys are walking down a street in Yuma, Arizona...
They turned a corner and see a sign that says, 'Old Timers Bar - ALL drinks 10 cents'.
They look at each other, and then go in, thinking this is too good to be true.
The old bartender says in a voice that carries across the room, "Come on in and let me pour one for you! What'll it be, Gentlemen?"
There seemed to be a fully-stocked bar, so each of the men ordered a martini.
In short order, the bartender serves up four iced martinis...shaken, not stirred, and says, "That'll be 10 cents each, please."
The four men stare at the bartender for a moment. Then look at each other.
They can't believe their good luck. They pay the 40 cents, finish their martinis, and order another round.
Again, four excellent martinis are produced with the bartender again saying, "That's 40 cents, please."
They pay the 40 cents, but their curiosity is more than they can stand. They have each had two

martinis and so far they have spent less than a dollar.
Finally one of the men says, "How can you afford to serve martinis as good as these for a dime a piece?"
"I'm a retired tailor from Phoenix," the bartender said, and I always wanted to own a bar. Last year I hit the Lottery jackpot for $125 million and decided to open this place. Every drink costs a dime...wine, liquor, beer, it's all the same."
"Wow!!!! That's quite a story," says one of the men.
The four of them sipped at their martinis and couldn't help but notice seven other people at the end of the bar who didn't have drinks in front of them, and hadn't ordered anything the whole time they were there.
One man gestures at the seven at the end of the bar without drinks and asks the bartender, "What's with them?"
The bartender says, "☺h, they're all old retired people from Florida. They're waiting for Happy Hour when drinks are half price."

And from Larry…

A woman in a supermarket is following a grandfather and his badly behaved 3 year-old grandson. It's obvious to her that he has his hands full with the child screaming for sweets in the sweet aisle, cookies in the cookie aisle, and for fruit, cereal and pop in the other aisles.
Meanwhile, Granddad is working his way around, saying in a controlled voice, "Easy, William, we won't be long. Easy, boy."
Another outburst and she hears the granddad calmly say, "Its okay, William, just a couple more minutes and we'll be out of here. Hang in there, boy."
At the checkout, the little terror is throwing items out of the cart, and Granddad says again in a controlled voice, "William, William, relax buddy, don't get upset. We'll be home in five minutes; stay cool, William."
Very impressed, the woman goes outside where the grandfather is loading his groceries and the boy into the car. She said to the elderly gentleman, "It's none of my business, but you were amazing in there. I don't know how you did it. That whole time, you kept your composure, and no matter how loud and disruptive he got, you just calmly kept saying things would be okay.
William is very lucky to have you as his grandpa."
"Thanks," said the grandfather, "but I'm William…the little shit's name is Kevin."

From Dick in Montana…

The local news station was interviewing an 80-year-old lady because she had just gotten married for the fourth time. The interviewer asked her questions about her life, about what it felt like to be marrying again at 80, and then about her new husband's occupation. "He's a funeral director," she answered.
"Interesting," the newsman thought.
He then asked her if she wouldn't mind telling him a little about her first three husbands and what they did for a living. She paused for a few moments, needing time to reflect on all those years.
After a short time, a smile came to her face and she answered proudly, explaining that she had first married a banker when she was in her early 20's, then a circus ringmaster when in her 40's, and a preacher when in her 60's, and now in her 80's, a funeral director.
The interviewer looked at her, quite astonished, and asked why she had married four men with such diverse careers.
She smiled and explained, "I married one for the money, two for the show, three to get ready, and four to go."

~It's Classified~

Non-Commercial Ads

Ads from subscribers are published free of charge for one month on a space available basis. Free ads are limited to one per subscriber per month and may contain up to ten items. Add $1.00 per each item over ten. Add a photo for $5.00. Please email your ads to juliac@rcreport.net. Include your name and email address. Phone numbers are optional. Modeling items only!

Commercial Ads

Commercial Ads are those offering a service, more than one of the same item, soliciting business, etc. If in doubt, call or email for details. Commercial rates are $.25 per word and must be prepaid. Please contact the office for special multiple-month discounts. Cancellations will be accepted by mail, email or phone, but are non-refundable.

RC Report Online Classifieds

PO Box 12051

Huntsville, Alabama 35815

FOR SALE

Goldburg Sukoi: New never flown. 72"WS powered with a Webra 120-2 stroke engine. Complete with radio Fill the tank and fly. New engine must be broken in. Multicolor covering. $600.00

Ace 4-120: This is a big bi-plane. 72" top wing. Bottom wing is 60". Powered with YS 120 4 stroke engine. Plane has never been flown. Engine has less than 1 hr. running time. Model has been modified with a tapered top wing and a taller rudder for more rudder control. Complete with radio. Fuel it up and fly. $600.00

Goldberg Extras (2): #1 is the older version. #2 is a newer version.

#1 has a YS 4 stroke engine. #2 has a ST 2000 2 stroke engine. Neither has ever been flown. Complete with radios. Fuel and fly. Multicolor covering on both. $600.00 each.

Thunder Tiger Trainer: Never flown. ST.60 engine. 72" WS. Complete with radio. Fuel up and fly. $200.00

Leo L. Humenick Sr. Email at leosr@pa.metrocast.net.

I have some magazines from the 6☺'s and 70's and on thru the 90's that someone might like to have at a fair price. They are American Air Craft Modeler, R/C modeler Magazine, Model Airplane News, Flying Models, and even some Model Boating magazines. I also have a 1965-66 World Engines Catalog. Would say their condition runs from fair to excellent. If interested, call or email me at 406-227-5924 or rsprau2@msn.com and we could work something out.

Dick

PHOTO OPS

Golden Hawks Donate to Shriners Hospital – From Andy Bowen

The DeLand Golden Hawks Radio Control Model Airplane Club held its annual Giants flying event in February 2011. The event was held at the club's headquarters at Sperling Sports Complex in DeLand. The event raised $3,000.00 for the Shriners Children's Hospital. Shown presenting the check to Grand Potentate "Happy" Schuur are; left to right; Club Director, David Bamber; Club President, Jesse James; Field Marshall, Al Shukle and Club Treasurer, Kevin Leisy.

The DeLand Golden Hawks Model Airplane Club is a local, non-profit aeromodeling organization founded in 1986, to promote the educational and recreational benefits of the sport. Photo credit: Kevin Leisy

21st Annual Water 'N Wheels, Alaska Statewide IMAC & Pattern Championships, July 2-3, Fairbanks, Alaska – Mike Davis, Midnight Sun R/C Club

The weather didn't cooperate with us for this event; a lot of rain before during and after. We did manage to get through 2 rounds of known IMAC sequences on Saturday, but the unknowns were rained out. Everyone was very disappointed by that! ;-) About 9PM Saturday evening we did get some Freestyle in though. Pattern was supposed to be on Sunday, but was canceled due to rain and low visibility.

We still had some nice breaks in the weather leading up to the event, and got a lot of good flying in. A number of us were at the field starting 11 days before the event, camping out, and having a good time. ☺ur flying site, as you can see in an attached photo has water adjacent to it, so we also did some R/C boat-racing and float flying.

All in all, we had a lot of fun despite the weather.

Group photo of IMAC pilots before the start of the contest.

Mike Davis swapping out an anemic (troublesome) DLE-111 for a DA-120 a few days before the event.

Armand Marshal walking through the pit area, aircraft lined up waiting for their turn to fly.

Dean McMillian getting in some 3D flying during one of the breaks in the weather.

Propsnappers, Greater Portland, Maine – Frank Maguire

We take part in the Portland Jetport aviation show every year. This June we presented a static display of model planes and helicopters, had some of our larger models suspended from the hangar's rafters, and did a live flying show both Saturday and Sunday. We also promote the hobby and our club, inviting interested people to come to our club open house which is held two weeks later. Every year we get a good response to this invitation. This year over twenty buddy box flights were flown at the open house. We hope to get a few new members as we have in the past. ☺

Chesaning Area Model Flying Club, Maple Grove Twp, Michigan – Jim Breidenstein

Here are some photos of are event, (Sport Scale Fun Fly), that you donated subscriptions to. We didn't get as many participants as we would have liked due to so many other flying and non-flying events that were going on in the area. The goal of the meet was to get canned goods for a food donation to local food pantries. We got a wheelbarrow full of canned goods and $89.00 to buy more. ☺ We had very warm but great flying weather and everybody had a good time.

John Krupp won one of your subscriptions. He belongs to the Flint Aero R/c Club. He is very proficient and knowledgeable flyer and willing to help anybody.

Subscription winner George Heiman is the newsletter editor for our club. He also helps me keep my sanity as a fellow officer in our club.

Subscription winner Paul Binkley is the club go to guy for Heli's. Actually he is probably the go to guy for our whole area. He and his wife Helen helped me a lot with putting this event on.

Subscription winner Jim Maupin is a proficient flyer with many different models.

Thanks for helping me make the red dot disappear this month, guys! ☺

A FUN FLY WITH SPICE

On June, 26, 2011, the Pylon Racers of Puget Sound (PROPS) held a Fun Fly at Sanderson Field, Shelton, WA. The PR☺PS pilots were joined by pilots from the Sanderson Field RC Flyers (SFRCF). There were six competitions in the fun fly. The six competitions required only basic flying and aerobatic maneuvers, and included one event to measure a pilot's ground-handling ability:

- The Terrible Two's,
- Touch and Go,
- Bean Carry,
- Bomb Drop,
- Balloon Burst, and
- Taxi.

Some of the competitions were timed events. For example, "The Terrible Two's" required each pilot to takeoff, do two loops and two rolls, and land as close to two minutes as possible. CD Tom Strom Sr. noted that including the distraction of aerobatic maneuvers made it much more difficult for the pilots to keep track of the time. Distractions from other competitors further tested a pilot's ability to concentrate on the task at hand—and added spice to the event.

CD Tom Strom Sr. (L) Briefs the Pilots. Pilots Eric Ide (C) and Steve Mortenson (R)

Marc Winz Flying "The Terrible Two's" With "Help" From Fellow Pilots

John Calhoun Performing a Touch and Go

Dan Nalley won the Touch and Go competition. He might have done even better had he not picked up a rock during one of the landings.

A Handicap for Dan Nalley During the Touch and Go Competition

A LITTLE SPICE

Here is a bit of what happened during the Terrible Two's and the Bomb Drop:

00:00

Pilot-1 launches his aircraft for the "Terrible Two's" competition.

00:10

Pilot-2 begins telling a joke in Pilot-1's ear.

00:30

Pilot-1 completes two inside loops and two rolls.

Pilot-2 shouts, "Only 50 seconds left!"

00:40

Pilot-1 performs several aerobatic maneuvers while *his* mental clock continues to count the seconds.

Pilot-2 attempts to engage Pilot-1 in conversation, "Say, Pilot-1, are you still making lots of trips to Eastern Washington?"

01:10

Pilot-1 is very cool. He listens to the jokester and carries on the conversation about his trips to Eastern Washington--while still maintaining focus on his aircraft and the time.

Pilot-2 advises, "Just about out of time, Pilot-1. If you land right now, you'll be spot on 2 minutes."

01:30

Pilot-1 does two perfect outside loops.

Pilot-2 yells, "You just undid your inside loops with the two outside loops. You're going to have to do your loops again: outside loops cancel inside loops."

Pilot-1 stays cool.

01:45

Pilot-2 says, "Almost 3 minutes, now--too bad, Pilot-1."

Pilot-1 performs a few more maneuvers and prepares to land his plane.

02:06

Pilot-1 lands his plane after an outstanding performance.

After the The Terrible Two's and Touch and Go competitions, pilots prepared their aircraft for the Bean Carry and the Bomb Drop. For the Bean Carry, the CD loaded 16 beans into the Styrofoam "bomb bay" mounted on each aircraft.

Amazingly, more than one pilot landed with all 16 beans after a takeoff, circle, and landing.

Dan Nalley's Eratix 3D Ready for the Bean Carry and Bomb Drop.

For the Bomb Drop, the CD loaded a balloon containing several beans into the "bomb bay."

CD Tom Strom Sr. Loads the "Bomb Bay" for Pilot Dick Robb.

Pilot-2, the jokester, began the Bomb Drop competition. The CD loaded the "bomb bay" and Pilot-2 launched the aircraft and banked right towards the big X on the runway. As the plane banked right, Pilot-1 planted a seed, "The bomb fell out! ☺h, too bad, Pilot-2." Pilot 3 concurred, "You banked just a little too hard, Pilot-2."

Pilot-2 shouted, "I didn't even see it fall." Pilot-4 yelled, "Bad break, Pilot-2."

Pilot-2 continued flying past the big X on his way to a landing approach.

The CD advised Pilot-2 to complete the bombing run. "You never know," he said, "maybe it didn't drop out." Pilot-2 answered, "What's the use. They said it fell out." The CD still advised Pilot-2 to make

the attempt--just in case. A frustrated Pilot-2 turned the aircraft back towards the target, rolled the plane, and--miraculously--a "bomb" dropped out of the plane and hit the runway 85 feet from the target. "Foul!" shouted Pilot-2. "That wasn't fair."

With a grin of satisfaction, Pilot-1 quietly remarked, "You *never* believe what a competing pilot says during an event like this."

Eric Ide Measures Drop Distance to Target for Pilot Dan Nalley.

After the Bomb Drop, pilots took a break for a barbecue lunch. The lunch was provided by SFRCF and was cooked by SFRCF member Bob Treinen.

Bob Treinen Prepares the Dogs and Hamburgers for Lunch

The final competitions, the Balloon Burst and the Taxi contests, were then completed.

Balloon-Burst Mission Accomplished by Dick Robb.

Steve Mortenson (R) Taxies His Trainer Arround a Balloon.

At the completion of all contests, scorekeeper Tom Strom Jr. calculated a score for each pilot and determined the contest winners.

Scorekeeper Tom Strom Jr.

The winners were Bob Beatty (first), Erick Ide (second), and Dick Robb (third). The first place winner received a gallon of fuel donated by Tom Strom Sr. The second and third-place winners each received a premium subscription to RC Report ☺nline.

CD Tom Strom Sr. (L) Awards First Place to Bob Beatty (R)

CD Tom Strom Sr. (L) Awards Second Place to Eric Ide (R)

CD Tom Strom Sr. (L) Awards Third Place to Dick Robb (R)

All pilots enjoyed the fun fly. At no time were the distractions allowed to interfere with a pilot's ability to safely control his aircraft.

The pilots' ability to focus on "the mission"--in spite of the distractions--amazed the author. The event winner flew a gas powered plane; the other winners flew electrics. Especially during the Taxi competition, the light-weight electrics were at a bit of a disadvantage in the afternoon due to a variable 5mph wind.

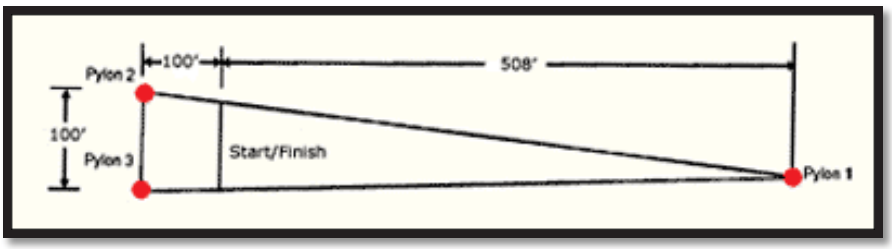
Competing pilots were Steve Mortenson, Marty Hoppe, John Calhoun, Eric Ide, Marc Winz, Dan Nalley, Bob Beatty, Dick Robb, and Burt Daggett.

Special thanks to Tom Strom Sr. (CD), Tom Strom Jr., and Eric Ide for organizing and running the event. Also, special thanks to Julia at RC Report Online for donating the subscriptions used for prizes.

Thanks to Royce Tivel for sharing with us again this month! Please send questions or comments for Royce to me in the office and I will be sure to forward them along.

A SPECTATOR'S GUIDE T☺ RC PYLON RACING

Pylon Races are not just for pilots, but are great events for spectators, too. There is a lot going on during a pylon race--and the flying is only a part of the activity. This article is written for the spectator and describes how a pylon event is organized and run at Sanderson Field, Shelton, WA.



RC Pylon Race Course

The Race Course

The race course is defined by three pylons which form a triangle. The distance from pylon-1, at the apex of the course, to pylon-2 and pylon-3 is 608 feet; the base of the triangle, between pylons-2 and pylon-3 is 100 feet. The start/finish line is located inside the triangle and 508 feet from pylon-1. Ten laps around the course equals 2.5 miles. Pilots fly their aircraft around the course in a counterclockwise direction--left turns all the way. The course length is selected to result in 10-lap times between one minute (fast pace) and two minutes (slow pace for beginners). For the quickest aircraft, the speed around the course falls typically between 180-200mph.

Event organizers arrive at the flying field a day before the actual event to set up the race course. It takes several workers to set up the heavy pylons, each 20 feet high. Pylon-1 is positioned at one end of the course near a signal board.

The signal board contains a light for each lane to signal when a pilot's aircraft "breaks the gate." A pilot seeing this signal knows that he can make his turn at pylon-1 without "cutting." There are two other lights on the board for each lane that are used to indicate "cuts" (turns on the inside of a pylon). The lights are controlled by the flaggers through a wireless connection between the flaggers tent and the signal board (gone are the days of faulty cable connections).

On the signal board, there are four lane designations: lower green (lane 1), lower red (lane 2), upper green (lane 3), and upper red (lane 4). Each pilot identifies his/her aircraft with a press-apply decal corresponding, in color, to an assigned lane. More on this later in the article.

Erecting a Pylon

Signal Board at Pylon 1

Race Officials

The Contest Director (CD) has the "absolute authority" during a pylon competition. The primary responsibility of the CD is to insure the safety of the event. At Sanderson Field, the CD conducts meetings for both the pilots and the course workers to insure that each person understands the basic rules. The CD also conducts the awards ceremony at the end of the competition.

On the race course, the starter acts for the CD. Unless overruled by the CD, the starter's actions and decisions on the race course are final. There will be more on the starter's responsibilities later in the spectator's guide.

Course Workers

Course workers are primarily volunteers. There are several "stations" around the course to which course workers are assigned. These included stations for cut judges (pylons 1-3), fueling station, flaggers, and timers/lap counters. If there are not enough course workers for every job, pilots and other event participants fill in where needed. The volunteers free the pilots to concentrate on readying their aircraft--and flying. If you are a spectator, you might be able to participate as one of the volunteers.

The Planes

Regulations for pylon racing discuss everything from the spinner to the tail. Design specifications in the regulations for each class of competition include those for the wing, fuselage, power plant, landing gear, propeller, construction materials, and many other parts of the plane.

Tom Strom Jr. and His Beautifully Covered LR-1A Pogo

In the past, there have been three classes (called events by the AMA) that have been flown at Sanderson Field:

- 424 APRA: Sport Quickie,
- 428: Quickie 500 (Q-500), and
- 422: Quarter 40 (Q-40).

The Sport Quickie (424 APRA) is the entry level event and the planes are the slowest of the

three, reaching about 11☺ mph around the course.

Their specification insures that the cost for the plane and engine will be low. The planes are readily available commercially. Wings and tails must be constructed of either all wood or wood sheeting over a solid foam core. In the APRA 424 event, there is no motor RPM limit and the

Thunder Tiger motor is used: all other rules are the same as for the AMA 424 event.

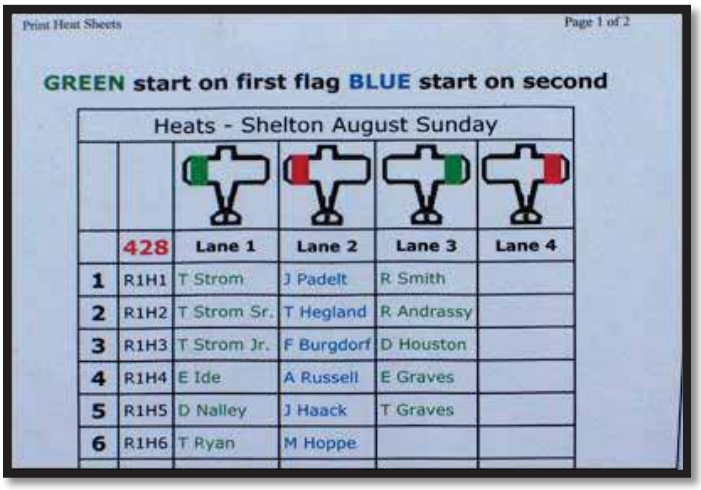
The Quickie 500 (428) is the next step to high performance RC pylon racing. The "500" refers to the minimum wing area for the class of 500 square inches. Unlike the Sport Quickie, wings and tails manufactured in molds designed to produce hollow core structures can be used. With the engines permitted for this class, the planes can reach speeds around 170mph.

The Quarter 40 (422) is the fastest of the classes. These are the planes that reach the 180-200mph top speeds. Q-40 planes are often all composite and "painted in the mold" resulting in beautiful, sleek—and fast--racers. As specified in the regulations, the planes in this class must also resemble real airplanes.

For the first time, a new class of pylon racer might very well be flying at Sanderson Field during the 2011 racing season. The new class is designated by the National Miniature Pylon Racing Association (NMPRA) as Electric Formula One (EF1). The new class will provide pilots with a relatively inexpensive--and quiet--entry into the excitement of pylon racing. The class will serve as a great "beginner's" plane for new pylon pilots--as well as being just plain fun to fly by experienced pylon pilots, too. EF1 races at Sanderson field will use a shorter, three pylon, 425 foot course.

Preparing the Aircraft

Before the ride to the flight line, pilots perform last minute checks and fuel their aircraft. Pilots also check the "heat matrix" for their races and apply an identifying decal to their aircraft. The decal corresponds to an assigned starting lane on the flight line. In addition to showing a pilot's starting lane, the heat matrix also shows which drop of starter's flag launches which lanes. The aircraft launches are staggered slightly to prevent congestion at the starting line on takeoff.


Print Heat Sheets Page 1 of 2

GREEN start on first flag BLUE start on second

Heats - Shelton August Sunday

	428	Lane 1	Lane 2	Lane 3	Lane 4
1	R1H1	T Strom	J Padelt	R Smith	
2	R1H2	T Strom Sr.	T Hegland	R Andrassy	
3	R1H3	T Strom Jr.	F Burgdorf	D Houston	
4	R1H4	E Ide	A Russell	E Graves	
5	R1H5	D Nalley	J Haack	T Graves	
6	R1H6	T Ryan	M Hoppe		

Heat Matrix For Event 428 (Q-500)

Pilots apply a decal according to their assigned starting-lane position for a heat:

• Lane-1, green decal on the low end of the wing,

• Lane-2, red decal on the low end of the wing,

• Lane-3, green decal on the high end of the wing, and

• Lane-4, red decal on the high end of the wing

Edward Graves Applys a Lane-3, High-Green Decal

If you visualize an aircraft in a steep, left-hand bank around a pylon (a counter-clockwise turn around a pylon), one end of the wing will be higher than the other. Aircraft in Lane 1 or 2 have a decal on the low end of the wing; aircraft in Lane 3 or 4 have a decal on the high end of the wing.

Course judges use the decals to identify each aircraft. For example, a "Cut Judge" might report a cut like this, "Pylon-3 cut on high red."

The color designations are also repeated on the signal board as described earlier: there are both low and high green and red colored rectangles painted on the board to designate the signal lights for each lane.

The Racing Begins

After the course workers occupy their work stations, the racing can begin. For safety, all stations are positioned at least 300 feet away from the race course. Both course workers and pilots are required to wear hard hats. The pilots, with their aircraft and callers, are driven both ways between the pit area and the starting line.

Among the many responsibilities of the starter is to have pilots perform a control check to insure that the RC system is functioning properly: the transmitter and receiver for each aircraft must be functioning correctly.

Pilot performing a control check for starter Jody Haack

When the pilots/callers are ready, the starter starts the 60-second clock. After the clock starts, and because pilots do not want to start their engines too soon, they watch the clock closely until, in their experience, it's the right time to do so.

Starting The Clock

Dan and Patt Nalley Watch The Clock

Pilots have 6☺ seconds to start their engines and signal their readiness to control the aircraft to the starter. After the engine has been started, the pilot typically moves away from the start line (towards pylon 2 and 3) and prepares to control the aircraft.

Eric Ide (Foreground) Starts The Engine as Caller Tom Strom Jr. Assists

With the drop of the starter's flag, the callers launch their aircraft and race to the side of the pilots.

Callers Launch Their Aircraft

While the pilot controls the aircraft, the caller "calls" to the pilot when it's time to make a turn. Course judges watch the race carefully to make sure the planes round the pylons on the outside and do not turn a corner by cutting inside the pylon. A "cut" results in an extra lap; two "cuts" and the pilot is out of the race. Other course workers keep track of each lap completed by every aircraft and their time around the course.

Pilots Prepare To Control Their Aircraft

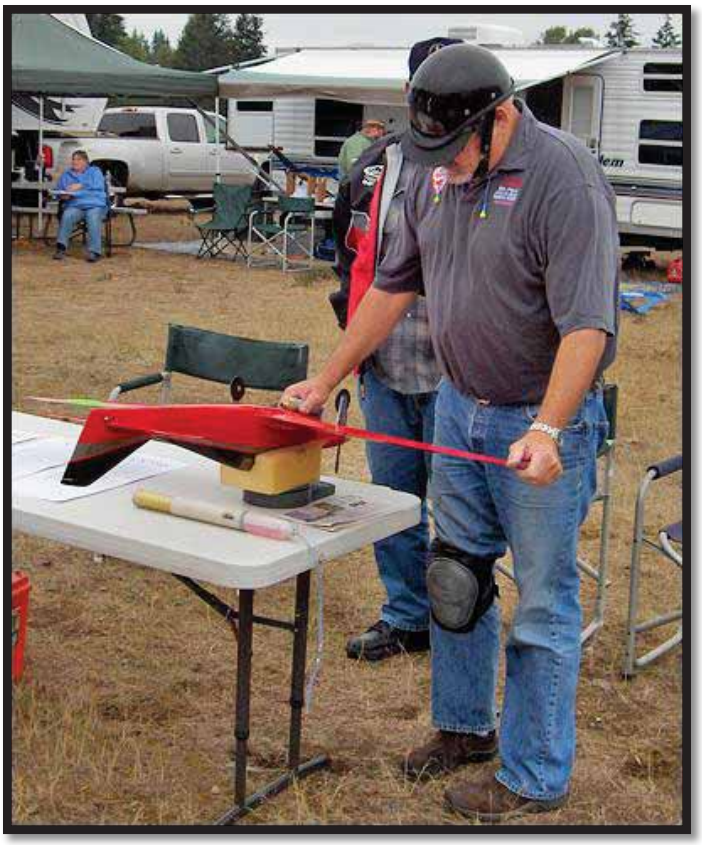
As each aircraft completes the last lap, the starter drops his flag to indicate this to the pilot.

After all of the planes have completed the last lap of a heat, the starter records the heat results. Pilots receive points based on their finishing position: 4 points for first place, 3 for second, 2 for third, and 1 for fourth.

Starter Jerrett Cangle Ready To Flag The Last Lap

Back in the pit area, the heat winner must weigh his/her aircraft to insure that it is at or above the minimum allowable weight, as specified in the regulations.

Pilots and Callers In The Heat Of The Race



Heat Winner Weighing-in The Aircraft

This summer, there are several opportunities to be a spectator and share the excitement of pylon racing at Sanderson Field. The competitions are sponsored and organized by the Pylon Racers of Puget Sound (PROPS). Here is the 2011 racing schedule:

• August 20st-21st -- Pylon Race North vs South

• September 24th-25th -- Pylon Race APRA/428/Q-40 – PROPS Championship.

Resource Links

Competition Regulations 2011-2012 : -- These are the Academy of Model Aeronautics (AMA) regulations for pylon racing (PDF). The document offers a wealth of information about pylon racing.

EF1 Competition Rules : -- These are the NMPRA Electric Formula ☺ne Rules (PDF).

Pylon Racers of Puget Sound (PROPS) : -- Home Page

3rd Annual
Joe Grube Memorial
Big Bird Fly-In

Saturday, August 6, 2011
8:00 AM to 5:00 PM
Hosted by the
Bartholomew County RC Fliers - Columbus, Indiana

AMA Sanctioned Event - AMA card required

Aircraft requirements:
Minimum 80" for Monoplanes, 60" for Bipes,
or true 1/4 scale and larger.
No Jets, turboprops okay.

Great food available for purchase.
Grass 90' x 500' Runway.
Landing fee $10.00 (includes lunch).
Pilot Prizes!

For more info, contact:
Ken Erickson CD - 812-603-8190 - ken_erickson@comcast.net

Location: 3 miles east of Columbus
on 25th Street at the closed landfill.
GPS - 39° 13' 30.37" N, 85° 48' 04.00" W

for more info, please visit:

www.bcrcfliers.org

AstroWings of Grafton Wisconsin
All Electric Fun Fly and Swap Meet

Saturday, August 27- 9am to 4pm

Rain Date: August 28

Flying Open to all AMA Members
Concessions and Facilities on Site
Free Admission and Parking
Public is Welcome

Pilot Registration: 8:00 am
Pilots' Meeting: 8:30 am
Open Flying Begins: 9:00 am
Swap From Your Trunk or Tent: 8 am-2 pm
Raffle Drawing: 3:30 pm

Pilots Registration Fee: $5
AMA Membership Required to Fly
Electric Planes Only

Grand Prize: E-flight P51B!

50/50 Raffle Every Hour

This is an AMA Sanctioned Event

For More Information Contact
Steve Tarney, AstroWings President at 414-351-5015,
Jeff Thompson at 414-704-5900,
Mark Koerner at 414-254-6355
or visit us at AstroWings.com

ASTRO•WINGS
WISCONSIN

Directions:
I43 exit 32 east
First road on the right will take you to the parking area.
(Approximately 22 miles from downtown Milwaukee)

CANYON CROSSWINDS 2011
EVENT/ACTIVITY SCHEDULE

EVENT	ACTIVITY	Date(s)
Swap meet & Fun Fly	General swap meet and gueat flying - All day	April 2, 2011
Scale Fun Fly	Guest flying, scale demonstrations, raffle prizes	June 11, 2011
Fourth of July	Members and families only fun fly, BBQ, and fireworks	July 4, 2011
3D Heli Jamboree	Guest flying, 3D demonstrations, overnight camping	Sep 9,10,11, 2011
Float Fly, Lake Castaic Lagoon	Guest flying, raffle prizes	September 17-18, 2011
Castaic Days	Demonstration Booth	September 24-25, 2011
Night Flying - Monthly	Night flying the first Friday of each month starting May 6, 2011	May 6, 2011 thru September

Iron Range Radio Control Club

2011 Annual Summer Fun Fly

When: **Saturday August 13th, rain date: Sunday 14th**

Where: **Thunderbird Field**

Sheldon Jct. Road (CR 372)

Time: **9am until the fun stops**

Food and pop on site, drawings for donated & purchased items.

$5.00 landing fee for pilots, AMA required to fly. All aircraft welcome.

Come and see the impressive lineup of warbirds, aerobatic, and sport planes.

AUGUST 13TH, 2011

30TH ANNUAL

MONSTER MASH

Sponsored by : The Fort Wayne Flying Circuits
Come and join us in celebrating our 30th annual Giant Scale fly-in. Primitive camping, no hook-ups. Beautiful 800'grass runway, with a 300' paved runway. All large scale models welcome. Must be an AMA member.
**** There are NO landing fees for pilots!****
Free Saturday evening dinner for all registered pilots. Additional dinners available for $5.00. Awards and dinner at 6pm Saturday, open flying after dinner. Open flying all day Sunday!
Early set-up on Friday 12th with free BBQ on the famous "Man Grille" in the evening, along with night flying.

More info: www/flyingcircuits.org
Ron Ballard c/d
260-701-8936 cell
strikemaster@onlyinternet.net

North Dallas R/C Annual Float Fly

Saturday August 27

Hidden Cove Park - Lake Lewisville, East Side

Starts at 8 am, ends when we're finished!

Plenty of nice shade trees and close by parking

CD- Charlie Viosca-call 214-288-3656 or e-mail: viosca4@aol.com

AMA Sanction # 11-0710

Directions:

From Highway 121 and Highway 423 (Main St of The Colony)

9th Annual

R/C SWAP MEET & AUCTION!

Denton, Texas
Saturday, August 13, 2011
Denton Civic Center

321 E. McKinney St.

(see map on back)

Swap Meet: 8:00 am - 1:30 pm ***(vendor setup at 7:00 am)***

Auction: 12:00 pm - 1:30 pm ***(or sell out)***

Advanced Table Reservations: $15 first table, each additional $10*

(Each table rented includes one admission, reserved tables will be held until you arrive, tables at the door are all $15 and first come-first serve, if available)

General Admission: $5 *(in-and-out OK)*

(Ladies and under 12 free!)

EVENT SPONSORS

AERO HOBBIES
Lewisville, TX
972-315-1854

Mike's Hobby Shop Superstore
Carrollton, TX
972-242-4930

NORTH TEXAS AEROMODELERS

Ron's Toys for Big Boys
Hurst, TX
817-268-0210

* Advance Table Reservation Form

*** *Note: Advance reservations must be received no later than* ***August 6, 2011*** ***

Please complete and return with payment to:
North Texas Aeromodelers
c/o John Larsen
912 Mallard Way
Flower Mound, TX 75028

Name: _____

Address: _____ City: _____ State: ___ Zip: _____

Phone: _____ email: _____

(Receipt will be provided via email. If email is not available, or return by USPS is preferred, please include a self addressed stamped envelope)

# of Tables (2 1/2' x 8')	Subtotal
First Table $15	$15
# of Additional Tables @ $10 ea. _____	
Total enclosed:	

Please make checks payable to **"North Texas Aeromodelers"**

Contact Info:

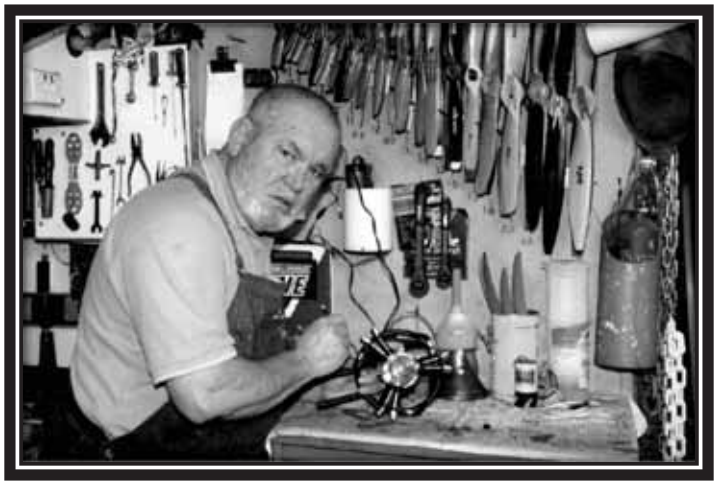
John Larsen
972-539-8576
jrlarsen@verizon.net
www.northtexasaeromodelers.com

Special Requests: _____

THE OILY HAND BRIAN WINCH

THE OILY HAND: Covering engine topics and working with metal for models. Send your comments or questions to: oilyhand@bigpond.net.au or write to Brian Winch, 33 Hillview Pde, Lurnea NSW 2170. Australia. International Response coupon (Post Office) required if you want a written reply.

IF IT FLYS - BRING IT



This month I am going to share with you another country trip, this time to Muswellbrook - a lovely country area about 250 km from where I live and it is north west in direction. The model club there has the use of a great tract of land with over 1,000 acres of flying area. They have a clubhouse/kitchen, toilets and water on the property and only 8 km from the modern yet quiet town and many motels. Talking about the clubhouse for a moment - they just built a new one…out of steel and insect proof particle board. I think you have termites on your island - we call them white ants - but I'll bet our termites could out eat your termites any day of the week. Put a fence post in the ground in termite area and don't expect to see it next week. You can hear them chomping and they build monster termite mounds that dot the countryside in the remote outback areas. Just about any area is prone to these little buggers and Muswellbrook is no exception. Previously, the club had a very solid built wooden clubhouse and a similarly built tractor/mower/tool shed separated by a huge tree. Seems to me the termites had been visiting that tree for years but found it was not the sort of wood they ate. The probably kept coming just in case the tree changed and then, one day, here was a great load of large logs and a lot of sawn timber placed either side of the tree and all spaced out in a building shape. Breakfast one side of the tree - lunch and dinner the other side. They attacked both buildings with a vengeance and the rooms took on a different lean every so many months as the foundation timbers were reduced in size or simply eaten away. In case you are wondering - no…we would not use any poison in an area like this. First off there is the cattle on the property to consider then the abundant wild life. Termite poison is very nasty stuff and it deadly to most creatures so…all that could be done was to yell and swear at the termites but…termites are deaf so they just kept eating and the buildings just kept tumbling. Finally, money was raised and some material was kindly donated so - we had a big bonfire to say farewell to the remains of the building which, incidentally, was the fuel for the bonfire,

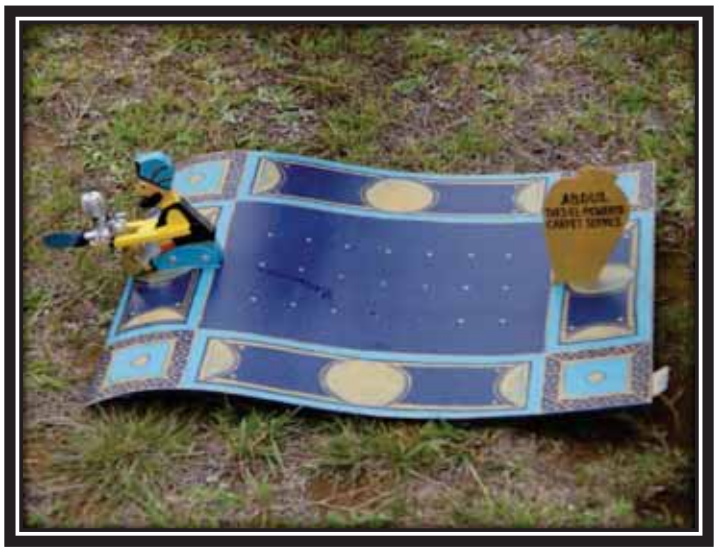
the new steel frame building was erected and we said goodbye to the termites.

Regarding the event - it is called - THE GATHERING. Previously it was THE VETERANS but this put some modelers off as they saw it as a collection of old farts talking about 'the good old days'. The idea of the event - now in its 23 rd year is to have as big a gathering of modelers in the one place at the same time (over 3 days) and the simple rule is - if you have a model aircraft - ANY sort of model aircraft - bring it and fly it at the gathering. I guarantee you will see every form of modeling in all shapes and sizes and…probably…some forms never previously seen as we have some really rare and strange models (?) turn up. Apart from the variety of models, the main attraction for me is to see so many rare and vintage engines used. Last year we had a Channel Island Special in a model that had quite a number of good flights. You can hear the burble of diesels, the high pitched scream of tiny glows, the bark of open exhaust petrol engines, the cacophony of exhausts from various glow engines and the bellow of a pulse jet…even the flutter of rubber power, the hum of electric's and the whisper of gliders…no noise restraints here. This is a great event that is enjoyed by all who attend - up to 200 - and the Saturday evening meal is really something else. A great idea for getting a load of modelers together that could be done by many clubs. Worth the consideration.

The selection of photos was taken, mainly, by Angie M. - a photographic associate who really enjoys photographing model events. Some were mine - mainly the night photos with the rest from Angie.

Combat U-Control model

Chuck gliders are fun for all ages.



Many novelty models

A bit of 3D flying

Always plenty of pit chatter

UNSUPERVISED AND ALONE

While I have been away, the workshop weirdo has been pursuing this mad bent to 'learn things'. He has been attending various TAFE courses as I explained last issue but….so far the results have been rather dismal. Whether he will ever learn anything useful in order to gain paid employment is beyond me. In any case, the only reason he wants more money is so he can continue to pursue his plans to fly - without the aid of a normal aircraft. Maybe, with a bit of luck, one day he will succeed and fly away - a bloody long way away and leave me in peace. One can only hope. As to his success with his latest venture - you be the judge.

His latest study topic is 'PSYCHIC PHENOMENA' Today he told the teacher that he really thought he had strong psychic powers so she asked him how he came about that idea. He told her that he had always felt he had a strange power as he can see into, foretell and dwell in the future. She raised her eyebrows and asked him how long had he thought he had this power, "since March 2025', he told her. I'm not really sure but I think he said she muttered a rude word or maybe it was something futuristically scientific. Whatever it was, she sent him off the find time travel at the local pub. She said that if he drank enough strong spirits he was sure to see ethereal things as he traveled through time…or woke up finding he had moved into a future time with no idea of what had happened from when he slipped off to sleep after the final drink to several days later.

Hopefully he will get drunk enough to see weird and horrible creatures from the future and they will chase somewhere far away.

Well, that's my lot and this has been another episode from WINCH - THE MIXED UP ZIW.

Very neat U-Control model

Why stand when you can sit?

Diesel power - 35mm film can tank.

Sleek powered glider

Vintage scale model

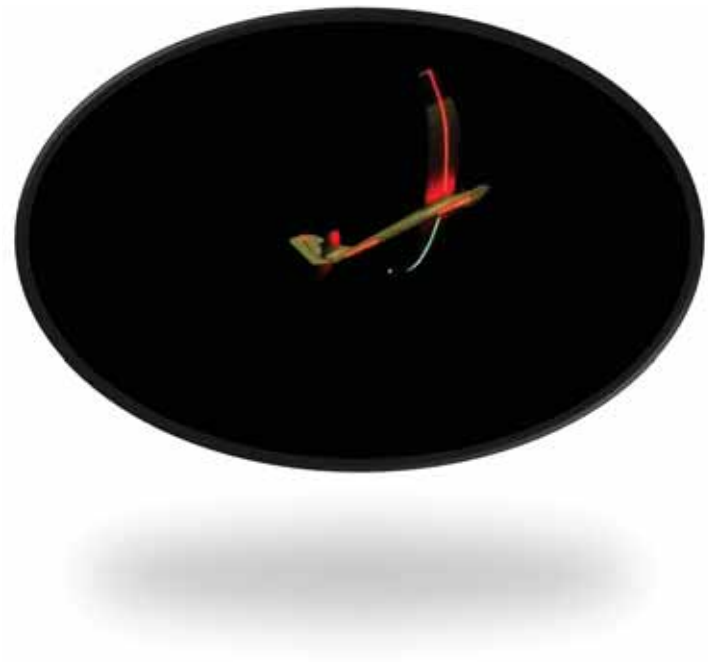
Nostalgia - diesel power

Just who IS flying that model?

Rubber power - note the winder

Mass launch of free flight models

Large old timer with a 'hot' sparky engine.



Night flying is very popular in the dark Western sky.

Lit up like a circus

Scratch built - large and nice.

FUN AEROBATICS ED MOORMAN

MANEUVER OF THE MONTH: The Aileron Roll

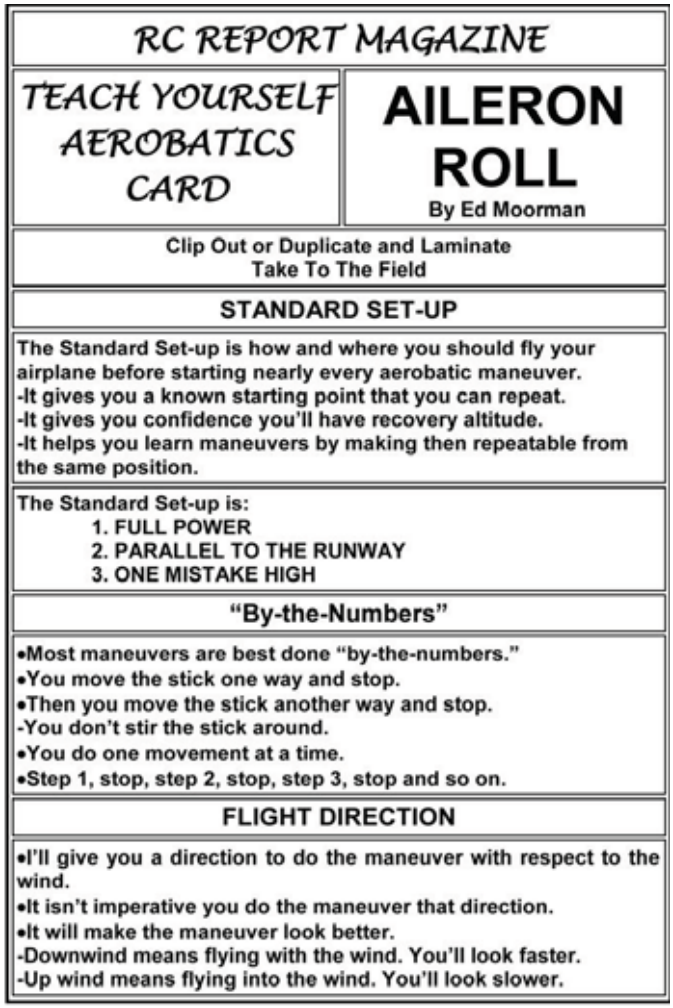
This month I think it's time I got back to the basics for new readers and old ones who want a review. We'll start with a simple aileron roll that a trainer can do and progress from there.

DESCRIPTION OF THE AILERON ROLL: An aileron roll is a simple roll using the ailerons only after establishing a nose up starting position. You can call it an aileron roll, a single roll, a simple roll, a scale roll or a trainer roll, this roll is like you would do your very first roll with a high wing trainer.

Think Safety: When you start learning a new aerobatic maneuver, whether it's your first aileron roll or 3D hovering, you need to think about safety. If it's your first roll, you don't want to put your plane in a position so that if you really mess up the maneuver, you'll end up crashing in the pits or into some spectators or other pilots. Keep this in mind when you start learning acro.

Safety Check: Next, before doing ant acro on a new plane or one you have just use to learn how to fly on, do a safety check. This is especially true if it is an ARF or if you didn't build it. Make sure your plane is structurally sound and the wing isn't going to fold at the first slightly hi-g maneuver you perform. Let me point out here that usually the highest g maneuver you'll probably do will not be a planned maneuver. It

will more than likely be a full up yank in a panic recovery from a blown maneuver. We all do it every once in a while, never the less, check your wing dihedral joint. Flex the wing a little to see if it is glued strongly. Some of the older ARF trainers are not very strong in the dihedral area. If you aren't sure, you should let one of the experienced fliers take a look. Also check the tail, both the stabilizer and the fin to make sure they are securely glued on. If you have a concern about your tail, you can use weed eater line for tail bracing. It weighs next to nothing and it won't let your stab fold. Finally, give a good tug on your hinges and controls. Some ARFs have pre-glued hinges. If you are not sure of them, you can pin them by inserting a straight pin through the surface and hinge, then clipping it off flush. Finally, grab your engine



RC REPORT MAGAZINE

TEACH YOURSELF AEROBATICS CARD

AILERON ROLL

By Ed Moorman

Clip Out or Duplicate and Laminate
Take To The Field

STANDARD SET-UP

The Standard Set-up is how and where you should fly your airplane before starting nearly every aerobatic maneuver.
-It gives you a known starting point that you can repeat.
-It gives you confidence you'll have recovery altitude.
-It helps you learn maneuvers by making then repeatable from the same position.

The Standard Set-up is:
1. FULL POWER
2. PARALLEL TO THE RUNWAY
3. ONE MISTAKE HIGH

"By-the-Numbers"

•Most maneuvers are best done "by-the-numbers."
•You move the stick one way and stop.
•Then you move the stick another way and stop.
-You don't stir the stick around.
•You do one movement at a time.
•Step 1, stop, step 2, stop, step 3, stop and so on.

FLIGHT DIRECTION

•I'll give you a direction to do the maneuver with respect to the wind.
•It isn't imperative you do the maneuver that direction.
•It will make the maneuver look better.
-Downwind means flying with the wind. You'll look faster.
-Up wind means flying into the wind. You'll look slower.

and wiggle it to see if the firewall and engine mount are secure.

STANDARD SET-UP: If you have read the Fun Aerobatics column before, you have seen the words, "Standard Set-up." The Standard Set-up is how and where you should fly your airplane before starting nearly every aerobatic maneuver. It gives you a known starting point that you can repeat when doing all your maneuvers. It gives you confidence before you start that if you mess up, you'll have recovery altitude. It helps you learn maneuvers by making then repeatable from the same position. Here's what the Standard Set-up is.

Full Power: For all your aerobatic maneuvers, start with full power, especially with the slower planes.

Fly Parallel to the runway: For those of you who are just learning, to minimize the chance of you ever hitting someone in the pits, you should practice your maneuvers so that your flight path is parallel to the runway, but out beyond the runway, not over it. This way if you totally blow a maneuver, you, and the guys in the pits, won't be dodging for cover. In addition, a parallel path also makes it easier for you to see the maneuver and see what you are doing wrong so you can learn to correct it. Remember, a parallel path does not mean over the runway. Finally, doing maneuvers in a flight path parallel to the runway helps you get a mental picture of the maneuver so you can learn it and repeat it the next time. Find a comfortable distance out, not so far you have a hard time seeing the plane, but not so close that you get concerned. It should be a comfortable, personal distance for you.

Altitude: I know that when you get comfortable with your trainer, you're going to start flying lower. Flying low means you're better, right. Well, low may be perceived as better, but let's not learn our maneuvers so low that one little mistake and you bash your plane. You'll see me use the terminology, "1-mistake high." One-mistake high is the altitude where you can make a bad mistake in a maneuver, you know, get inverted or pointing straight down, and yank in full up elevator and still easily clear the ground. You'll have to judge that altitude for yourself, but give yourself some clearance. Don't get up in the stratosphere, but fly high enough so you

can try something and live through it. In summary, the Standard Set-up is:

1. FULL POWER

2. PARALLEL TO THE RUNWAY

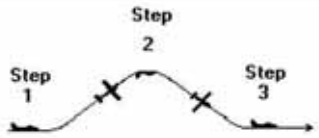
3. ONE MISTAKE HIGH.

I can't stress the Standard Set-up enough to those of you who are just learning aerobatics. If you try to learn maneuvers flying willy-nilly, all over the sky, you'll have a hard time learning them well. You need to learn flight discipline and to put your plane where you want it before a maneuver. As my daddy used to tell me about full-scale planes, "Son, don't let the airplane fly you, you fly the airplane." That's still good advice.

"By-the-Numbers": Contrary to what you might think, most basic maneuvers should be done "by-the-numbers." That is you move the stick one-way and stop. Then you move the stick another way and stop. You don't stir the stick around. You do one movement at a time, step 1, stop, step 2, stop, step 3, stop and so on. You probably think the maneuver will look jerky in the air, but it won't, it will look smooth. What you are going to find is that most errors in basic maneuvers are caused by not doing it by-the-numbers.

A final note before we get to the maneuver: For nearly every maneuver, I'll tell you a direction to do the maneuver with respect to the wind. It isn't absolutely imperative that you do the maneuver that direction, but it will make the maneuver look better. Rolling maneuvers, for example, always look better when done flying downwind, whereas looping maneuvers look better flown upwind. Downwind means your airplane going in the same direction as the wind. Upwind means your airplane is heading into the wind.

AILERON ROLL "BY-THE-NUMBERS"



Start with the Standard Set-up

FLIGHT DIRECTION: Downwind, flying the same direction as the wind.

Step 1: Put in up elevator to raise the nose to around 20 to 30 degrees, then release the stick.
•Adjust the climb angle for your plane's speed and roll rate.
•Don't pause long after releasing the stick, roll immediately, but do get to neutral elevator first.

Step 2: Put in full aileron and hold it until the roll is complete, then release the stick again.
•For some trainers, you may need rudder in addition to aileron.
•As you pass through inverted flight, your fuselage should be about parallel to the ground.

Step 3: After releasing the aileron, use whatever up elevator you need to bring the nose back up to level flight.

ERRORS

•Airplane dives in the middle of the maneuver.
YYou did not release the elevator before rolling.

•Trainer type plane rolls very slowly.
-Increase aileron movement.
-Increase speed of plane.
-Use full rudder in addition to aileron for roll.

CLIP OUT-TAKE TO THE FIELD
COLLECT THE WHOLE RC REPORT SERIES

For reprints of Fun Aerobatics or back issues call R/C Report
(256) 503-8436

Ed Moorman E-mail: emoorman25@gmail.com

Aileron Roll: The maneuver of the month is the aileron roll. Yes, it can be done by a trainer and just about anything else. For you scale guys who might be reading Fun Aerobatics, this is also how a full-scale roll is done on everything but a competition acro plane like an Extra, so it is how you'll be doing a roll. Finally, this is how I taught my students to do an aileron roll when I was a T-37 instructor pilot many years ago in the Air Force.

Let's do an aileron roll: First, how do we start? You got it, the Standard Set Up.

1. Full power.

2. Parallel to the runway and

3. One mistake high.

Do the aileron roll down wind or flying in the same direction as the wind.

Steps for the aileron roll: You are going to do this maneuver by-the-numbers, 1, 2, 3.

Step 1: Put in up elevator to raise the nose to around 20 to 30 degrees, and then release the stick. My buddy Ugo Ferrari has stiffer springs put on his transmitter sticks to assist him in getting the stick back to the center.

Step 2: Put in full aileron and hold it until the roll is complete, then release the stick again.

Step 3: Use whatever up elevator you need to bring the nose back up to level flight.

Let's go over it again.

Step 1: Raise the nose. Don't get too steep or you will kill off all your airspeed. Twenty to thirty degrees is plenty. The reason you raise the nose is because the nose is going to drop all the way through the maneuver. Your plane is trimmed for upright flight so when you are inverted, it will naturally tend to dive. If you had started from level flight, you would end up with your plane pointing nearly straight down! This is also what will happen if you don't release all the up elevator prior to rolling. This error is why you start one mistake high so when you recover, you'll miss the ground.

Release the elevator: Once you raise the nose you must release all the elevator before you put in the aileron. If you hold in any up elevator, you'll get a barrel roll at best and a big spiral dive at worst. There isn't a large pause after you release the elevator. Just stop momentarily before you put in aileron.

Step 2: Put in full aileron and hold it until the roll is complete. It's easy to say, but what if your plane rolls very slowly? If you have dual rates, set up a high rate with more aileron throw, switching to low rate for normal flying and landing. Some of the very slow trainers need rudder in addition to aileron to do a decent roll. For these, use full aileron and full rudder.

Note 1: Do not pull the nose up, then "pause and think about it" before you put in the aileron. A trainer slows down very quickly with the nose up. You may lose enough airspeed so the plane won't roll.

Note 2: Don't chicken out on the aileron. If you try to stop mid way through the roll, you are more than likely upside down and rolling out is the quickest way to correct, anyway.

It's up release; roll until the wings are back to level, release.

Step 3: After you stop with the wings level, you will be slightly nose down. Use a small amount of up elevator to bring the nose back up to level flight.

Here's what happens to the angle of the fuselage throughout the roll. The plane starts nose high at 20 to 30 degrees of pitch. As it rolls to the inverted position, the nose drops, passing through level inverted. Then as the plane rolls out, the nose drops further to slightly

nose down pitch attitude. You stop the roll and correct back to level flight.

Common Errors:

1. The plane does a big barrel roll. You did not release the elevator before rolling. When the plane is in 90 degrees of bank, your elevator is acting like a rudder and pulling your plane off to the side. Just a small amount of elevator will cause the plane to fly a spiral path, making a barrel roll.

Photo 1

2. The plane enters a steep dive. In this case, you probably held in a lot of elevator. In the inverted position, using up elevator causes your plane to go down instead of up. You must make sure you release all the elevator. I have taught many students how to do a roll and this is the most common error. If I see the plane barrel or dive out of a roll, I get then up safely high and then watch their hand when they try a roll. Most of the time they are squeezing the stick hard and can't feel the neutral position. If necessary, I tell them to release the stick and straighten out their fore finger and push the stick to the side with it.

In summary: Start from the Standard Set-up. The aileron roll is done BY-THE-NUMBERS. Step 1. Raise the nose and release the stick. Step 2. Use full aileron to roll and release the stick when you get back to wings level. Step 3. After the roll is complete, use up elevator to bring the nose back up to level. Get out and try this one.

Photo 1 is Flaps' new toy. This is a Hobby Lobby Grumman F-9F Panther, electric ducted fan. Flaps has been trying to build a successful EDF for some time now. We have tried several that he built from plans, but none have flown very well or very far. The truth of the matter is that Flaps is historically a scale builder from both control line and RC. You know what that means-he builds too heavy. Neither of us are used to these small, extra light electrics. The planes we build from scratch are more "robust" to use a nice word for strong and heavy. I test flew the Panther last weekend and it flew great. Flaps was very pleased.

Photo 2

Photo 2: Old buddy Joe Shearer has two of these Kadet Seniors. This one is the land plane and is OS .52 4-stroke powered. He also flies a Kadet Sr. on floats with an OS .70 4-stroke. Is there a better basic trainer, especially for someone who is having trouble or who never flew full scale or who never played video games? If there is, I don't know what it is.

Photo3: Mark Owens holds his remodeled Sky Raider Mach II. He stripped his old Mach II down to the bare wood, patched everything up and filled in all the dings and dents. He rounded the corners more for a smoother look and added a cowl for the Thunder Tiger .46Pro. He covered it in purple and added tip plates. Great job and it flies great, too.

Photo 4: Stan Davis shows his 12-year old; kit built Kaos-not the ARF. Naturally, it is an excellent flying plane. I flew my first one of five in 1971, so I know how they fly. The power is a 12-year old OS .46FX. The liner peeled once and after Stan had it fixed, he talked to the repair technician. He was told to use a castor fuel. He has and the engine has been running great ever since. You pay your money and take your choice.

Photo 5: This is Phil Poole with his repaired Sky Raider Mach I. Phil is on the buddy box, but is progressing. The power is a Thunder Tiger .42GP.

Photo 6: My first twin engine airplane. This is an Airmodillo Combat Twin made from Coroplast and square aluminum tubes. It was supposed to be for two .25s, but the only matching engines I had back in the late 1970s were two Fox .50s. Naturally, I shoe horned them in. It was nose heavy, but what the heck. The tuned pipes did help move the CG back a little. With one engine out it would really flat spin.

Photo 3

Photo 4

FEATURE OF THE MONTH: ROLL STABILITY. For years I have felt roll stability is one of the most misunderstood things in RC. I listen to people who think they know how to apply aerodynamics to RC talk about roll stability, and I am convinced some of them don't have a clue. I'll tell you first thing what my feelings on roll stability are: I don't want any. I'll go so far as to say: NO ONE WANTS ROLL STABILITY. Most of us, without even knowing it, hate roll stability. Alright, before you think I'm the one without a clue, I'll agree gliders need roll stability. Trainers need a little bit of it, but not that much. Everyone else secretly hates it! You don't think so? Well, let me just show you.

What is roll stability? It is the inherent ability of a design to level the wings when they are perturbed from level. Now, I know there is going to be some aerodynamics expert out there who is going to disagree by saying, "All planes have roll stability, whether it is positive, neutral or negative." This is true, but for the most part, I'm going to use generally accepted modeler definitions for aerodynamics terms. What we modelers usually mean when we say roll stability is what the engineer would call positive roll stability.

For full scale planes, roll stability is great. A full scale plane normally stays airborne an hour or two traveling to a destination. If you are flying somewhere and don't have an autopilot, you want the plane to be as easy as possible to fly. You want to trim it up and relax, letting the plane do its job. You don't want to have to concentrate every second on keeping the plane right side up.

Photo 5

Now consider the RC plane. How long do you fly your plane? My neck wears out quicker as I

Photo 6

get older. It used to be I flew for 12-15 minutes. Then it was 10 minutes. Now, it's getting down to 8 minutes or so. I do burn less fuel. We also don't fly our planes straight and level for very long. In less than a minute the plane begins getting too small to see. We are continually turning and flying back and forth. We also do lots of maneuvers, and for maneuvers, we want a plane that stays in the attitude in which you put it. You roll into a bank for a turn, neutralize the ailerons and add some back stick. The plane maintains the bank and turns. No playing with the ailerons to keep the bank where you want it, the plane stays where you put it. In other words, "It goes where you point it." How many times have you heard someone make that statement when they are talking about a really good airplane? Usually it's someone talking about his second plane after graduating from a roll stable trainer. "Great plane!" he'll say, "It goes where I point it."

How about some roll stability on a basic trainer? Take a Kadet Senior, for example. Here's a plane that is a great trainer and it has, and uses, roll stability. I have demonstrated roll and pitch stability many times using a Kadet. Pull the stick back in the corner until the plane is in an inverted dive and release the sticks. The big Senior will pull out of the dive and roll out all by itself. If the student messes up and gets the plane all out of shape, he can release the sticks and the Kadet will correct itself. This feature, positive roll and pitch stability, is especially good for students who want to push the envelope and come back out in the afternoon to try it themselves after their instructor has gone home. Most people now use a buddy box, so they normally wouldn't dare try it solo.

I will discuss wing location and dihedral effects

Photo 7

in another column, but let's look at this from the aspect of roll stability. Except for basic trainers, high wing planes never really need dihedral except for looks or out of fear of the unknown. You've probably seem photos of many of my planes with anhedral (the opposite of dihedral or downward drooping wings). Anhedral in a high wing plane works very nicely. From my experience with many high wing planes with anhedral, 3 degrees of down angle on both sides will cancel out the roll coupling when you use rudder for knife edge or in point rolls. See Photo7, a head on view of my old Kangke SK50 with anhedral. Excellent flying plane.

More than once I've had some new person or visitor come up to me and tell me that my plane was going to crash! One guy was just about frantic that my plane was doomed. I was nice and assured him that I knew what I was doing, but he waited behind a car while I flew.

Just to demonstrate what a lot of bunk this is, a few years back I borrowed a buddy's plane and ran a little experiment. Bob Hennon, a late friend who didn't mind trying a thing or two, had a small, .28 powered Stick type plane with rubber band on wings. I talked him into letting me play with it for a while. I took the wing off and put it back on upside down. Instant anhedral, a couple of inches on either side. Looked funny and everyone was skeptical. I took it off, trimmed and then wrung it out. Next, I let 5 or 6 other guys fly it, including Bob. They were all amazed at how well it flew. There were comments like, "Looks neat, kind of like a jet, even with the Stick tail," "Rolls a lot better, more axial." "Stays where you put it." "Outsides are easier; it doesn't try to roll off." "Flies inverted really well." Bob even said it landed better. He thinks the downward wings scoop the air underneath the plane, cushioning the landings. No one, not one flier, mentioned anything about the dread "R" word, "roll instability."

Now we're getting to the summation of this exercise. Ask yourself, do you want a plane that rolls itself out of a turn like a trainer or do you really want a plane when you put it in a bank, it stays there? No question in my mind. You, I, all of us want-I'm going to say it-NO ROLL STABILITY!! There, I've said it!

What about Bob's plane and all of mine with the droopy wings? How come it didn't fly weird? First, just having a high wing location gives some roll stability. The high location is the equivalent of 3 degrees of dihedral. Try knife edge with a flat wing Ultra Stick. It still wants to roll out just like a plane with dihedral. The droopy wings just get you back to neutral. Second, the weight of the fuselage is hanging down below the wing like a pendulum. This adds some stability. Third, to finally convince you that anhedral is good, take a low wing sport plane and turn it over and look at it head on. What do you see? A high wing plane with anhedral!

And now, exit, stage left, singing:

An-hedral is the way to go,

An-hedral if you're in the know.

Drooping wings are there just so

Your plane points where it's going to go!

Electric Formula One Pylon Racing Comes to Sanderson Field

On July 23, 2011, the Pylon Racers of Puget Sound (PROPS) introduced EF1 racing at Sanderson Field, Shelton, WA. Nine pilots participated in the event and brought with them 10 EF1s, all E-flite Pogos except for an early Little Tony belonging to Dan Nalley. The pilots flew Pogos exclusively during the two days of racing.

The course was 425 feet long and used three pylons. This course was created by placing a portable pylon between the long-course pylon 1 and pylons 2 and 3--a very easy course adjustment. The course length was chosen to result in a 10-lap time for experienced pilots of about 1:25. The fastest time was posted by Tom Strom Sr. of just over 1:23.

Both pilots and spectators enjoyed the EF1 races. For the spectators, it was easier to see and follow the races on the shorter course. For the pilots, the EF1s were just plain fun to fly--especially after several heats during which the pilots became more familiar with both their aircraft and the course. There were some exciting races among the pilots.

Hey! Where's the Caller for Lane 3?

On the whole, the pilots had little difficulty with the Pogos. There were one or two ground loops on launch and an engine failed to arm a couple of times. Most of the pilots found that launches were easier when using the caller at the flight line during the launch: the caller could hold the plane while the pilot advanced the throttle, thus eliminating the ground loop problem on takeoff. Not all pilots used a caller at the flight line during launch, though, and those who didn't were still able to launch reliably with careful attention to throttle and rudder. All pilots especially liked not having to walk to retrieve their planes after landing: they just taxied them home.

Joe DeLateur and Wife: All the Way From California to Race Their EF1

Everyone who participated for this first-ever EF1 flying at Sanderson Field is looking forward to the *big* event on August 20-21 -- Pylon Race North vs South. It is expected that the EF1 registration will be significantly larger. The North vs South event gets bigger each year and, because of the great air at Sanderson Field, times tend to be faster around the courses. Contact Props to register for this Sanderson Field event--or just show up and enjoy the fun.

Tom Strom Sr. Delivers a Fresh Battery to Pilot and CD Eric Ide

Pilots for this historic event were Dan Nalley, Eric Ide, Tom Strom Sr., Tim Strom, Marc Winz, Steve Mortenson, John Riley, Tom Strom Jr., and Joe DeLateur.

Tom Strom Sr. After a Fast 10 Laps Around the Course

Callers Race to Join Pilots after Launch

Starter Tom Strom Jr: The Last Flag

Resource Links

Electric-Power for Radio-Controlled (RC) Pylon Racing: More information about Electric Formula One.

Pylon Racers of Puget Sound (PROPS): Home Page

TAILS FROM THE OTHER SIDE ISABELLE

Welcome to August! School will be back in session any time now. The summer has gone by quickly. I enjoyed my time off last month. Hope Bailey didn't scare too many of you. He's a fussy cat sometimes.

So let's see what we can get into during the month of September. The weather will actually start cooling down in some parts of the country. Royce Tivel, who's writing you will find all over RC Report Online this month, tells mom that is in the 70's already in his part of the world (Washington – the state, not the Capitol) By the way, if you haven't had a chance to read some of Royce's stuff; you definitely should take that opportunity this month. He does a great job and has a lot to share! Thanks, Royce!

Spend your money (and fly a little) with these good people!

Visit Newton County, Georgia, on September 3, for the NEWTON COUNTY RC FLYERS TAIL GATE AND SWAP MEET held at Varner Field. David Mccullough can be reached at traderdave2@att.net for more information or visit www.ncrcf.org. Concessions on site. No transmitter impound, fly what you bring.

The following weekend, travel to Kutztown, PA, for the 11TH ANNUAL RC SWAP MEET at the Kutztown Fairgrounds. Contact Ernest Jones with questions at flygramps@gmail.com. Meet hours are 9AM to 2PM with a $3 admission. KUTZTOWN AERODROME RC SQUADRON

Take a couple of weeks off and then take a little trip to Burr Ridge, IL, on September 24, for the WOODLAND AERO MODELERS 44TH ANNUAL SWAP MEET. This long running event will be held at Trinity Lutheran School. William Brzostowski has the answers at billbrz@sbcglobal.net or visit: www.wam-rc.com. Open 8AM to noon, admission $5, tables $15 each at the door, advance table reservations $12 per table with check payable to Woodland Aero Modelers. Coffee and doughnut concession available.

In West Seneca, NY, on that same day, you can enjoy an RC AUCTION held at First Presbyterian Church. Contact James Ehrig for more information at jehrigiii@gmail.com or visit www.theflyingknights.com. Doors open at 10AM, auction starts at noon. Adults $5, under 12 and women free. Refreshments available. Sponsor: FLYING KNIGHTS OF HAMBURG NY

If you're just looking to fly; here you go!

Come see me on September 2-4, in Tuscaloosa, AL, for the TUSCALOOSA 3D THROWDOWN held at Club Field. Email Chacy Dubose at chacyd@gmail.com or visit www.waam.us for more information. Giant scale 3D event. Raffle prizes, concessions, landing fee $20 includes Saturday lunch. We are on Facebook - West Alabama Aero Modelers for field pictures and other information. Sponsor: WEST ALABAMA AERO MODELERS

Or you could visit Ft Smith, AR, on September 3-4 for the KENNY ROBERDS MDA FLY IN. Contact Harold Wille for more information at h.wille@sbcglobal.net or visit www.fortsmithflightmasters.com. The Flightmasters flying field is located right off Hwy 71, on Treece Rd, just five miles south of the I-540/Hwy 71 south junction, in Fort Smith, AR. Sponsor: FLIGHTMASTERS MAC

Maybe you're a little farther west? Check out the WEST COAST MINI FESTIVAL CELEBRATING AMA'S 75TH in Lodi, CA on September 2-4, at Kingdon Airpark. Jose Macias can give you more information when you email him at hiflyerjr@sbcglobal.net or visit www.deltamodelers.org. Enjoy three full days of flying and friendship, runway 3700x60', RVs welcome, no hook ups. Trophies awarded for best of show, best scale, best sport and pilots choice. Vendors welcomed, lunch served Friday and Saturday, night flying Friday and Saturday. Airport open Thursday for early arrivals, possible Saturday night dinner. Sponsor: DELTA VALLEY MODELERS

All the way across the country, and a week later, enjoy the (C) H.A.M. CHARITY FUN FLY in Spring Hill, FL. Contact Ed Carpenter at k4gj@yahoo.com or visit: www.hamrc.com. All AMA legal models invited. Enjoy our 800' grass runway and help us on our annual charity event. $3 per person or $5 per carload. Power available for charging only. Good food and soft drinks at site. Sponsor: HERNANDO AERO MODELERS

On September 10-11, join the fun in Belvidere, IL, at the (C) N.I.R.C.H. FALL FUN FLY. Larry Stevens can be reached at lstevens@ksbhospital.com. Come enjoy two days of flying with friends. Good food, good friends, good times. $20 pilot fee includes raffle and dinner. Sponsor: NORTHERN IL RC HELICOPTER ASSN

That same weekend, in St John, IN, you can have a little fun at a (C) FLOAT FLY held at Lake Hills Golf Course. Email Ronald Parent at ronaldparent@sbcglobal.net or visit www.crownpointaeromodelers.com. Nice shaded area to set up, plenty of room to fly. Refreshments available on site. Sponsor: CROWN POINT AEROMODELERS

The (C-Restricted) BLUE SKY FLY IN will be held on September 17-18, in Berryton, KS, at the Blue Sky Aerodrome. John Dalton can tell you more when you email him at jwidner68@yahoo.com. Sponsor: N.E. KANSAS BLUE SKY SQUADRON INC

The (C-Restricted) KY FALL CLASSIC FLY IN will take off in Lexington, KY, on September 15-17 at the Gov Landfill. Email Gale Moore at p51moore@yahoo.com or visit www.lmacky.org. 80" mono, 60" biwing, 70" warbird, 50x750' black top, 50x600' grass. Landing fee - donation. RV camping, some hook ups. Food and drink available. For information, email Curtis Adams at cadams4210@windstream.net. Sponsor: LEXINGTON MODEL AIRPLANE CLUB

On September 17, in West Monroe, LA, the (C) FALL FUN FLY W BIG BIRDS will be held at club field. Email Stanley Williams for more information at chswe800@yahoo.com or visit www.weflyrc.net. Prizes and raffle. Food and drink concession. Flying 9AM to 5PM. The first 15 minutes of each hour is reserved for big birds. Big birds and smaller planes fly the rest of each hour. Sponsor: NORTHEAST AERO RC CLUB

Travel to Fruitland, MD, on September 25, for (D) MARKS AIRSHOW. Contact Jeffrey Mccarter via email at mccarter@4-shore.net. Visit: www.marksrc.com for more information. Fun fly and exhibition, free admission, flying by invitation only. Prizes for flyers, hours 1PM to 5PM. Food available on site. Sponsor: MIDATLANTIC RADIO KONTROL SOC SOCIETY MARKS

Play at the (C) SMITHVILLE DAMBUSTERS FLOAT FLY on September 25, in Gower, MO. The event will be held at Lone Rock Lake. Email Dan Richardson at drichardson3@kc.rr.com. $10 per day landing fee. On site concession, retrieval boat, flying 900 to 1900 each day. Sponsor: SMITHVILLE DAM BUSTERS RC

On September 24, in Greensboro, NC, have an electrifying time at the (C) GREENSBORO ELECTRIC FLY IN held at Grams Field. Contact Steve Vergamini at svergamini@triad.rr.com or visit www.greensbororadioaeromodelers.com for more information. This is a first-time event, so help them kick it off right! All electric planes, foamies, micros, gliders, EDF and helis welcome. From 10AM to 10PM, bring your night rig. Landing fee of $6, parking space rental for swap meet is $5. No overnight camping. Concessions on site, plus prizes and raffle. Sponsor: GREENSBORO RC AEROMODELERS

Celebrate the end and beginning in Mineral City, OH, on September 30- October 2 at the (C) MAHONING COUNTY MODEL CLUB FLY IN held at Atwood Lake Park. Email Richard Evans at ree39@zoominternet.net. Sponsor: MAHONING COUNTY MODEL CLUB

The (C) SOD BUSTERS WARBIRD INVASION will be held on September 30, in Camden, SC. Contact Forest Morris at scalenut@bellsouth.net or visit www.giantwarbirds.org. Join them for a giant scale warbird event co-hosted by the Giant Scale Warbird Assn. Beautiful 1200 acre sod farm with manicured Bermuda sod and miles of open airspace. 80" mono and 60" multi wingspan min applies. $25 landing fee. Military or civilian paint okay. Camping encouraged, no hook ups. Come Thursday and stay until Sunday if you like. Sponsor: CAROLINA SOD BUSTERS

Here's another ending and beginning opportunity in Tullahoma, TN. Enjoy the view at the (C) MTRCCA AIR SHOW held at the Tullahoma Airport. Email Augustus Tonan at dtonan@mac.com or visit www.mtrcca.org for more information. This is Middle Tennessee's largest fly in, with over $2000 in door prizes. 1000' paved and grass runway. RV hook ups. Sponsor: MIDDLE TENNESSEE R/C CLUBS ASSOCIATION

There are a couple of last minute event flyers on the following pages! Enjoy!

Let me hear from you! Send in your event information by email, via the office: juliac@rcreport.net, with information concerning upcoming events that you are aware of – no matter how big or small! Attach a flyer, too! If you don't tell the RC world about it, the RC world will never know to visit and fly with you in your part of the country!

Isabelle

Spay and neuter your pets and ADOPT – don't buy! Rescued is my favorite breed!

Spirits of St. Louis R/C Flying Club, Inc.

ELECTRIC FLY-IN

Sunday August 7, 2011

$5.00 Landing Fee

Concessions Available

Event Directors

Chris Nenzel 636-634-8888

Greg Bohrer 636-939-4155

9-9:30 – Micro flying. Micro planes have the right of way, wind permitting.

9:30 – 10:30 General E-Flight. Have a question? Ask a volunteer!

10:15 – 11:30 E Heli's only please! Tear it up boys!

11:30 – 12:00 Lunch break

12:00 – 1:00 Five at a time Park-Zone Streamer Combat – Get the streamers only, midair collisions discouraged!

1:00 – end Open Flying.

Sales of Electric Flight Items welcome – Bring your tables and sell your stuff at the East end of the field (opposite of the pavilion).

How to get to the Event:

http://bit.ly/oN4GdL

...or scan me with your phone

August 20th – 21st, 2011

Sponsored By: InDepth Creations in Kent, Wa

Remote Control Pylon Racing! Come see the countries best pilots fly four aircraft at a time at speeds greater than 200mph! Bring the family, walk through the pits and meet the pilots! This is a free event for spectators!

Site: Sanderson Field R/C Flyers site in Shelton, WA
Take I-5 to HWY 101 North. Follow 101 North through Shelton, and look for the airport on your left shortly after passing the Wallace Kneeland Blvd exit. Turn left onto Sanderson Way, and look for Model Aircraft Race signs.
Note: This is a full scale, active airport. There will be NO flying except for Friday, Saturday, and Sunday. There is a 300ft ceiling.
Entry Fee: Fly one event for $50.00 total for the weekend, fly two events for $85.00 total for the weekend, or fly three events for $100.00 total for the weekend. Entry fees include your lunch for both Saturday and Sunday! Discounted Entry fees possible due to the sponsorship and contribution to this event from InDepth Creations, which is a local company.
Entry fee is payable by cash or check only. There is a four pilot per frequency limit. All entries must be current AMA.

Contest Director: Tom Strom Sr.
1420 SW 160th St
Burien, WA 98166
206-246-4258

Co-Contest Director: Eric Ide

Hotel Info: Super 8 Motel
2943 Northview Circle
P.O. Box 267
Shelton, WA, 98584 US
360-426-1654

Little Creek Casino
91 West State Route 108
Shelton, WA 98584
360-427-7711

Camping Info: Camping is available at the field. There are no hook-ups.

Schedule:

Friday Aug. 19th	Saturday Aug. 20th	Sunday Aug. 21st
10am – 6pm Inspection Open	7:30am Test Flying Open	8:30am Pilots Meeting
10am Test Flying Open	8:15am Test Flying Closes	9am First Heat
6pm Test Flying Closed	8:30 am Pilots Meeting	
	9am First Heat	

Please note that this schedule will be followed to the minute and no deviations will be made.

Classes to be flown: APRA Q-500/ AMA 428 Q-500/ AMA 422 Q-40/ Electric Formula 1

Sparky's Revolt

by Tony Coberly

by Tony Coberly

Well folks, can you believe this heat wave we are having across the US? Days upon days of record temperatures at and above the century mark and we are trying to get some flying in. We must be crazy! I am going to talk a bit about cooling and look at a little Nitro planes project that I have been piddling with in my spare time.

Heat Heat Heat!

Over the past two years there has been an explosion in the electric arena of high power battery packs, and extreme power and speed planes have flooded the market. These planes can range from the smallest entries from E-flite like the Beast to larger ready to fly stuff from nitro planes and Venom. The foam ducted fan jets are zooming around at 100MPH with these generic batteries crammed into tight fitting foam enclosures. Just because the manufacture said it was ready to fly, don't mean not to worry about it. When you are looking at temperatures approaching the century mark, you should be concerned.

LiPo packs are designed to get warm and even hot in order to produce the maximum power. If your LiPo is not in the 100-110 degrees F range, you are not getting the best performance from the pack. Now there is always a tradeoff of course because the hotter the battery is before the discharge begins, the hotter it will be when the flight is over. When your LiPo pack is done with a discharge cycle it should never exceed 140 degrees F. Above 140 degrees, the lithium salt

electrolyte in the battery pack starts degrade. When this electrolyte degrades, it outgasses and causes the pack to swell up and eventually rupture. When the ambient temperature is as high as we have had, you need to take more precautions to save your packs.

As a general rule it has been said that you need three to five times as much air exiting the plane as you have entering. The problem is that as the air temperature climbs past 95, you have little to no actual cooling on the pack. When you have high temperatures you need to start at the five times exit air.

You should actually consider an active cooling solution if the plane is large enough to facilitate it. A CPU cooling fan can be used on three cell LiPo without a problem, but of course it's more weight. The idea is when you are at full throttle your battery pack is getting the highest volume of air across the pack, but when you slow down to

cruising speed the pack builds more heat than can be dissipated when the air temperatures is extreme. If you can use an active cooling option, like a CPU fan, you can keep the rate at which you can dissipate the heat at the maximum without concern for airspeed. I am surprised there are not more fan options out there for this use, but you can use a small fan from Integy that the RC car guys use for their speed controllers.

Going back to some of the foam jets and little war birds just cannot take the extreme temperatures that we are having. I always recommend taking a small drill bit in the 1/4 inch range and add a few additional exit holes in the foam on the bottom of the plane. Let's face it; you are not looking at a Top Gun class competition plane. The last thing anyone wants at any RC club is a plane or jet flying into the pits, crowd or somewhere else while on fire!

Now we talked a little about the heat while flying, now what about while in the pits. What are you doing when you charge your batteries? If it is over 95 degrees and you have just flown, how long do you think it will take for your battery to cool down? Once again, hot air just will not cut it! If you want to cool your batteries down and fly again soon, there is another option. Now this option is only for those open minded folks so here we go. Just get yourself a large quart supersize plastic cup, two quart size zip top bags and a towel. Since it is hot at the field, you should make sure to stay hydrated, so you should have a supply of nice cold ice water handy. All you need to do is place your freshly discharged battery into the first plastic bag and get most of the air out and close the bag. Now place your battery, while it is in the first bag, into the second plastic bag and seal it up as well, removing most of the air. Now place the bags in the tall plastic cup and fill it up about half way. Just fill the cup up with cold water until the battery is nearly covered. Do NOT leave the battery alone; just wait for about five minutes. Depending on the size of the battery you are trying to cool, you should see a drop of about 15 degrees. Now if you are worried about your battery melting through the plastic bag, well don't. If the battery is hot enough to melt the plastic bag, you have already damaged the battery and shouldn't be flying it. The plastic bags are just a precaution, but I don't recommend leaving the packs in too long. We are only trying to cool them down to 100 degrees or a little less. You do not want to cool the batteries down to a cold ice water temperature, but just good cool water. Now once everything is cooled down just dry off your battery and prepare it to be charged.

Now this is defiantly not the method to be used by folks that are afraid to think outside the box. Just a very good reliable method to get things cooled down quickly so you can get back in the air as soon as possible, without a lot of risk.

During this summer I know everyone is out and about attending flying events, so be careful. Make sure to keep yourself healthy by keeping cool as humanly possible and watch out for your fellow flyers.

Until next month.

Tony Coberly

tonyc@rcreport.net

Retail: $599.99

Selling: $429.99

Spektrum R/C

Distributer: Horizon Hobby Inc.

Included with system:

- DX8 Transmitter
- 2-AR8000 2.4GHz DSMX Receivers
- TM1000 Telemetry Module
- Neck strap
- SD Card
- Voltage sensor
- Temperature sensor
- Data lead
- 2mm Allen wrench
- Instruction manual and programing guide
- Power supply

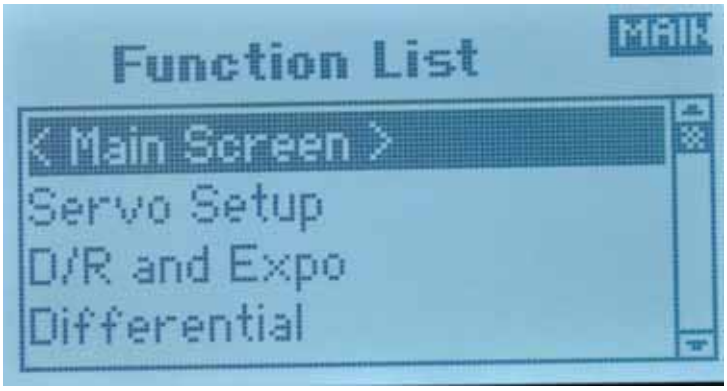
The Spektrum DX8 is the next generation in 2.4GHz radio system. The DX8 system is not only a spread spectrum transmitter and airborne receiver but Spektrum has also added the DSMX technology and imbedded telemetry. What is DSMX? Well let's have a look.

According to the Spektrum website "*DSMX frequency shifts are coordinated using the most advanced FHSS algorithm ever seen in an RC application. Unlike other FHSS transmitters that all hop in the same fixed patterns, every DSMX transmitter has its own unique frequency shift pattern calculated using its GUID (Globally Unique Identifier). And each pattern uses just 23 channels in the 2.4GHz spectrum. By adding the agility of unique frequency shifts to the superior interference resistance of a wideband signal, and limiting those shifts to a smaller portion of the 2.4 band, DSMX transmitters provide on-channel interference protection that is simply second to none. The result is quicker reconnection times and superb response in the noisiest 2.4GHz environment."* Now let's look at this statement. What is FHSS? FHSS stands for Frequency-Hopping Spread Spectrum. FHSS has been used in the past by a couple other radio system manufacturers, but it is a first for Spektrum. Spektrum has used DSM and DMS2 for years, but there is no channel hopping involved. DSM and DSM2 systems grab two available wide band 2.4GHz channels and hold onto them. If the first channel becomes bothered by noise or interference, the transmitter and receiver simply decide to use the second channel that was grabbed. The new DSMX technology uses 23 channels that are constantly hopped across in a unique pattern for each different radio system.

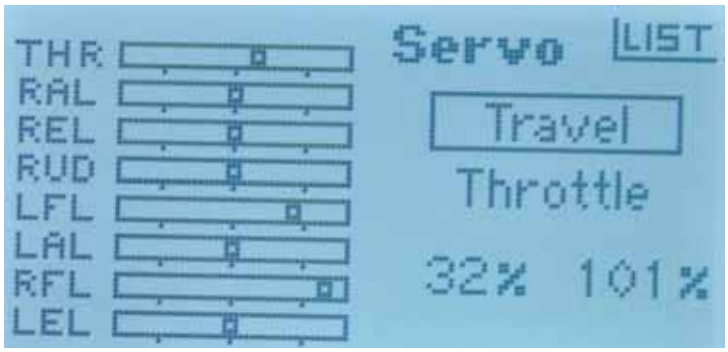
Looking at the DX8 transmitter itself I first notice that is very flat across the face. Gone are the slightly convex features of the DX7 that I liked. The back of the DX8 has a pair of rubber grips to aid grip during those hot summer days. The front of the transmitter sports all digital trims for the controls. Four three-position switches are labeled for flaps, aileron D/R, elevator D/R, and Aux. One additional digital trim on either side of the transmitter labeled L trim and R trim. The top of the transmitter there is a three position switch for rudder D/R, Aux 3 dial, and mix switch on the right side. On the top left side of the transmitter there is a trainer button, three position F Mode switch and a gear switch. The control sticks appear to be aluminum and are adjustable with the included hex wrench. The front of the screen has two buttons to the left, along with what looks like a button, but it's actually a speaker. The right side of the screen has a multiuse scroll dial/button. Finally on the left side of the transmitter we have a SD card slot.

Now let's look through this radio and do a thorough examination of each menu! I'll start with the basic menu we get when the Spektrum DX8 is powered on. When the transmitter is powered on we first get a main screen with several different logos. The screen has a blue tinted back light that is illuminated for about 35 seconds, if no other menu keys are actuated. The

Spektrum logo appears across the top with the current DSM mode type of DSM2, or DSMX. The aircraft type and name along with a representation of an airplane or heli, depending on the mode. The main screen also has a timer and transmitter voltage indicator. The digital trim positions are indicated on the right and left, as well as two indicators on the bottom for rudder and aileron sticks.



The Function List is accessed from the right side roller knob. The Function List is accessed by depressing the roller knob. This list contains ten different sub menus that will be used most of the time once the model is initially setup. The ten sub menu options are: Servo Setup, D/R and Expo, Differential, Throttle Cut, Throttle Curve, Flap System, Mixing, Range Test, Timer and finally Monitor. Any of these menus is accessed by rolling the dial until the correct selection is made and then depress the roller knob.



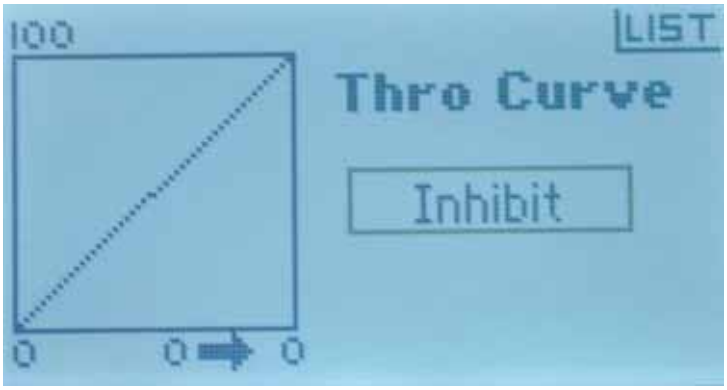
Servo Setup is where we can adjust the many aspects of the servo movement. The first is the actual servo travel of the servo. By rolling the knob and selecting the travel option, we can adjust the movement of selected servo on the upper and lower limit. With the Travel option selected it is easy to select the particular servo that you want to control by simply rolling the dial to the throttle and depressing the knob again. Now by rolling the knob you can select the servo that you want to adjust. When the Travel option is selected and the roller knob is depressed, more modes are available. Sub Trim allows small adjustments to each servo channel. Again just select the appropriate channel and navigate to the number below, depress the knob again and roll the knob in either direction to move the servo. Next menu is the Reverse menu for selecting any servo channel and changing the direction. The last menu under Servo Setup is the Speed setup for each servo channel. This speed setting allows the servo input to be slowed down by up to 30 seconds. This setting is good for flaps or mechanical retracts, for a slow more scale deployment. This is the last option in the servo setup menu. To go back to the main menu, just click the list option, or the back button.

D/R and Expo menu is used for setting the amount of movement and softness of the controls. Aileron, Elevator and Rudder controls can be adjusted by percentages of the total movement. Each channel is preprogrammed to a switch with three different positions. Each switch position has its own percentage of total servo throw, and Expo.

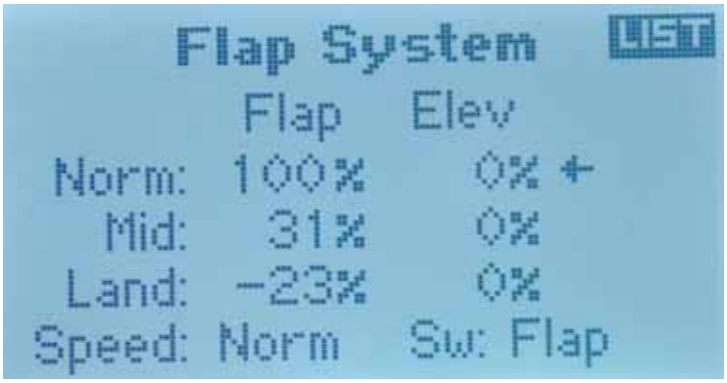
Differential menu is the area where you can make adjustments where you want more movement in one direction than the other. You would use these settings for some mid wing airplanes that tend wallow through what would be an axial roll. You would adjust the ailerons to allow more up movement on one side of the wing, than down movement on the other. This menu allows the adjustment of all channels in both direction, and is also based on the multiple rate switches.

Throttle Cut menu is very self-explanatory. This is where we can use an unassigned switch to bring the throttle back to a kill position. The default switch for throttle cut is the trainer switch, but can be changed to any other switch that is not assigned. Again, just roll the knob and select SW and pick an unassigned switch. The position of the kill can be adjusted by position below the idle throttle position.

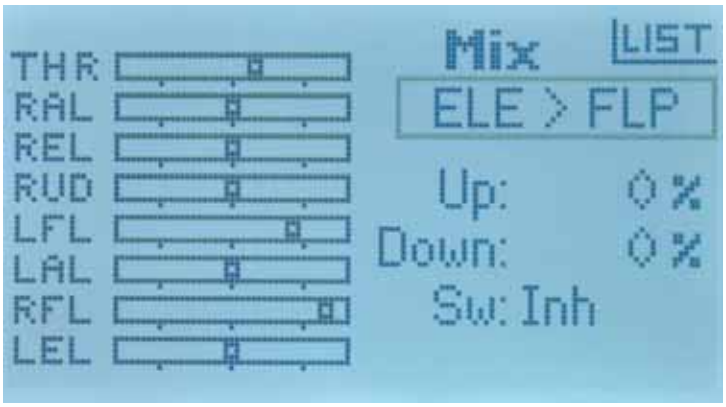
Throttle Curve menu allows you to change the throttle servo movement from a linear movement



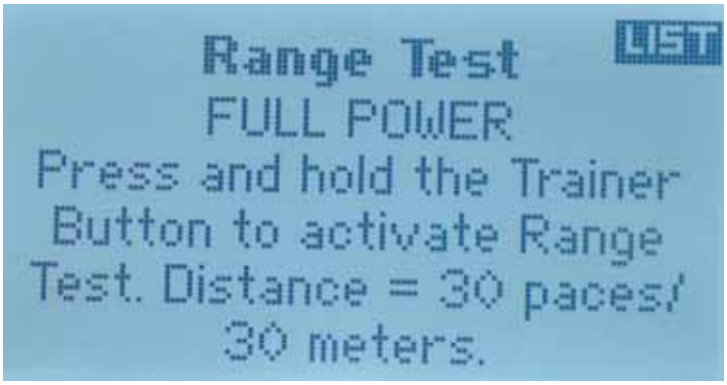
to a more aggressive, or move passive movement as the stick is advanced. The Throttle curve can be assigned to a switch, on all the time, or inhibited.

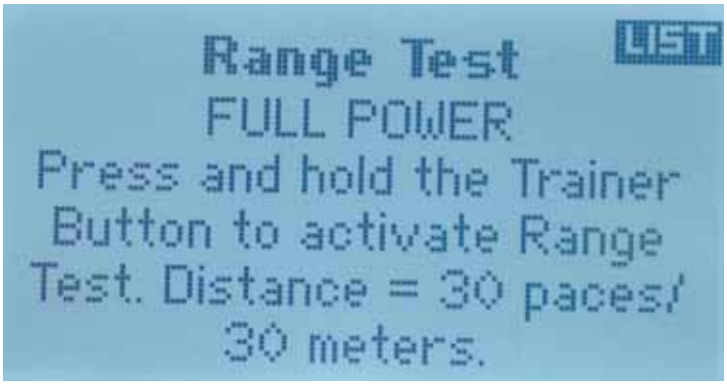


Flap System is an area used when flaps are present. This area allows for quick assignment of flap movement based on flap switch position. Additionally the elevator can be adjusted to compensate for the normal pitch up of the nose of the plane with the flaps down, by adding down elevator. Each of the three flap switch position has their own flap and elevator percentages.

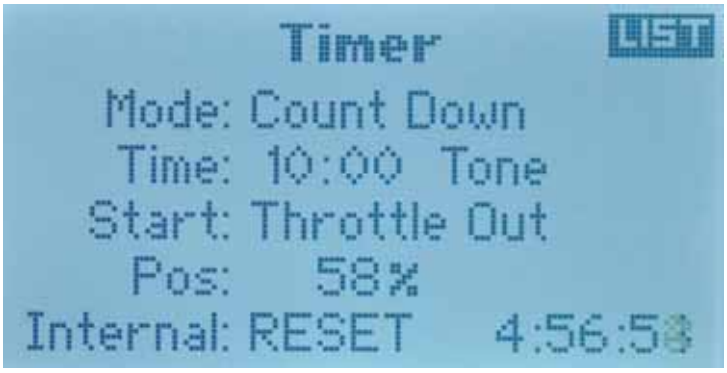


Mixing menu is used for coupling one control surface movement to that of another. There are two prebuilt mixes, one for elevator to flap, and one for aileron to rudder. Both of these mixes can be assigned to be enabled by a switch, and each direction is adjustable. To go with the two built in mixes, we have six additional mix areas that we can customize to our needs.

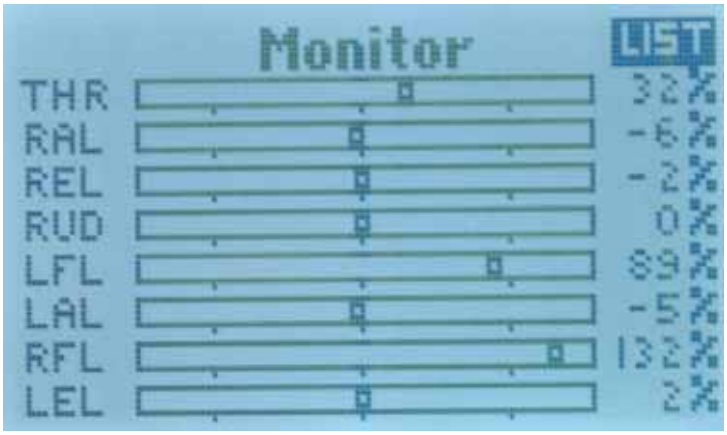




Range Test menu is where we can test our range for first time models. This is very simple as the screen indicates the instructions. It is indicated that we are to walk 30 paces away and press the trainer switch to go to low power mode. While holding the low power switch we test the movement of the control surfaces. PLEASE NOTE: If you are using the telemetry module in the plane you are range testing, the screen will NOT prompt you how to enter the range test mode. The screen will instead show flight data log from telemetry module. We can still walk away to the 30 pace area and press the trainer button. Now while moving the control surfaces we will see if there are any holds or fades as indicated on the transmitter screen.



Timer menu allows adjustment of the onboard timer. The timer can be a countdown timer or a stop watch timer. The either timer can be assigned to a mix, the trainer switch position or a percentage of the throttle stick. I like to use the trainer switch on fuel powered models, but I like to use throttle position on my electric planes. PLEASE NOTE: When using the throttle stick percentage to start and stop the timer there is something to be considered. If your throttle servo channel has to be reversed to move the correct direction, the timer percentage at idle will be a high percentage NOT zero percentage. So with a reversed throttle you will start at 100% and move down until the timer starts and stops where you want it too.

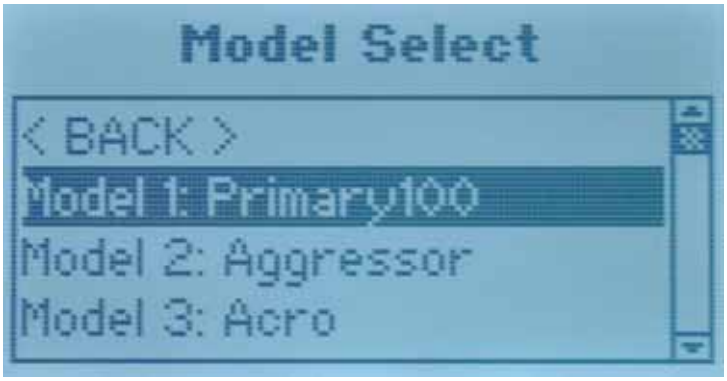


Monitor menu gives us a graphical view of the

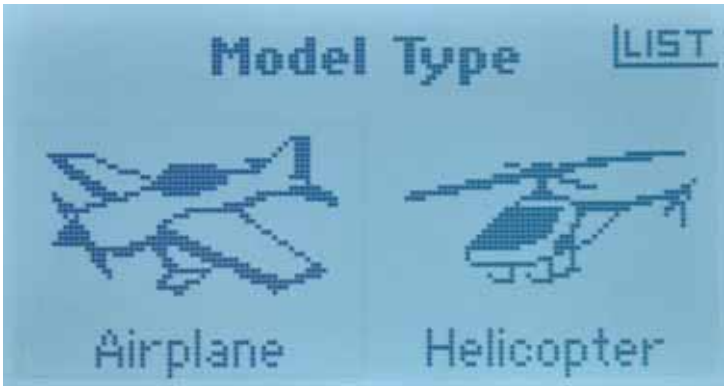
current position of all servo channels. This graph shows stick position including any trim or sub trim that is used.

In order to access the Model Select menu you must push the CLEAR and BACK buttons simultaneously. The Model Select menu allows you to select from one of the 30 possible stored models in the transmitter.

Now we have talked about menus used to configure a model in the transmitter, but we need to look at the System Setup menu. The System Setup menu is where you need to start when configuring a new model. The first option is the Model Select menu.



Model Select menu is the same menu that you can access with the Clear and Back button push.



Model Type menu is next and is used to configure the initial type of airplane or helicopter.

Model name is of course to set the name of your aircraft for identification. There are 10 characters possible in the name of the model.

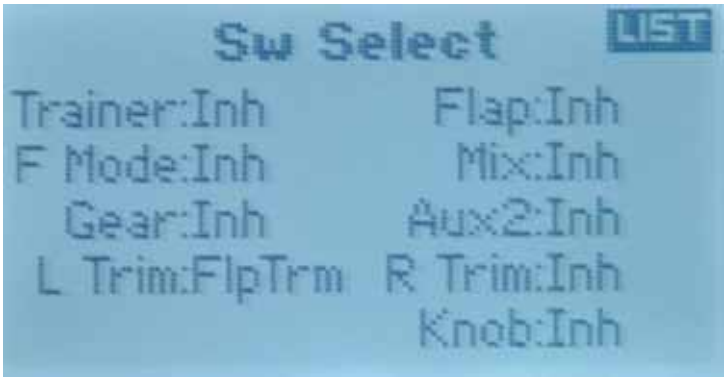
Wing Type menu is going to become your best friend! This menu acts like an aircraft setup wizard. The first prompt we get is an image of a wing with two ailerons and a single servo in the middle. Below the image there is a text are that indicated Wing: Normal and Tail: Normal. When selecting and scrolling through the different wings we have seven different wing types:

1. Normal,
2. Dual Aileron
3. Flaperon
4. One Aileron and one Flap
5. One Aileron and two Flaps
6. Two Ailerons and one Flap,
7. Two Ailerons and two Flaps
8. Elevons

Now there are also four different tail types:

1. Normal
2. V-Tail
3. Dual Elevators
4. Dual Rudders

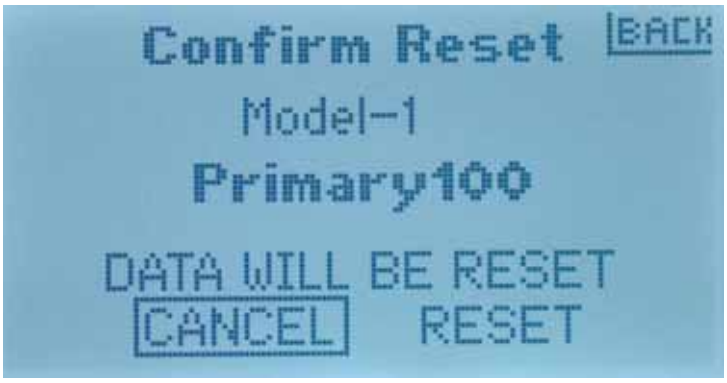
It is very important that you use this screen when you initially setup a model. By using this wizard the transmitter will preconfigure several different mixes needed initially make things work correctly. The wizard will also configure the receiver channel mapping so you know where to plug in each servo. An example of a preconfigured setup would be if you have two aileron servos and two elevator servos. Once you select these options in the transmitter, the transmitter will automatically assign two aileron servo channels to the aileron stick, and two elevator servo channels to the elevator stick; additionally the aileron trim tab will adjust both ailerons as needed. Gone are the days of having to assign a programmable mix to maser the aileron channel and slave it to the AUX 2 channel! Once the model is setup here, you then need to go to the Function List-Servo Setup submenu to find out where to plug in you servos into the appropriate channels.



Switch Select menu is used for the assignment of switches to functions like trainer, flaps and gear. In most cases this menu is not needed since the wizard from the Wing Type menu defaults these settings.

Trim Setup menu allows us to configure rate at which the trim tabs move the servos. The default stepping is a five, but it can be adjusted between one and ten. Also there is an option for trim type of Common and F Mode.

Model Reset is exactly that. If you want to delete the model, this is the place to go. All model settings will be cleared with this data reset.



Model Copy is used to create an image of the current model.

Warning menu is a place to configure some power on warnings. The throttle warning will alarm either tones or vibration or both if when the transmitter is powered on. The gear and flaps have the same warnings, but all warnings can be inhibited.

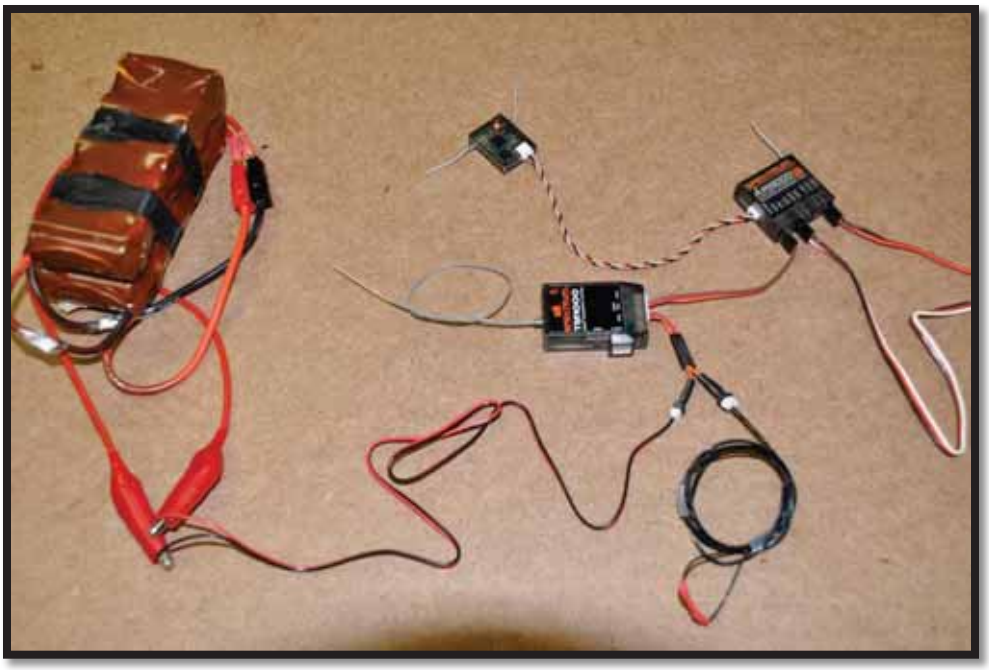
Telemetry menu is used to configure the display on the transmitter if you are using TM1000. The flight Log area allows you to display and set alarms with a selected number of lost frames or holds. RPM, Temperature, Rx Voltage, Flight Pack Voltage, Airspeed, Altitude and PowerBox menus allow configuration of the transmitter display and configurable alerts.

Frame Rate menu allows the transmitter/receiver settings to be changes from 22ms ton 11ms for digital servos. We can also select either DSM2 or DSMX mode.

Trainer menu function is where we turn on or off the trainer function

System Settings allows you to put in your user name, adjust the screen contrast, mode change if needed, the language settings, battery alarm voltage and battery type. The DX8 comes with a 2000mAH NiMh pack, but has an optional Lithium battery pack.

Transfer to SD card menu is used to save your settings to the included 128Mb Secure Digital card. From here you can import one or all models from the SD card, export one or all models to the SD card or update the firmware of the DX8.

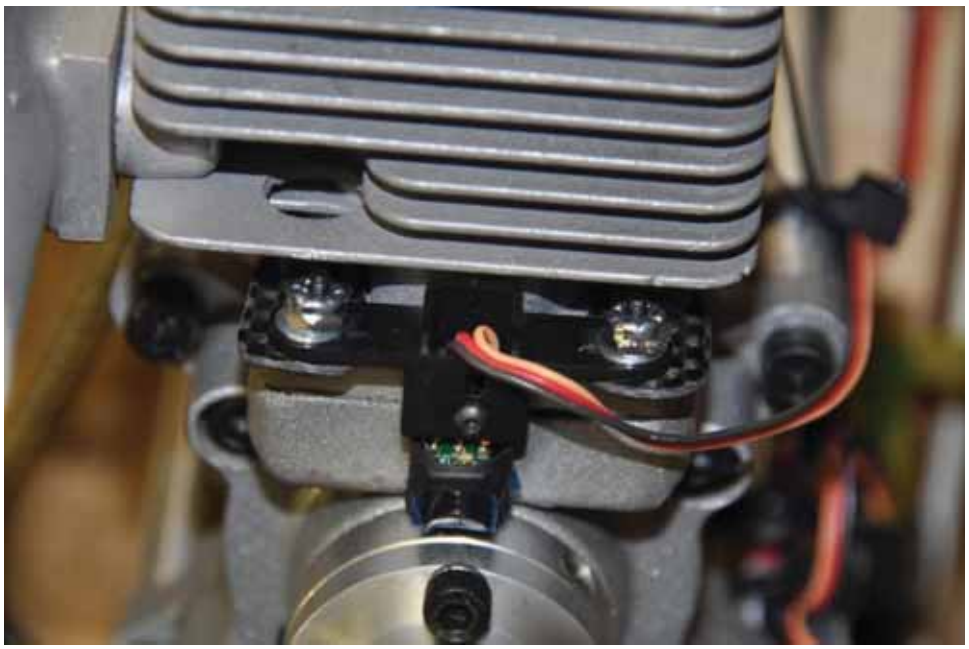


The DX8 that I got has 2-AR8000 8 channel High Speed DSMX receivers. The AR8000 is a full range receiver with a single remote receiver. The AR8000 is useable with voltages from 4.8V-9.6V. The AR8000 has eight usable channels with a data/bind port for use with the included telemetry module or flight log. The AR8000 can be used in DSM2 or the new DSMX mode, but NOT with DSM. The high speed moniker is used because the receiver can be used with a frame rate of 11ms when used with digital servos. This higher frame rate coupled with the 2048 resolution means that the time from stick movement to servo output is nearly instant!

The TM1000 DSM telemetry is a full range add-on module that transmits from the aircraft and is displayed on the DX8 transmitter. The TM1000 plugs into the AR8000 receivers BND/DAT port with the provided cable. The TM1000 module will broadcast the receiver voltage, frame loss and hold data without additional sensors. Included with the TM1000 module is a head temperature sensor as well as an additional voltage that can be used to monitor an ignition battery or electric flight battery. When using both temperature and voltage sensors you need to use the provided Y-harness. There are two other ports for optional and future accessories. The RPM port currently has two options for this port. First a crank case based sensor for the back plate of engines. The second is a phase sensor for brushless electric motors that is connected to one pole of the motor. These RPM sensors are downlinked into the data stream of the TM1000 and display on the screen of the DX8. Finally there is a port marked X-Bus. This port is used for currently two optional sensors. The first is an air speed sensor that uses a pitot-tube that is mounted onto the plane beyond the prop wash. The second is a barometric pressure based altimeter. These two optional sensors are plugged in in a daisy chain format and as before supply the data to the TM1000 to downlink to the DX8.

Using the DX8 with the included TM1000 Telemetry module

I chose to install the DX8 and telemetry system into my gas powered glider towing rig. I installed the 8 channel receiver with two ailerons, two flaps, two elevator servos, one throttle servo and a single rudder. This completely populates the receiver channels along with the data cable plugged into the TM1000 module I had a slight problem with no place to plug in the flight battery. I used a heavy duty Y-harness on the rudder channel to get power to everything. Looking in the belly of this big plane I was slightly worried. I mean that now I had a 2.4GHz transmitter device (the TM1000 module) sitting 2.5 inches from my 2.4GHz receiver. Since the local hobby shop was closed, I couldn't go get the 24 inch telemetry extension I got to thinking. The telemetry module has a small propriety connector at the module; the opposite end is just a standard servo connector. I decided to try to use a servo extension between the receiver and the telemetry module to get some space away from the receiver. Now since I was just using this plane as a test bed I decided to mount the telemetry module to the firewall under the RCGF .26 gas engine. I soldered the included voltage sensor to another Y-harness and installed it between my ignition switch and the ignition module. I wrapped the temperature sensor between the fins of the engine and pulled them snug. With all the sensors that were included with the DX8 kit installed, I also procured the optional RPM module and the altimeter. The altimeter installation was easy because I just added some Velcro to the bottom and stuck it to the top deck of the front of the fuselage, but the RPM module was not as easy.



The RPM sensor for nitro engines is designed to fit into the rear cavity of a glow or front mounted carburetor gasoline engine. The RCGF .26 is a rear rotating valve carburetor so back plate installation was not an option. According to the instructions for the RPM sensor, the magnetic pickup will work for any rotating ferrous metal within 5mm of the end of the pickup. This RPM sensor is basically the same as the hal effect pickup used by the electronic system on the engine. (Perhaps I could actually just tap into the ignition wires directly….maybe next time.) I decided that I could mount the sensor to the front of the engine and use the ignition timing magnet already mounted in the thrust washer as the pickup. I had to use a couple pieces of heavy duty carbon fiber plate stock mounted under the two front cylinder mounting bolts. The RPM sensor had an adjustable bracket so I left about 2mm spacing between the thrust washer and the sensor. When I powered on the system and tested the rom sensor I noticed that

the TM1000 module has a red LED that blinks as the RPM sensor is tripped, so this is a handy indicator if you have the RPM sensor set correctly.

Flying the DX8 and TM1000 telemetry system

At the field while waiting on a mid-morning thunderstorm to pass, I run through all the preflight checks for a new radio system. The range check mode on the transmitter is selected so I am now looking at flight data with zero fades and zero holds. I walk the obligatory 30 paces away and push the trainer button and the screen shows reduced power mode. All the surfaces on the Primary100 are moving smoothly and correctly and the transmitter reads zero holds and fades. I walk out an additional 20 paces and the transmitter shows 10 fades but no holds. This is within good range considering I held the trainer button (low power) as I turned and walked away the additional 10 paces. The transmitter indicator for the telemetry module activity in the top left corner showed that we were connected so I started up the engine and watched the RPM. With the engine warmed up I was able to get the idle set to a fairly steady 1800 RPM and tuned the high end for a max of 7200RPM. The rain finally stopped so I could finally get into the air. The takeoff was uneventful and off I went as I adjusted the trims for this radio system. I climbed out to a comfortable altitude and glanced down at the transmitter. Since I had the sky to myself I was not concerned about other planes, but I'll admit that you need to be careful not to stare at the transmitter too long while looking at the downlink info. You need to make sure you fly the plane, NOT the transmitter! The transmitter showed that I was at 425 feet of altitude, (no this

is off the runway where I powered up the plane, NOT off sea level) with a full throttle RPM of 8050. I decided I did want to see more so I climbed out to a much higher altitude for some testing. The 100 inch wing is big and easy to see so I climbed for a couple minutes to give me some time to check out the transmitter. I held the transmitter up where I could see the screen and the plane I noted that I had just passed 1000 feet. I leveled out and flew a lazy circle about the width of the field. That is when I noticed that the altitude seemed to hang up and the telemetry icon was gone from the top left corner. The telemetry icon would come and go as I made my circle. It would seem that when I was out in front of myself the telemetry would fall off until I came back around inbound again. I guess that I had reached the downlink rang of the telemetry module, but the DX8 link to the plane was not affected. I always had full control of the plane, just no data on occasion. By my calculations, line of site to the plane at an altitude of 1000ft and a distance of 700ft in front of me equates to a distance of about 1200 feet away. I suppose this is a good distance for the downlink, since there is no documentation as to the expected range other than full range. Since I was happy with the range

test of the telemetry, I came down to about 600 feet and monitored the engine temperature. The temperature sensor showed that I was running at 295 degrees Fahrenheit at full throttle, and down to about 260 while at 5000RPM. I landed and taxied the plane back for some more transmitter telemetry review. It is important that if you want to look at the minimum and maximums in the telemetry after a flight, you cannot turn off the plane! The flight log is inside the TM1000 module and is not stored when the plane is off. My flight showed zero fades and holds, with a minimum temperature on the engine of 78 degrees and a maximum of 297. The receiver voltage never fell below 6.1 volts, as the ignition voltage never went below 6.4 volts.

Conclusions:

The DX8 radio system is a great system that will do most anything that 75% of most modelers need. The transmitter comes with a 2000mAh pack that will give you better than 4.5 hours of flight time on a full charge. The SD card in the DX8 allows you to save your model information for safe keeping, and moving to another DX8. The SD card formatting is a standard format so there is no need for special software or proprietary adapters or cables. The DX8 has software updates free for registered email address with Spektrum. The AR8000 receiver offers enough channels for all but the most complicated jets and giant scale aircraft. The telemetry module offers security for knowing valuable air born information. The alarm features available on the telemetry voltages is a great security feature to have since the voltage is user adjustable to your personal "warm and fuzzy" area. The entire telemetry system included in the kit weighs just less than one ounce, so you can put it on nearly anything. You have to make sure you don't find yourself staring at the transmitter and not the airplane, so be careful.

The programming of the DX8 is quite easy as long as you know the two alternate selection options: push clear and back simultaneously to select model, and hold the scroll wheel down while powering up the transmitter for a new model setup. If you have programming questions, the manual is very good with images of what each screen looks like and a description of the task. The DX8 is a great deal with a retail price of $429.99. This included two receivers that usually retail for $129.99, the DX8 itself and the TM1000 telemetry module.

Spektrum has a great powerful radio in the DX8 that is priced right.

Tony Coberly

tonyc@rcreport.net