

THRUSTLINES

Indianapolis R/C Modelers Chapter 288

WWW.INDYRCMODELERS.COM

January 2008



The Editors Corner

I was not able to attend the January meeting as I was on a cruise in the Southern Caribbean and I will be missing the February Meeting as I will be in California visiting friends in Palm Desert. I plan on visiting the Palm Spring Air Museum and possibly the Chino Air Museum and will bring back lots of photos for all to see.

Looks like Steve Percifield and Tim Mills have come up with a place on the north side for indoor flying this winter—hope to get more information and photos from Tim to put in the newsletter.

Ron Cassell wants me to remind everyone that your 2008 dues should be paid not later than the February meeting. We have our rent to pay for this year which is \$2000. He also needs your reservations for the club dinner which will be on Saturday, 9 Feb. You can call him at 861-6053 and then pay at the dinner or the Feb meeting. This is a great event with good food for all members and their spouses and friends.

I was down in Evansville this past week and went over to the Evansville RC field. The temps were in the low 50's on Sunday with light winds and there were several members out flying.

Some upcoming events to get on your calendar—the Toledo Show will be April 4-6. This is the place to see everything that is new and old in the RC Aircraft world. The Johnson County Club (aka Atterbury Club) will be having their annual Swap meeting on 15 March. Most important is our 3rd annual swap meet and fly in that will be held on June 7th.

This is typically the building season so please bring any of you newly completed or in-process projects to the club meeting for show and tell. If you have a question about how to do something on that new bird bring it with your questions and will get an answer—actually probably get several different answers.

Till next time—

Ted Brindle, Editor

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Event Announcements

The February Meeting will be held on Monday 4 February at 7 pm.

The Prez Sez

It's hard to believe that it is February already, and that in about a month and a half, we'll be thinking about flying outside again!! Definitely makes one want to get to work on that new project, so as to be ready when the weather breaks. Matter of fact, our club meeting's show and tell is a good place to show us what you're working on, even if it isn't finished! Keep us posted.

At the February meeting I'll put together another presentation regarding using the Real Flight simulator to keep the rust off, and enhance one's flying skills. We'll again set up Real Flight and discuss a couple maneuvers, show how to do them properly, and give guys a turn at the sticks to show what they learned. Should be a lot of fun, and informative also.

For those who haven't already done so, the February meeting is the last opportunity to get the 2008 club dues paid and avoid the penalty fine. If you can't make the meeting, you can make a check out to Indianapolis RC Modelers and mail it to me at: Tim Mills, 2937 Brouse Avenue, Indianapolis, IN 46218. Get your dues paid, even if you have not yet renewed your AMA license.

The annual club dinner will occur on Saturday evening, February 9th. Cost is \$10 per person, and we need a head count of people who will attend. If you will be joining us and can't make the February 4th meeting, then please shoot me an email letting me know you plan to attend, and you can send a check (again, made out to Indianapolis RC Modelers) to me at the above address. The club dinner is always an enjoyable evening, with great food, and great company. As per the usual custom, we'll have several awards to pass out. Hope you can join us.

Steve Percifield and I have secured the Fieldhouse in Fishers to use for indoor electric aircraft flying. We had our first affair last Saturday evening (Jan 26th) and everyone seemed to be impressed with the facility. It has 8 basketball courts and offers the advantage that like aircraft can fly together. For example, helicopter guys can take a court, sport flyers can fly with each other, the pattern guys can have a court to themselves, etc. Makes for good flying. We're working on putting together a schedule and will post it shortly. Hope you can join us for a lot of fun.

See you at Monday's meeting,

Tim Mills

Indianapolis R/C Modelers
January 2008 Meeting Minutes

Meeting was brought to order @7:03pm

Budget was read and accepted.

Old Business:

Reminder that the Banquet is Saturday February

Doors open @ 5 pm.

Banquet starts @ 6 pm.

If you sign up and don't show you are required to pay.

Please pay at the February meeting.

New business:

Club cards are being made by Kelly B. and will be passed out at the end of the meeting.

Tim Mills covered some new website additions.

Pictures and Freeze Fly review.

Show and Tell

Vern Doty brought and displayed his U-Can-Do 3D.

Jack Sallade gave a presentation on batteries in R/C aircraft covering different types, advantages, disadvantages, maintenance of batteries.

Presentation is available from Jack via email.

50/50 drawing

Meeting was adjourned at 8:10.

Trimming an Airplane

The following chart may be used to systematically set up and trim a model for straight flight and aerobatic maneuvers. Please note that for best results, trimming should be done in near-calm conditions. Before you decide to make a change, be sure to try the test several times before making adjustments. If any changes are made, go back through the previous steps and verify that they are not also affected. If they are, make further adjustments as necessary. →

To Test for...	Test Procedure	Observations	Adjustments
1. Control neutrals	Fly the model straight and level.	Use the transmitter trims for hands-off straight-and-level flight.	Change the electronic subtrims or adjust clevises to center transmitter trims.
2. Control throws	Fly the model and apply full deflection of each control in turn.	Check the response of each control: —Aileron high rate: 3 rolls in 4 seconds; low rate: 3 rolls in 6 seconds —Elevator high rate: to give a smooth square corner; low rate gives approximately 130 foot diameter loop —Rudder: high rate 30-35° for stall turns; low rate maintains knife-edge	Change ATV (for high rates) to achieve desired responses.
3. Decalage	Power off vertical dive (crosswind if any). Release controls when model is vertical (elevator trim must be neutral).	a) Model continues straight down b) Model starts to pull out (nose up)? c) Model starts to tuck in (nose down)?	a) No adjustment b) Reduce incidence c) Increase incidence
4. Center of gravity	Method 1: roll into near vertically banked turn. Method 2: roll model inverted	1a) Nose drops 1b) Tail drops 2a) Lots of forward stick (down elevator) required to maintain level flight 2b) No forward stick (down elevator) required to maintain level flight, or model climbs	a) Add weight to tail b) Add weight to nose
5. Tip weight (coarse adjustment)	Fly model straight and level upright. Check aileron trim, maintain level wings. Roll model inverted, wings level. Release aileron stick.	a) Model does not drop a wing b) Left wing drops c) Right wing drops	a) No adjustment b) Add weight to right tip c) Add weight to left tip
6. Side thrust and warped wing	Fly model away from you into any wind. Pull it into a vertical climb, watch; for deviations as it slows down.	a) Model continues straight up b) Model veers left c) Model veers right d) Model rolls right	a) No adjustment b) Add right thrust c) Reduce right thrust d) Put trim tab under left wing tip
7. Up/down thrust	Fly the model on normal path into any wind, parallel to strip; at a distance of around 100 meters from you (elevator trim should be neutral as per test 3). Pull it into a vertical climb and neutralize elevator.	a) Model continues to straighten up b) Model pitches up (goes toward top of model). c) Model pitches down (goes toward bottom of model).	a) No adjustment b) Add down thrust c) Reduce down thrust

To Test For	Test Procedure	Observations	Adjustments
8. Aileron differential	<p>Method 1: fly model toward you and pull into a vertical climb before it reaches you. Neutralize controls, then half roll the model.</p> <p>Method 2: fly model on normal pass and do three or more rolls.</p> <p>Method 3: fly the model straight and level and gently rock the aileron stick back and forth.</p>	<p>1a) No heading changes. 1b) Heading change opposite to roll command (i.e. heading veers left after right roll). 1c) Heading change in direction of roll command.</p> <p>2a) Roll axis on model centerline. 2b) Roll axis off to same side of model as roll command (i.e. right roll, roll axis off right wing tip). 2c) Roll axis off to opposite side of model as roll command.</p> <p>3a) Model flies straight ahead without yawing. 3b) Model yaws away from roll command (i.e. right roll, yaw left). 3c) Model yaws toward roll command (i.e. right roll, yaw right).</p>	<p>a) Differential settings okay. b) Increase differential. c) Decrease differential.</p>
9. Dihedral	<p>Method 1: fly the model on normal pass and roll into knife-edge flight; maintain flight with top rudder (do this test in both left and right knife-edge flight).</p> <p>Method 2: apply rudder in level flight.</p>	<p>a) Model had no tendency to roll. b) Model rolls in direction of applied rudder. c) Model rolls in opposite direction in both tests.</p>	<p>a) Dihedral okay. b1) Reduce dihedral. b2) Use mixed to produce aileron opposing rudder travel (start with 10%). c1) Increase dihedral. c2) Mix ailerons with rudder direction 10%.</p>
10. Elevator alignment (for models with independent elevator halves)	<p>Fly the model as in Test 6 and pull up into an inside loop. Roll inverted and repeat the above by pushing up into an outside loop.</p>	<p>a) No rolling tendency when elevator applied. b) Model rolls in the same direction in both tests—halves misaligned. c) Model rolls in opposite directions in both tests. One elevator half had more throw than the other (model rolls to side with most throw).</p>	<p>a) Elevators are in correct alignment. b) Either raise one half, or lower the other. c) Reduce throw on one side, or increase throw on the other.</p>
11. Pitching in knife-edge flight	<p>Fly the model as in test 9.</p>	<p>a) There is no pitch up or down. b) The nose pitches up (the model climbs laterally). c) Nose pitches down (model dives laterally).</p>	<p>a) No adjustment needed. b) Alternate cures: 1) move CG aft 2) increase incidence 3) droop ailerons 4) mix down elevator with rudder c) Reverse "b" above.</p>

Saving Money on Connectors??

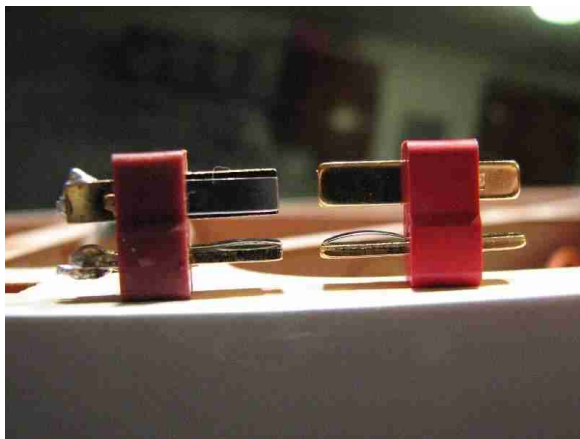
By Jack Sallade

Like all of us, I'm always interested in saving a few bucks on my modeling tools and supplies. So recently at a swap meet when I saw Deans Ultra connectors on sale for 5 pair for \$10 I scooped some up. I wasn't particularly concerned whether they were actually Deans brand, since these connectors are very simple and reliable and I was only using them on a little electric foamie anyway!

Fast forward a couple months and I'm working on my 28% Edge. I have decided on using LiPo batteries for both flight packs and for the ignition battery (a total of three packs). Of course these packs don't come with connectors and I had decided to use the Deans since they are very reliable and handle current better than standard servo connectors. They are also pretty much what I use on ALL my LiPo packs.

After soldering on all 5 female connectors to the batteries (2 spare packs) and 3 males on the respective power switches (redundant plus the ignition) I began assembling and testing the power system on the airplane. Imagine my surprise when I got no power out of one of the new LiPo packs. It had charged fine but no joy... Puzzled I replaced the pack and noticed as I plugged it in that my system would power up briefly then go back off... even stranger! Eventually what I found was that when the connector was fully seated it no longer connected! After plugging and unplugging the other battery to switch connection a couple times I found it did the same. I almost fainted while considering what could have happened had I tried to fly it this way!!! After careful testing I found that every male connector end I had left seemed to exhibit similar issues... then I remembered the good deal I got on these cheap copies!

Needless to say I am now in the process of cutting off and disposing of every single "knockoff" Deans connector I have and installing new Deans Ultra connectors purchased at my favorite local supplier "Hobby R/C". As I make the swap I find they work every time! I have not actually seen any failures on the female connector "copies" but I'm taking no chances. On physically examining the removed connectors I took this picture side by side of the copy vs. the real thing:



As you can see the Deans on the right has a brighter red color and the "friction tab" as I think of it is much more pronounced than on the copy. Because I've got them facing each other you can't see the tab on the top blade of the Deans but look carefully at the bottom blades to see the difference. The real connector also goes together much smoother than the copy. I suspect that friction tab is the real difference. Either it's not as conductive as it should be on the copy or the shape of it doesn't fit the way it should in the female socket. Whatever the case may be no more copies for me. I'll pay the price for actual Deans.

Notice: Barb Middleton is taking a well deserved vacation so Hobby RC will be closed starting Monday Feb 18th and will reopen on Monday March 3rd.

Members items for sale

Vern Doty has 2 or 3 planes for sale and Jack Sallade has a plane or two and a trailer for sale.

For Sale

I need to make some hangar space for some new aircraft so I am selling several of my IMAA Giant Scale planes. Air Flair **Sundancer 80** with an OS91 4 stroke, a **Senior Telemaster** with a Saito 91, and a Giant Scale Sport plane. I also have a Giant Scale Trainer hanging in Hobby RC. It is a **“Ryan’s Rebel”**. This is a stick type plane—it is new—never flown. It would fly well on a 120 4 stroke or a Zenoah G26 or G38. This would be a great everyday flyer for an IMAA size plane. If you are interested in getting into IMAA Giant scale give me a call—these are all good first time planes for getting into flying larger planes.

Ted Brindle 894-2311

If anyone out there is looking for some ready to go intermediate aerobats for next summer (at a budget price), maybe I have the planes for you. I am selling a ARF Hobbico Extra, 58in, Supertiger .60, with an older Futaba 6ch conquest system (FM, ch40). Plane, radio, and engine must go together, ready to go. I just ran the engine this summer and it runs fine. You can have it all for \$120. I have moved on to gas-sers, electrics, and helis. I am also selling a smaller 0.20 size pattern type ship, not sure what exactly it is, like a miniature Kaos. It doesn't have a radio but does come with an OS .20 engine that is like new. Has a little bit of minor hangar rash that would take about 1 evening to fix. Otherwise in very good shape. Yours for \$50. thanks, Dan Davis, cell 317 410-5211 email ddavis72@yahoo.com

Mike Bealmear has a JSM Genesis 3D Electric ARF NIB for sale. \$90.00 Really nice little plane. Exact same thing as the Horizon Hobbies Prodigy <http://www.horizonhobby.com/Products/Default.aspx?ProdID=FLNPRO0007> You can call Mike at 812-350-7793 or email him at bealmearm@comcast.net



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You can find Photos from the 1 January Freezfly at the site listed below:

<http://www.indyrcmodelers.com/photo/freezefly2008/index.html>

Coming Events

Annual Club Dinner—Saturday 9 February

Indy Sportliners Annual Swap Meet—Saturday 1 Mar—9am to 1pm at the Hancock County 4H Building, 620 N Apple St., Greenfield, IN This is just north of US40 and about a mile east of the center of Greenfield.

Johnson County Club Swap Meet 15 March

Toledo RC Show—4 to 6 April