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HEART OF AMERICA FREE FLIGHT ASSOCIATION

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DISPATCH

APRIL 2013

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Schedule of Flying Events

Date	Day	Location	Time	Notes
April 6*	**Sat.**	**Osawatomie**	**8:30 AM - 3:30 PM**	**HAFFA Annual Indoor Contest**
April 7*	**Sun.**	**Osawatomie**	**8:30 AM - 4 PM**	**HAFFA Indoor Records Trial**
April 16*	Tues.	Frontier Trails Jr. High	6:30 PM - dark	Outdoor - practice for outdoor Champ.
April 21*	Sun.	Ozanam	8:30 AM - 12 PM	Indoor
April 27 & 28	Sat. & Sun.	Beatrice, NE	Sat. 10-4, Sun 8-4	Nebraska indoor contest
May 19*	Sun.	Ozanam	8:30 AM - 12 PM	Indoor
May 21*	Tues.	Frontier Trails Jr. High	6:30 PM - dark	Outdoor - Champ. Flying
June 18*	Tues.	Frontier Trails Jr. High	6:30 PM - dark	Outdoor - Champ. Flying
June 27 - July 1	Thur. - Mon.	Moscow, Idaho	?	Kibbie Dome Cat. 4 Indoor site
July 8 - 12	Mon. - Fri.	Muncie, IN	dawn to dusk	AMA outdoor NATS & NFFS USOC
July 16*	Tues.	Frontier Trails Jr. High	6:30 PM - dark	Outdoor - Champ. Flying
Aug. 7 - 11	Wed. - Sun.	Champaign, IL	7 AM - 9 PM	United States Indoor Championships
Aug. 20*	Tues.	Frontier Trails Jr. High	6:30 PM - dark	Outdoor - Champ. Flying
Sept. 9*	Tues.	Frontier Trails Jr. High	6:30 PM - dark	Outdoor - Finals, Champ. Flying
Oct 5 & 6*	**Sat. & Sun.**	**Marion, KS**	**8:30 AM - 12 PM**	**HAFFA Annual Outdoor Contest**

***** indicates official HAFFA event/activity

HAFFA Indoor Site Locations:

Ozanam Gymnasium
421 E. 137th St.
Kansas City, MO

Kansas City College & Bible School
7401 Metcalf
Overland Park, KS

Osawatomie City Auditorium
425 Main St.
Osawatomie, KS

For Outdoor flying information contact Mike Basta (913-492-4830)
For Indoor flying information contact Emil Schutzel (913-341-7788)

1. Osawatomie reserves the right to cancel our reservation if they get a paying customer.
2. Outdoor flying is subject to weather conditions.

INDOOR FLYING SITE FEE UPDATE:

This is a reminder that our indoor flying fee is $10/person.

HAFFA Indoor Championship Points Standings

Name	Dec.	Jan.	Feb.	March	April	**Total**
Emil Schutzel	4	4	4	4		**16**
Gary Hodson	2	3	5	2		**12**
Jeff Renz	3	0	2	3		**8**
Tem Johnson	2	2	3	0		**7**
Jack Vetter	0	1	1	0		**2**
Dana Field	1	0	0	1		**2**
Mike Basta	0	0	0	2		**2**

Note: Notify Gary Hodson of any scoring discrepancies

Schedule of Flying Events notes:

There have been many changes to the Flying Schedule above so look it over closely. Here are the highlights:

An AMA "Records Trial" has been added & is scheduled for April 7. This is the day after our Annual HAFFA Indoor Contest. We have received our sanction approval.

The Nebraska Indoor Contest has been tentatively rescheduled to April 27 & 28. Check with John Pakiz to confirm the dates.

2013 HAFFA Outdoor Flying Sites

1) FTJH – Frontier Trails Junior High on 143rd, just west of Black Bob in Olathe – a mowed field at a large school complex. About ¼ mi wide, east to west, by 3/8 mi north to south. Irregular shape, suitable for small field aircraft used in our HAFFA Outdoor Championship flown under late afternoon/evening conditions. Surrounded by housing developments, so you want to stay on the field.
2) The northeast corner of Pflumm and 183rd, Overland Park, field is ½ mi north to south and 3/8 mi east to west. Suitable for all rubber and glider aircraft, depending on wind and using good DT's. Gas with good DT's for tuning flights maybe, but limited. HAFFA has permission to "fly there anytime". Field is a hay lot, so after mowing is great, but could be a problem with really high grass other times. Entrance is northwest corner with west-northwest or north wind, and southeast corner for anything out of the south. Really great for flying summer Sat. & Sun. afternoons!
3) Marion, KS, Airport – What to say, we have the entire airport for our two day contest. The field is 1 mi by ¾ wide, and everything is flown there. Paved and grass runways with mowed fields, surrounded by wheat fields and pastureland, with the wheat being long gone at contest time. Big thermals and flyaways with windy conditions and malfunctioning DT's! Marion, KS, welcomes us with open arms to their city for our contest, and it is a great time!

2013 Club DUES are PAST due
FINAL NOTICE
Please send checks to:

HAFFA
c/o Lynn Chaffee
10936 Rosehill
Overland Park, KS 66210

$20
(add $10.00 if you choose to receive the Newsletter by mail this year)
NEWSLETTER includes,
INDOOR & OUTDOOR PLANS
INFO FROM OTHER CLUBS
EXCITING BUILDING HINTS
PHOTOS BEFORE & AFTER
TALES OF WOE
MAYBE SOME TRUE STORIES
AWESOME DEAL

Monthly meeting - 3/12/2012 by Dana Field

Meeting was called to order at 7:12 pm.

Secretary's Report – Minutes from the February meeting were read and accepted as amended.

Treasurer's Report – Lynn reported we began with $595.95 from the last meeting. $200.00 was collected in dues, including two new members (Stan Chilton and Lauren Rezak from Wichita), and $30.00 was paid out in sanction fees leaving us with a balance of $765.95. The report was accepted as read.

Old Business

1) Jeff Renz reported on the Science Olympiad, which was held at JCCC. He ran the helicopter event for junior high students. There were 16 entrants, with a winning time of around 1 minute 20 seconds (the only time over 1 minute)

2) Indoor Contest – Will be 4/6 at the Osawatomie City Center. The schedule is published in the newsletter. Peck ROG Mass Launch has been added from last year's schedule. The sanction for the Records Trial on 4/7 has been received. It will be run more formally than the contest.

3) Downtown Airshow – Jeff Renz contacted the airport, and it looks like we can participate for free. Date is 8/10?

4) The Outdoor Contest is proceeding as planned.

New Business

1) We have illicitly been shut out of the meeting room for the April meeting at the Corinth Branch Library. Therefore the April meeting will be Cedar Roe Branch Library, located at 5120 Cedar St. in Roeland Park. The location is just behind the Walmart on Roe Blvd, between 51st and Sycamore.

The business meeting was adjourned at 7:48 pm.

Show & Tell – Charlie Taylor brought in a full sized 1939 Wakefield that originally electric powered but he wants to reconvert back to rubber power. Jeff Renz brought in one of Bob K's Jimmy Allens. Just not quite sure which model it was.

Program – Gary Hodson gave a cracker jack program on how to inkjet print tissue for scale models. He had a Messerschmitt ME 109 which he used as an example (my favorite plane!). It obvious you need to use a printer with pigment ink or you will have ink bleed. Also, best done in the winter with low humidity. A wonderful program!!

Next meeting – April 9, at the Cedar Roe Library in Roeland Park.

Strange Facts

In the late 19th century, millions of human mummies were used as fuel for locomotives in Egypt where wood and coal was scarce, but mummies were plentiful.

Due to a metal shortage during World War II, Oscars were made of painted plaster for three years. Following the war, the Academy invited recipients to redeem the plaster figures for gold-plated metal ones.

Bird Feeding: Do not feed avocado as it is toxic to birds!

2013 HAFFA Outdoor Championship

We will again be flying for the Outdoor Championship on summer Tuesday evenings at the Indian Trails Jr High field on 143rd, just west of Black Bob in Olathe. The format will be the same as last year, with points being awarded for the best time each night in hand launched glider (javelin style, field too small for tip launched), catapult launched glider, and Half aWake. Rules will be available for everything at the next HAFFA meeting, or they can be emailed to anyone requesting them. The 6:30 start means light or little thermal activity, and there were no flyaways. Heck, no one could do better than 28 seconds with their Half aWakes, and there were only a couple of better than one minute glider flights. But, a good time was had by all!

Tech Tips

Extracted from an internet discussion:

Gary Hodson wrote:
Imagine two identical motor sticks, same dimensions, same weight, etc. When viewing the motor stick from the side, one is made from "A" grain & the other from "C" grain wood. Which will resist bowing better, which will resist twisting better?

Yuan Kang Lee wrote:
I will be the first to go on record -- I have no idea.

Nick Ray wrote:
A-grain is most flexible, that is why it is used for bending around curves.

C-grain is the least flexible, which is why it is used for prop blades and motor tubes. When you first think about it, it seems paradoxical to use the stiffest grain orientation to roll a small diameter tube, but the goal is to resist the tube collapsing. Motor sticks start to fail by a section of the tube deforming under load.

To answer your question a motor stick whose side view shows C-grain will be stiffest when twisted, but it will perform poorly in compression. A motor stick with A-grain showing from the side view will perform poorly in torsion but will be stiffest in compression.

Which is better for our purposes depends on flying style.

Mike Kirda wrote:
In glider spars, you want/need the strength for launches. Grain goes vertically.
See: http://workshopcompanion.com/KnowHow/Design/Nature_of_Wood/3_Wood_Strength/3_Wood_Strength.htm
Balsa is not listed but you can see the tendencies. Wood is anywhere from 1.5-2x stronger in one direction than the other.

None of this tells use torsional info, but I imagine this is a function of cross-section rather than grain orientation.

Leo Pilachowski wrote:
The grain type does not make any significant difference in bowing or bending stiffness. Having c-grain on the sides rather than the top and bottom does allow for bit more "bonding" between the top and bottom layers of a motor stick but the bowing or bending stiffness is largely determined by the stiffness of the longitudinal fibers. However, one does not want to glue to a c-grain surface as the interlayer bonding is weak perpendicular to a c-grain surface. This weak interlayer bonding also causes failures when bending along the grain for c-grain sheets. That is why most people use a-grain or b-grain for making formed tips and other such parts.

The torsional stiffness, again, does not depend on the grain orientation.

Rolled motor sticks are another case. Again, the bending stiffness does not depend on the grain of the sheet used. The same goes for the torsional stiffness. However, c-grain should be used for rolled motor sticks rather than a-grain in our lightest planes. Sheets of c-grain balsa have a great deal more cross grain stiffness than do a-grain sheets. In fact, earlier in the history of indoor flying, a-grain sheets were used for rolled tubes as a-grain sheets rolled easier and with less splitting. However, as indoor flyier began using thinner sheets, rolling and splitting were less of a problem. For these thinner sheets, the cross grain stiffness of c-grain sheets is important because tubes rolled from thin c-grain sheets are much less apt to dent and buckle. This makes for easier handling for tubes that also held up better in use. Tubes that are easily dented or buckled cannot standup to compression. This is not because such sheets are weaker but because the dent or buckle is the point of failure.

One more thing to remember is that a-grain sheets usually have more consistent properties across the sheets so spars cut from one side have about the same properties as spars cut from the other side. This is less so for c-grain sheets. A-grain sheets are cut from wood in about the same growth layer while c-grain sheets are cut radially and include many growth layers.

Bill Gowen wrote:
IMHO the problem with the problem is the term "identical motor sticks". It think the variability in wood prevents an absolute answer to the question. To me it always boils down to cut and try. If I have two pieces of wood that seem like good candidates then I would make MS's from both and test to see which was best.

Another problem is in what cross section you are using for the MS. Are you more concerned more with torsional stiffness and therefore go to a squarish cross section or are you concerned more with bending strength and go with a more rectangular cross section? It's POSSIBLE that the choice of grain orientation would be better at one shape than the other but for me it would be guesswork as to which would be better.

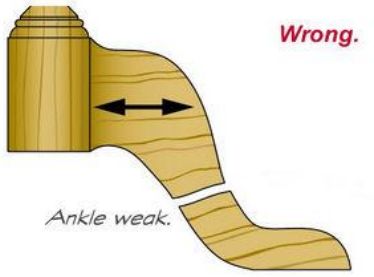
All that being said most of my motorsticks are cut from A or A-B wood

Jake Palmer Wrote:
I have nothing useful to add, but I use C-grain motor sticks because I like the way they look.

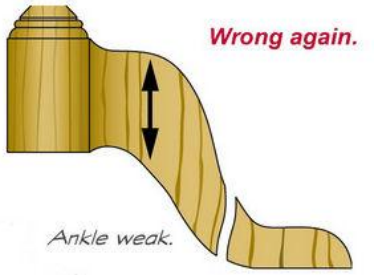
The following is an extract from the web site Mike Kirda referenced above:
When building with wood, consider how each part will bear the load that will be placed upon it. Also consider how the wood joints will transfer the loads from part to part.

GRAIN DIRECTION AND STRENGTH

To take full advantage of a wood's strength, pay attention to the grain direction. Wood is a natural polymer — parallel strands of cellulose fibers held together by a lignin binder. These long chains of fibers make the wood exceptionally strong — they resist stress and spread the load over the length of the board. Furthermore, cellulose is tougher than lignin. It's easier to split a board with the grain (separating the lignin) than it is to break it across the grain (separating the cellulose fibers).



Remember this when you lay out the parts of a project. Always orient the grain so the fibers support the load. Whenever possible, cut the parts so the grain is continuous, running the length of the board. *This also applies to wood joinery!* When cutting a **tenon**, for example, the wood grain must run the length of the tenon *and* the board so the grain is continuous.



Straight-grained boards are stronger than those with uneven grain, knots, and other defects. Parts such as shelves will support a heavier load if the weight rests on straight grain.



SPECIFIC GRAVITY

When strength is paramount, grain direction may not be your only consideration. Some species of wood are naturally stronger than others. Chairmakers, for example, typically use maple, birch, and hickory for legs, rungs, and spindles. These parts are fairly slender, and weaker woods won't hold up.

A good indicator of a wood's strength is its density — the weight for a given volume.



HEART OF AMERICA FREE FLIGHT ASSOCIATION

Annual Indoor Model Aviation Contest

April 6, 2013, 8:30 AM to 3:30 PM
Location: Osawatomie City Auditorium
425 Main St., Osawatomie, KS
For Information Contact Emil Schutzel: 913-341-7788

Entry Fee: $20

Schedule of Events:

212 - Indoor Hand Launched Glider
218 & 219 (combined) - Catapult Launched Glider

208 - Limited Penny Plane
215 - Bostonian (7 Gram)
206 - EZB
220 - Mini Stick
222 - A6

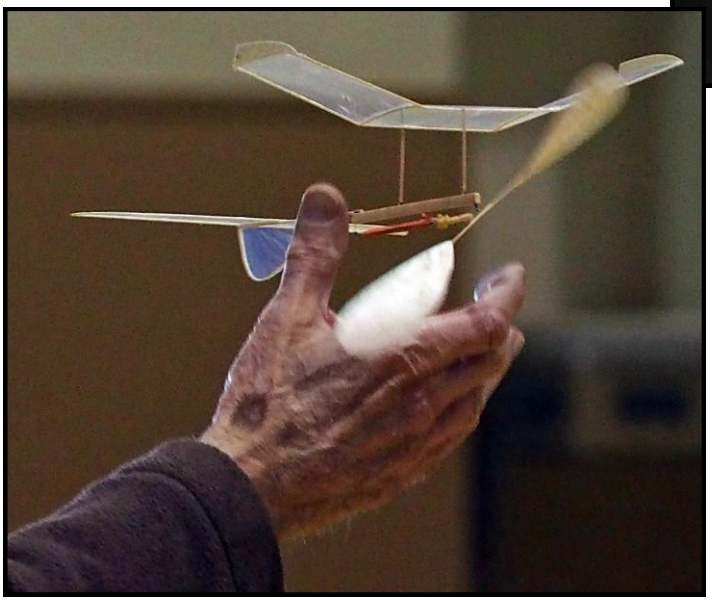
FAC - Peanut Scale
FAC - No Cal
P24
Comet ROG
Legal Eagle

Mass Launches:	Launch Time:
Ltd. Penny Plane	12:00
No Cal	12:30
A6	1:00
Comet ROG	1:30
Peck ROG	2:00





Emil Schutzel checks his Mini-Stick quarter motor time.



Emil Schutzel catching a Mini-Stick in flight.