



The Transmitter

Suburban RC Barnstormers - P.O. Box 524, Bloomingdale, IL 60108

AMA CHAPTER 640

IMAA CHAPTER 194

January 2014

<http://www.suburbanrcbarnstormers.com>

Coming in January and February

January 1st, Frozen Finger Fly, Pratt's Wayne Woods, Group photo at 12pm

January 6th, Member Meeting, Bloomingdale Public Library, 7:00pm **** DATE CHANGE!! ****

January 27th, Board Meeting, Bloomingdale Public Library, 7:00pm

February 17th, Member Meeting, Bloomingdale Public Library, 7:00pm

February 24th, Board Meeting, Bloomingdale Public Library, 7:00pm

President's Corner

By Mike Maciejewski

Hi, as I sit here in my basement in September looking out the window drinking my favorite adult beverage, I wonder why I have to write an article four months ahead of time. I don't know what the weather is like, if the Frozen Finger fun fly went well. How many airplanes do I need to fix. How am I supposed to communicate with you if I write the article so far in advance? There must be a better way.

Have any of you checked out the web-site parkjets.com. It is a place to find a large selection of foam plans. Most of the plans are propelled by a prop. So you don't have to get a ducted fan to fly them. Most of the plans are of planes with a shape to them. Yes you can attach an

engine to a sheet of plywood and get it to fly. But I like to see an airplane that looks like something. Now some of you will say what is wrong with flying a sheet of plywood. Well nothing if that is what makes you happy, it is only my option and what do I know.

Don't forget this is an election year, so get your nominating partitions in by the end of February for the March primary. The March meeting will be at the Itasca library.

Now it is up to you to figure out what in this article is true.

Frozen Finger Fun Fly 2014

By Scott Taylor



Temperatures in the low 20's, moderate winds out of the east, and light snow falling did not stop a hardy group of Barnstormers from attending the first Fun Fly of the year, the Frozen Finger Fun Fly!

Notes of the Suburban RC Barnstormers Membership Meeting

December 9, 2013

ATTENDANCE

There were 40 members present. But the room also included spouses, relatives, and friends of members.

OFFICER REPORTS

President: Mike Maciejewski presided over the meeting.

Mike noted that construction on the new field is moving forward. A gravel construction road has been created where the final roads will be.

Mike reminded everyone the December Board has been moved up a week to December 16th.

Vice President: Steve Thill was absent.

Treasurer: Bob Elsner said we got our meeting date requests back from the Library for January through June.

Unfortunately, there are a few conflicts. Some we have alternate dates for and others we do not. Our meeting in January has been moved up a week to January 6th. The meeting in February will be back a week to February 17th, and we do not have rooms available in March and June.

This seems to be more common and we will need to address this issue. That might include a new location or a different day of the month. Bob Vance volunteered to talk to the Itasca Library, and Ralph Niedzwiecki volunteered to talk to his church in Addison.

Secretary: Scott Taylor reminded members it was time to renew for 2014. He also said those that have renewed should be expecting a hard copy of

the next newsletter that will include their membership card.

Scott also picked up some additional model identification labels. These have been designed to meet the AMA insurance requirements. They can be purchased for \$0.30 each.

OTHER BUSINESS

Swap Shop – John Howe said we have sold 7 tables so far. As usual, the event will be on the Saturday before Easter and held at the Dupage County Fairgrounds. Unfortunately, this is the week before the Toledo show, which prevents some vendors from attending our event. Debbie Howe has flyers and a PDF can be downloaded from our website.

Charity Raffle – John Howe briefed members on the Wishtree raffle. Members can purchase tickets, they keep the “Keep This Ticket” portion and put the other portion in the container in front of items you are interested in. There are several groups of prizes, so you could have several opportunities to win. All proceeds will be given to the Bloomingdale Wishtree project.

ENTERTAINMENT

Door Prizes – As part of our entertainment, a door prize give away was conducted. All members present were eligible and there were more than enough prizes for everyone.

Wishtree Raffle – John and Debbie Howe conducted the Wishtree raffle. We owe many thanks to John and Debbie for organizing this activity that helps many families. Thanks!

Dome Flying

By Scott Taylor

Don't forget to take advantage of the indoor flying at the 2nd largest golf dome in the USA. Located immediately southwest of Chicago's O'Hare airport, at 500 W. Jefferson St. (3rd Ave.), Bensenville. The White Pines Golf Dome is “a prayer come true” for winter flying. It's 300' wide by 300' deep and it's 10 stories tall! As one pilot said: “It's not like flying in a gym, it's like you're outside at a park!”

Doors open at 11:00 pm on Friday and Saturday nights and close at 1:00 am. Entry is \$15 or \$10 with a discount pass. Season passes are also available for \$150. Contact Stan Warden at FrenchStan@ComCast.Net or 630-654-8476 with questions.

Mixing for Knife Edge (KE) Flight

By Steve Thill

One of my favorite maneuvers is the knife-edge (KE) and I have great fun flying knife-edge circuits around the field. Over the years I've found that a little mixing in our computer radios will go a long way to reducing pilot workload during KE flight and make KE flight easier.

This article assumes you are using an "aerobic" type airplane with neutral flight tendencies such as an Edge, Extra, Slick, Katana, Funtana, etc. Planes with self-correcting tendencies (trainers, planes with dihedral, etc.) will tend to fight KE flight all the way and, while these tips may help take out some of the self-correcting tendencies, the mixes probably won't allow for rudder only KE flight.

In addition to neutral tendencies your plane must have enough power to sustain a level KE. During standard level forward flight you have the wing, elevator and fuselage all providing lift. During KE flight only the fuselage and rudder are providing lift so a good amount of thrust is required to maintain altitude. For example, I've owned planes such as the .40 size Great Planes Revolver with an OS .46AX that would not maintain more than 50 feet of KE flight without sinking due to it being underpowered. In order to help with power requirements a number of new aerobic and 3D plane designs include side force generators that provide additional lift in KE flight and reduce the amount of power required to sustain this flight.

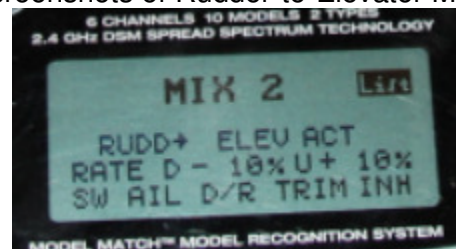
Before you start trying to mix for KE flight it is VERY important to perform some basic airframe tuning. If the plane isn't properly setup to begin with you are going to be "chasing the mix". Probably the most important tuning prior to KE mixing is finding the correct CG. There are many guides on how to do this but I typically start with the manufacturer's suggested CG and perform the inverted 45-degree up line test. In order to perform this test you pull up on a 45-degree up line and roll inverted. If the plane climbs you are tail heavy, if the plane sinks you are nose heavy. In general, I try to tune a plane so that it will maintain 3-5 seconds of inverted 45-degree flight before the plane sinks to the nose.

Now that your plane flies straight and level and you are able to hold an inverted 45-degree up line it is now time to try a KE. When I put a new plane into a KE for the first time I make sure I get a few

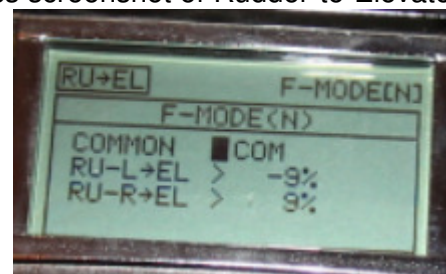
mistakes high but not so high that I can't see how the plane is reacting. I fly across the field level at about $\frac{3}{4}$ throttle next I pull pitch the nose up SLIGHTLY and roll to KE. Pitching up the nose slightly puts the thrust in the correct direction and gives you a little time to compensate if you don't use enough rudder. Once you are flying in a KE try your best to hold it for a few seconds and note how the plane is reacting. The most common behaviors in a KE are "pulling" (to the canopy or the gear) and/or "rolling out" where the plane tries to roll out of the KE to level flight. These behaviors can be easily mixed out on newer computer radios with a little work.

Pulling (Canopy or Gear) – This is a very common behavior and I have this mix on every one of my aerobic planes. Basically, in a KE a plane may have a tendency to pull to the canopy or to the gear. This tendency can be influenced by the CG of the aircraft so it is important to tune the CG FIRST and use this mix to compensate for a pulling tendency afterwards. In order to compensate for this behavior a Rudder-to-Elevator mix is required. Adding a Rudder-to-Elevator mix will cause the elevator to go up or down based on the movement of the rudder. The amount of elevator required to compensate for pushing / pulling is typically very small (3%-10%) but it can make a HUGE difference in reducing pilot workload. Generally, I leave this mix on during the entire flight and don't notice it in normal (non-KE) flight.

DX6I screenshots of Rudder-to-Elevator Mix:



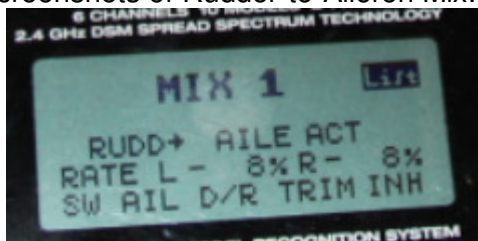
Airtronics screenshot of Rudder-to-Elevator Mix:



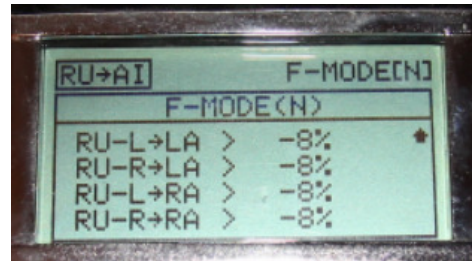
Make note of the positive and negative signs. While counter intuitive these mixes will make the elevator go down when rudder is moved left OR right. The best way to make sure the control surfaces are going the direction you want is to dial up the percentage while initially setting the throws (on the ground) and make sure the elevator is moving in the direction you want, then dial them back to a reasonable starting point (3-10%).

Rolling Out – This behavior is a little less common than pulling and not all of my planes require this mix. In a KE some planes have a tendency to “roll out” of the KE. Typically the plane tries to roll back to level flight so you have to hold aileron during a KE to keep the plane on its’ side. In order to keep a plane from rolling out of KE flight I utilize a Rudder to Aileron mix. Again, the amount of aileron required to keep a plane from rolling out is typically very small (3%-10%) but it can make a HUGE difference in reducing pilot workload. I also leave this mix on during the entire flight and don’t notice it in normal (non-KE) flight.

DX6I screenshots of Rudder-to-Aileron Mix:



Airtronics screenshot of Rudder-to-Aileron Mix:



Note that the Airtronics radio provides a little more flexibility when it comes to setting Rudder-to-Aileron Mixes. In this case, as with most aerobatic planes, the amount of deflection for the left and right ailerons will be the same in a Rudder-to-Aileron mix.

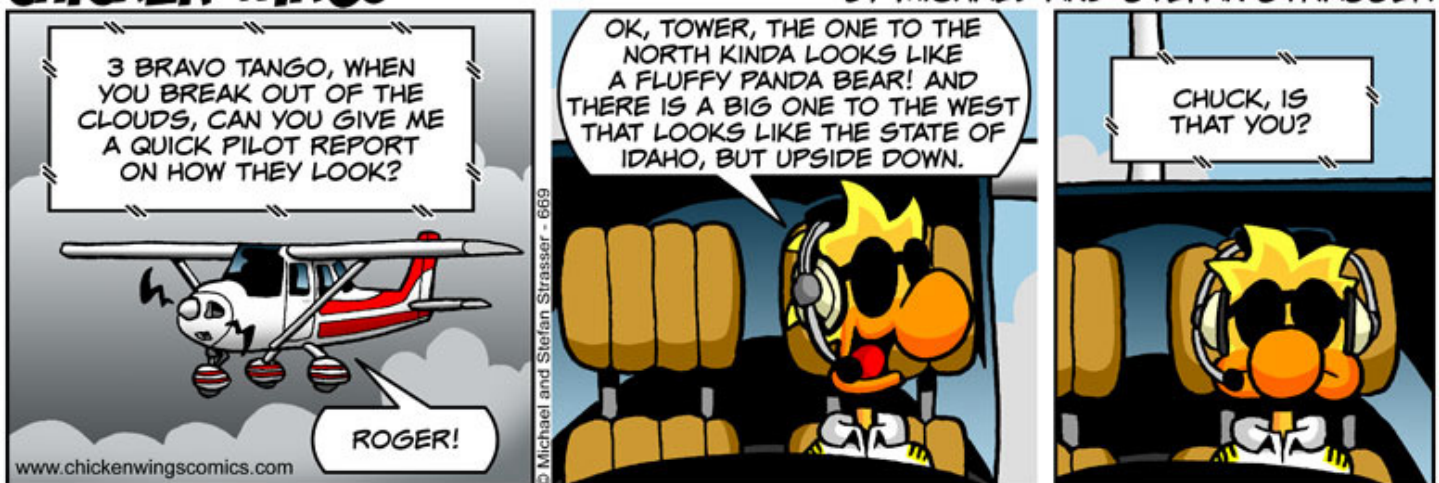
I hope this takes a little of the mystery out of mixing for knife-edge flight. The most important thing when performing any airframe tuning is to make SMALL adjustments and to dial the plane in gradually. It may take six to ten flights to really dial in a plane but please stick with it as you will be rewarded with a great flying airplane that and a significantly decreased pilot workload.

Blue Skies,

Steve

CHICKEN WINGS®

BY MICHAEL AND STEFAN STRASSER



The Transmitter

This newsletter is published monthly by the Suburban RC Barnstormers, Inc.

We reserve the right to edit all information forwarded to us. Permission is hereby given to reprint any article that we publish as long as proper credit is given.

Material can be submitted for publication: (1) at a meeting, (2) by mailing to Suburban RC Barnstormers, Inc., P.O. Box 524, Bloomingdale, IL 60108, (3) sending it to the email of the editor, Bob Sarley, at bobs@commeg.com

Articles must be received by the 4th Saturday of the month to be included in the following month's newsletter.

OFFICERS/BOARD OF DIRECTORS

President	Mike Maciejewski	630-513-1476	macieml@sbcglobal.net
Vice President	Steve Thill	630-208-9830	steve@thill.us
Treasurer	Bob Elsner	630-653-5345	Srcbarn@aol.com
Secretary	Scott Taylor	630-999-1372	taylorstr@core.com
Flight Instruction	John Howe	630-541-3054	iflyrc4@att.net
Fun Fly Chairman-Outdoor	Steve Merrill	630-251-5945	steveme@sbcglobal.net
Safety Officer	Tom Lyons	630-668-9525	gtpslyons@comcast.net
Board	Dave West	630-837-6553	dwest@wingedshadow.com
Board	Ron Hilger	630-833-8111	Ronhilger@aol.com
Board	Scott Stampfli	630-440-6475	stamper022@comcast.net
Board	Jeff Peca	630-305-0018	j_pec@yaho.com
Board	Bob Sarley	630-267-9534	bobs@commeg.com

NEWSLETTER STAFF

Web Masters [Marty Schrader](#) (630) 588-0241
Editor/Publisher [Bob Sarley](#) (630) 267-9534

Please Support The Following Hobby Shops

[Al's Hobby Shop, Inc.](#) 121 Addison, Elmhurst, IL (630) 832-4908
[HobbyTown-St Charles](#) 2061A Lincoln Highway, St. Charles, IL (630) 587-1256
[LaGrange Hobbies](#) 25 South LaGrange Rd, LaGrange, IL (708) 354-1220
[Strictly R/C](#) 7719 W Lawrence Ave., Chicago, IL (708) 456-9100
[True RC](#) <http://www.TrueRC.com> truerc@comcast.net
Adventure Hobbies 23 Huntington Lane, Wheeling, IL (847) 537-8669

Visit our web site at <http://www.suburbanrcbarnstormers.com>