



HI-SKY R/C FLYER

April 2009

Volume 38 Issue 4

President: Chris Rutter
Vice President: Gilbert Hernandez
AMA Charter Club #851

Treasurer: Ed Anderson
Secretary: Ralph Gillette
www.hiskyrc.com

Meeting:

The April meeting of the Hi-Sky R/C Club will be April 7, 2009 at the First Baptist Church Activity Building. The meeting will begin at 7:00 PM.

HI SKY R/C Club Minutes: March 3, 2009

Meeting was held at the First Baptist Church.

Meeting called to order at 7:02 PM by President Chris Rutter. 18 members were present.

Minutes: Minutes were approved as published in the newsletter with correction to the Fun Fly dates being April and July, not April and May. Also, comment was made on the newsletter item about the Electric Fly at the Horseshoe; it will be October 16, 17 & 18.

Field Report: Field looks pretty good. Jim Tartt reports that the clean up project at the field is still on for Saturday, March 7th at 8:30AM. We will be painting and spraying for weeds. Jim says we do not have to mow or use the weed whackers yet. Jim also reported on the handicapped porta-potty. He says we can get a used one for \$400.00 with a credit of \$150.00 if we trade in our old one. A

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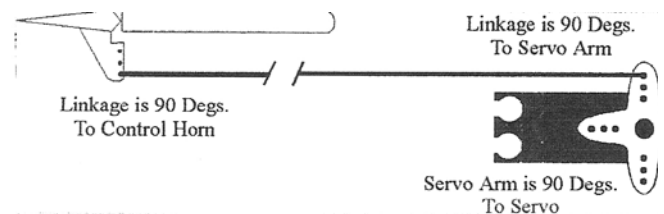
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Sub Trim and Linkage Setup

By Richard Lindberg
Rocky Mountain Flying Machine Albuquerque, NM

Sub Trims are intended for minor adjustments to servo linkages. Using excessive sub trim values (percentages) can cause servos to be over-driven where they try to move past their internal stops. This can cause servo damage.

The diagram below illustrates an ideal servo/linkage setup when the servo is at neutral. Notice that at the servo arm is positioned at 90 degrees or perpendicular to the servo. Also note that the linkage or rod is attached at 90 degrees to both the servo arm and the control surface horn. This setup will result in the same amount of throw in both directions (0 differential throw).



Follow these steps to help ensure the proper use of Sub Trims and to achieve an optimum servo/linkage setup.

Access the Sub Trim function on your radio and make sure Sub Trim settings are set to zero (0).

Access the Trim Offset function (another name for Trim Memory) and clear any offsets. Also make sure that the mechanical trim levers on the transmitter (TX) are centered in their center-detents.

Plug the servo into the appropriate channel of the receiver (RX). Turn on both the TX and RX. The servo should now be at its electronic center position.

Test fit the servo arm to the servo, trying to get the servo arm to be at 90 degrees to the servo as shown in the illustration. Try different positions if necessary,

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motion was made and approved to buy the used handicap facility with no trade in, after the CD matures. We will keep our old one.

Safety Report: Everything has been safe. With the warm weather, watch for snakes.

Treasurers Report: Ed Anderson is out of town. He sent in a report, we have money in the checking account, the savings account and in the CD. We do need to get busy on getting support for the Electric Fly at the Horseshoe to defray the cost.

Activities:

IMAC – We will join Odessa club again this year. Scheduled for May 23 & 24.

Calling of the Hogs – Planned for second week in September 12th & 13th.

Fajita Fun Fly – Planned for second weekend in June, 13th & 14th.

Fun Flys – It was discussed and agreed that we need at least two fun flys this year. Dates picked were April and July

Electric Fly in – October 16th, 17th & 18th. Jeff Laufer is working on the sponsor letter. We have put a deposit on the facility to hold the dates. Need to get donations to defray the cost of rent. Dennis Robins has bought the raffle items, a Vapor and a Blade. These will be raffled off to everybody and you do not have to be present to win. Dennis is also working on a flyer to send out to all the area clubs and organizations.

Old Business: None.

New Business: None.

Show and Tell:

Monte Sandefer had his AXE CX Mini Micro helicopter. Flys very well.

Club Raffle: Three Hextronic Micro Servos won by Ralph Gillette.

Next meeting: At the Baptist Church, 7:00PM April 7th.

Meeting adjourned at 7:50PM.

Tips & Tricks

Got fuel-soaked balsa?

Fuel leak from the fuel tank all over the tank compartment? If so I have the solution! First, remove the fuel tank if able. Next, try to dry as much as possible. When finished, get some regular corn starch and dump it in the compartment and leave for 24-48 hours. After that, dump out the excess (if able) or use the vacuum cleaner. You will probably have corn starch stuck on the balsa where the fuel was. Just push the tank in and take it back out and use the vacuum to get the rest out. If it is still damp reapply the corn starch for another 24 hours. Repeat as you feel necessary. Yes, there are other methods to use but I have found this one to be best.

Tip for those who have Real Flight G2

If you use the interface controller for real flight, take a small zip tie and secure the cord to the carrying handle that way it will relieve the stress on the wire going into the controller.

Tip for cleaning bolts

I saw this little tidbit on RunRyder on cleaning bolts before applying loctite to them. To do so, place the pile in a fine strainer (stainless) and sink it in a pot of boiling water and regular, not lemon, Cascade detergent for about 10 minutes. Dissolve the Cascade first. Rinse thoroughly and dry when complete. The parts are very clean when done. No further prep work is needed. This is easier on the fingers than the manual method, especially on a new model with a whole bag of screws to do.

Reinstalling the fuel tank with motor installed

Have you ever tried to run those pesky fuel lines through the tiny hole in the firewall while the motor is installed and you got a headache? Well here is your aspirin! If you have any old pushrods or old bent landing gear lying around, straighten them as best you can and route them through the front of the firewall to the radio compartment. Then hook your fuel lines onto the wire and pull the wire out of the firewall. Easy huh?

Reducing glitch

Use shrink or silicon tubing on metal parts such as throttle and linkages to reduce minimum glitching. —all tips and tricks courtesy of Jim's RC.com

“The mind is like a TV set – When it goes blank, it’s a good idea to turn off the sound.” Commo briefings

“The only man who never makes a mistake is the man who never does anything.” Theodore Roosevelt

CALENDAR OF EVENTS

Old Kingsbury TX IMAC Round Up
Old Kingsbury Aerodrome
April 25 & 26, 2009
Hotels close by and camping available on site.

9th Texoma R/C Electric Extravaganza
Sherman, TX Club Field
May 2, 2009
Fly in for all electric powered aircraft.

Midland-Odessa IMAC Contest
Odessa Club Field
May 23 & 24, 2009
We need to have our members helping on this.

Fajita Fun Fly
Midland Club Field
June 13 & 14, 2009

Calling of the Hogs
Midland Club Field
September 13 & 14, 2009

Horseshoe Electric Fly In
Horseshoe Arena Midland, TX
October 16 – 18, 2009

Picked up Passing by

Well it is almost Easter and the wind is blowing. So what else is new? I heard an interesting discussion about the wind and how it effects our activity. Actually it was some golfers talking. One person made the comment that they were glad it was blowing, because when the wind would blow like this before Easter, It would calm down afterwards. They remarked that a few years ago the period before Easter had calm winds and after Easter the wind blew hard all summer. So based upon that prediction, we should have good flying weather with light winds all summer.

I have included another article by Richard Lindberg. His articles are well written and very informative. This article discusses setting up your servos for the best performance.

Last month I started a discussion about changes to our hobby. Today we have ARFs for those who don't have the time to build. Some of the kits are laser cut or precision sanded. With these kits building a great flying "bird" is almost a snap. Even the die-cut/crushed kits are wonderful compared to the printed parts on balsa that had to be cut out with a double edge razor blade. Then, when all parts had been cut out we used glue that smelled horrible to hold the parts or pieces in place. This same glue has been outlawed because kids were sniffing it to get "high". You never had it so good!

removing the arm, rotating it 90 degrees, and inserting it back onto the servo output shaft. Use the position that is closest to 90 degrees.

If the servo arm is not at 90 degrees or perpendicular to the servo, use the Sub Trim function to adjust the arm so that it is at 90 degrees to the servo.

Position the control surface so that it is in its neutral position. Now make and adjust the linkage. Adjust the linkage so that the control surface is at neutral when the servo is in its neutral position.

If the mechanical linkage cannot be adjusted precisely enough, get it as close as you can and then use the Sub Trim function to make the final adjustments.

Now use the Travel function (or ATV, or EPA, depending on your radio) to adjust total travel in both directions.

Fly the aircraft and use the trim levers for trimming. Now use the Trim Offset function (or Trim Memory – your radio should have a similar feature) to store the trims, allowing the trim levers to be returned to their center positions. If excessive amounts of trim are required, it is best to mechanically adjust the linkages and try to keep the servo as close to its electronic center as possible.

FOR SALE

3W 24i engine (gasser) mounted but not broken in. Comes with 2 props, mount and Pitts style muffler. \$250.00

73 " wingspan Edge 540 Blue with yellow trim and fiberglass cowl. (I am the second owner and it doesn't appear to have been crashed at any time.) \$125.00

If interested contact Jeff Roberts at jeffdana64@ridgewoodcable.com

Futaba T6EXAP Transmitter Ch 36 - \$65.00
Airtronics Vanguard Buddy box with cord - \$10.00
GWS Futaba 6 channel receiver Ch 36 - \$10.00
GWS JR 6 channel receiver Ch 36 - \$10.00
Glow charger - \$5.00
Gws Formosa Kit - \$30.00

If interested conact David Harrell
Work phone: 432-571-3210
Home phone: 432-684-7818

Fuel - The ins and outs

By Mike Phillips

North Dallas R/C Club Website

What is the best fuel to run? I hear this question ring through out the flight line over and over from new pilots and long time flyers alike. Many wonder what the best fuel is for their airplane, costs, protection and other things associated with fuel and glow/gas engines for our RC Aircraft.

This article will cover a month adventure I was on to determine just what fuel I should be using, along with field tests and allot of reading on the internet and conversations with experienced long time flyers I hope to be able to explain here what might help anyone determine what is the best type of fuel for them to use.

Allow me to first explain a couple of things, being fairly new to this hobby and absolutely no expert in this field (or any other field for that matter) I will explain this the best possible way in hopes to share this experience in an effort to have something to point to when somebody asks "What is the best fuel to use".

Disclaimer - This information is provided as is with no warranty, please read the site disclaimer for further information, use this information but at your own risk. Feedback is always welcome; please feel free to contact me if you like mike@rcnegades.com

FUEL

Model aviation fuel contains 3 elements.

Alcohol

Nitro

Oil

Engine fuel for RC Aircraft known as "Glow Fuel" contains 3 elements that are determined by the manufacturer and usually printed on the gallon jugs or cans purchased when you buy your Glow Fuel.

Out of these three elements, only two are combustibile, the Nitro and Alcohol. In my testing over the past month, my main concern was the oils used in these fuels, allow me to explain.

I run mostly Saito 4-Cycle engines and these engines require a little less oil than their two stoke counter parts. Determining the oil content is what has taken me down this road due to a malfunction on my Saito 100 that is currently flying in my U-Can-Do 60. A Dead stick over the runway inverted at about three feet really makes you start figuring on things you had not thought of in the past. The plane survived however the rush I got from getting the plane flipped over and back on the ground really had me thinking.

After further examination, what was found was that the engine had a stuck tappet in the tappet guide; this caused the exhaust pushrod to hang and rip teeth off of the cam gear, really ugly site too.

Repairing the Saito 100 (Or better said an attempt to repair the Saito 100), found that any small debris in this motor will cause damage. Finding that this motor did the same thing on the second flight after the repair, we found that microscopic pieces of the cam were lodged in the tappet guide once again.

A full breakdown of this motor and repair once again, replacing the bearings (rusted and pitted) and a complete clean up and soaking helped put this back in the air.

With this information in hand, we were able to determine that rust had played a part in the first engine malfunction and pieces of the cam gear on the second malfunction.

This all started with Rust, well, got me thinking where does rust come from? Moisture in the engine, where does this come from and the adventure was on its way.

Moisture in your engine can cause damage, sometimes catastrophic damage and so, this takes us to the 3rd element listed above - "oil".

Glow engines run fuel like our everyday two stroke motors with a combustible (alcohol, nitro) liquid and a lubricant (oil) Oil is an important piece of ensuring that your engine does not rust and also to keep the engine running smooth and well lubricated to prevent heat.

Rust can build in your engine whether it is stored for long periods of time or short periods of time and thus, we simply should have oil in the engine to prevent the rust.

When an engine runs, it takes in moisture from the fuel source and carburetor. Nitro acts as a magnet to moisture and will draw the moisture into your motor. Have you ever noticed when you spill any of this glow fuel on your flight box or anywhere it will quickly obtain a milky looking film over the top of the spilled fuel? This is the nitro pulling in the moisture right from the air!

The oil used in the fuel plays a big part in protecting the engine from the moisture and preventing rust long term and short term.

Many fuels list what they use in their fuels, many use a synthetic oil and this oil simply allows the motor to run more RPM's than a castor based oil will do. Castor is a thicker oil and is a natural oil and will protect the motor (long term) better than a synthetic fuel. IF the motor is running a lot where it does not have time to ever be dry from a synthetic fuel then synthetic fuel may be ok to run with no issues.

Castor being a natural lubricant (hey, this stuff comes from beans!) is thicker and will leave residue all over the motor and will protect it while in storage helping to prevent rust.

So, I decided that I would want a fuel that had castor to beat the rust but also wanted a synthetic fuel that would loosen up the mixture so I could produce the RPM range I was looking for.

Lets look at some of the fuel tested here (Percentages based on volume)

Cool Power 2 cycle fuel.
15% Nitro / 20% oil (10% low viscosity, 10% high viscosity)

Cool Power 4 cycle fuel
15% Nitro / 18% oil (9% low viscosity, 9% high viscosity)

Cool Power 4 cycle fuel (Castor Based)
15% Nitro / 18% oil (9% Castor, 9% Synthetic)

Rich's Brew 2 cycle fuel
15% Nitro / 22% oil (Known as the 11-11).

The goal was to use a like brand to determine the best RPM and change the oil content. And with the findings, the Cool Power 15% 4 Cycle 100% synthetic has proven to provide the most RPM and power however, running this fuel comes at a cost. Back to the rust issue. (NOTE: This is on a 4-cycle engine, for a 2 cycle; you would want the 20% oil).

Running a fuel that is 100% synthetic can prevent rust in a short term period however, my feeling and understanding is that the castor would assist in preventing rust. So, how can you run the best fuel and get away from the worry of rust? If you run a fuel with Castor, probably nothing to worry about here. If you run a fuel without castor you should use after run oil.

If you read a label on the Cool Power (this was amazing to me) it states on the bottle of fuel that "After Run oil not required". After all I had read through and understand, this was somewhat of a mystery to me. How can you run 100% synthetic fuel and not have to use after run oil? They attribute this to their low viscosity synthetic fuel from what I gather reading their fuel information online at Morgan Fuels.

In short, use my recommendation as this is based on what I know to be the best for me. But, if you're running a fuel and it does good for you then this is the fuel for you. If it runs good use it. In my opinion all fuel is about the same, different manufacturers are the difference in the production of fuel. I personally like Cool Power however; another brand with the same mix would probably run the same.

FOR SALE

(Both are almost new, and in great shape!)



Clik F3P pattern plane ready-to-fly (less receiver) \$85
3-dymond D4.7 servos (retail \$20 each)
1-feigao 6 amp speed control (retail \$16)
1-Turnigy 2204-19T brushless motor (retail \$11)



Tension Freestyle plane ready-to-fly (less receiver) \$50
3-HXT 500 servos
1-Turnigy 2204-19T brushless motor
1-Turnigy Plush 10 amp speed control

Call Dennis Robbins for details, or to see planes at H 687-5663 W 682-2488
(I can bring either plane to the meeting)

From the Robbins Nest: *Come to the meeting to enter the Club Raffle!*

By Dennis Robbins

4th Annual SPEF indoor electric event: April 24 – 26, 2009 is the date set for the Plainview fly-in. The flying will begin on Friday at 8 AM-10 PM, all three days. We always have an enjoyable time at Plainview, and Royce, Reegan, and Britton May are the perfect hosts! This event is always held at the Ollie Liner Center, which is 136ft wide, 302 ft long, and 25ft high.

More information about this fly-in can be found here:

<http://www.rcgroups.com/forums/showthread.php?t=1016562>

Just copy and paste into the address box, and you can “read all about it”!

And a few photos from past events, so you can see the fun you are missing if you don’t make plans to attend.



Mike Robbins, Reegan May, and Dennis Robbins trying the “transmitter behind the back”



Jim Rice, our Dist. VIII VP



Where it all happens



Ernest Butler's Spacewalker, built entirely out of depron foam!



Michael Connally and his big Tripacer.



Reegan May and his fleet of blucore planes



Lot's of Misc. depron foam airplanes



Flight line view