



HI-SKY R/C FLYER

May 2006

Volume 35 Issue 5

President: Gene Laughlin
Vice President: Bruce Hoover
AMA Charter Club #851

Treasurer: Ed Anderson
Secretary: David Harrell
www.hiskyrc.com

Meeting:

The May 2006 meeting will be at the First Baptist Church Activity Building May 2, 2006. The meeting will start at 7:00 PM.

HI SKY R/C Club Minutes: April 4, 2006

Meeting was at the First Baptist Church Activity Building.

Gene Laughlin brought the meeting to order at 7:00 PM.

There were 19 members present and 1 guest. The minutes of the last meeting were approved as written.

Field Report: The previous clean up day was rained out. A clean up day is planned for Thursday, April 20 at 7:00 pm. Bruce Hoover will check on the cost of a commercial spraying for weeds at the field. A motion to allow up to \$150 for weed spraying of the field was seconded and passed.

Safety Report: A.J. Lee reported that things were as safe as they can be. A.J. also reminded everyone to watch for snakes at the flying field.

Activities: The Fajita Fun Fly is scheduled for

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From the Robbins Nest:

FLEX MOUNT FOR CD ROM MOTORS

Many modelers these days are building and flying electric planes. This new movement in the R/C world took a giant step forward when CD rom motors were removed from computers, and rewound for model airplane use. This allowed for a custom brushless motor that could supply plenty of power, and cost very little to build.

I was a late comer, but soon saw the potential these little home built motors had. They were perfect for my requirements, supplying the power necessary for hovering a 4-5 oz foam plane.

One of the weak links that needed to be overcome was how to mount these motors to the airframe. The CD rom motor is usually constructed with a bearing tube, which extends from the back of the stator about 1"-1 1/2". I first mounted the motor by wrapping it in masking tape, and gluing the motor directly to the foam plane. Several problems immediately arose. First, you could not easily replace the motor, and second, if you had a less than desirable impact with the ground, usually the nose of the plane suffered. After many sessions of reattaching my motor, and even having to rebuild the nose of the airplane, I was determined to come up with a better mounting method for the CD rom motor.

What was needed was a mounting method that was not permanent, and would be forgiving during impact with the ground. After discussing this with a fellow pilot at the Big Spring fly-in, the following method for mounting a motor was suggested, and what you will see in the photos is my adaptation of the idea to my own personal use.

This is how it's done:

- 1) I used two 5" pieces of 3mm carbon fiber tubing. They were glued underneath the wing, in the groove where the fuse contacts the wing.
- 2) Latex tubing 1/4"ID 3/8"OD (purchased at any hardware store) was cut into bands.
- 3) Slide the bands onto motor, then slide the bands over the carbon tubes.
(this is the more difficult part of the procedure)
- 4) A small balsa or hard wood block can be glued between the carbon tubes near the fuse. This prevents the foam from

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Saturday April 22. Mike Chase has volunteered to bring a crock pot of beans, ice chest with ice and a roaster pan. Steven Bowers has volunteered to bring drinks. Jim Ruple has volunteered to bring cake and cookies. Motion was seconded and passed to take a head count and the purchase the necessary food items on the Fajita Fun Fly day.

Old Business: Motion was seconded and passed to purchase a Mini Katana for the CAF Electric Fly raffle. Bruce Hoover will place the order. Several members will look into options for having a Friday night July 14 flying site for the CAF Electric Fly pilots.

New Business: We had a discussion on the J.C. Kelly City of Midland ordinance. Jim Ruple is going to check with the City of Midland Parks department about the wording of the ordinance.

Kenneth Williams from the local amateur radio club visited the meeting. Kenneth requested that we provide a R/C show and tell at the May amateur radio club meeting. The amateur radio club meets on the second and fourth Tuesday of each month.

Motion was seconded and passed to adjourn at 7:45 pm.

Show and Tell:

Dennis Robbins brought JAR number 4. Bruce Hoover brought a brand new electric Lama Helicopter. Gene Laughlin brought a Laser Arrow delta with a JR radio, OS .50 and added landing gear. Jim Ruple brought a Clipped Wing Cub with coupled rudder and ailerons. Jim also brought an Alpha models foam P51 Mustang.

After the meeting Jim, Dennis, Bruce, Ralph and Jeff fly in the gym.

Club Raffle: The club provided two GWS Naro servos for the raffle. The raffle was won by David Harrell.

Upcoming Events:

Fajita Fun Fly April 22

Picked Up Passing By:

If you missed the last meeting you missed seeing some nice planes. I am curious to see how Gene's Laser Arrow does in the air. Gene, that is a beautiful airplane. Gene always does a great covering job. Too bad he doesn't do a show and tell about covering. I could use some helpful hints. Bruce Hoover's mini helicopter, the Lama, was very interesting. I was wondering if it would fly. And fly it did. I think several people tried flying it. No, your

newsletter editor did not try. He learned his lesson last month.



Jerry Houston flying the Lama

Jerry looked as though he had been flying helicopters for years. I don't know about his experience with them, but he is accomplished with the electric planes. Jerry is knowledgeable on electronics also. He helped me understand how the Triton charger works.

I have begun checking the batteries I have in models. The first one that I cycled checked bad. It was at least 4 years old so I won't try to do more than one discharge check. A battery pack is less expensive than a model, in this case an Astro Hog.

I read some interesting things about batteries while writing this. Toshiba has recently announced a rapid charge battery. This lithium-ion battery achieves 80 percent of its charge in just one minute. A few more minutes and it's fully charged. Another item in the works is fuel cells for gadgets. You don't recharge them, instead you refill them. They are refilled with a chemical such as methanol. Fuel cells have been around for a while, but not small fuel cells. One use that has been mentioned is laptop computers. That means a fuel cell for model planes is a possibility in the future. What concerned me was a lack of safety concerns being mentioned in the article. We have heard about fire problems if prudent safety precautions are ignored. The article did mention the need to properly dispose of batteries. Many batteries have hazardous materials that are not suitable for landfills. Many electronics retailers have collection points.

Remember that the word "success" comes in front of hard "work" only in a dictionary. Coach Herman Boone

CALENDAR OF EVENTS

WARBIRDS OVER WACO

SPEEGLEVILLE II PARK WACO, TX

MAY 5, TO MAY 7, 2006

CLOVIS, NM MAD SPRING FLY IN

CLUB FIELD CLOVIS NM

MAY 20, 2006

MIDLAND/ODESSA IMAC CLASSIC

ODESSA CLUB FIELD

MAY 27 & MAY 28, 2006

ABILENE R/C SOCIETY IMAC SHOOTOUT

SEA BEE PARK ABILENE, TX

JUNE 9 TO JUNE 11, 2006

Big Spring Fun Fly

John Wesley Field

June 10 & 11, 2006

Fort Worth 4-Stroke Fly in

Thunderbirds Field

June 14, 2006 Yes, that's a Wednesday

Texas Chiefs Open House Fly In

Model Airport in Haskell, TX

June 24, 2006

CAF/Hi Sky Club Indoor Electric Fun Fly and Swap Meet

Commemorative Air Force Hanger

July 15 & 16, 2006

Odessa Big Bird Event

Odessa Club Field

August 12 & 13, 2006

Callin" of the Hogs

Midland Club Field

Sept. 16 & 17, 2006

West Tex Jet FX

Odessa Club Field

October ?, 2006

Gray hair is God's graffiti. Bill Cosby

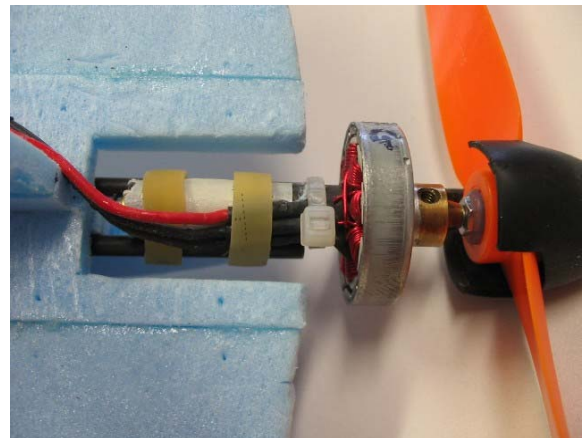
crushing after the latex bands are in place.

The following photos illustrate how the CD rom motor Flex mount works.

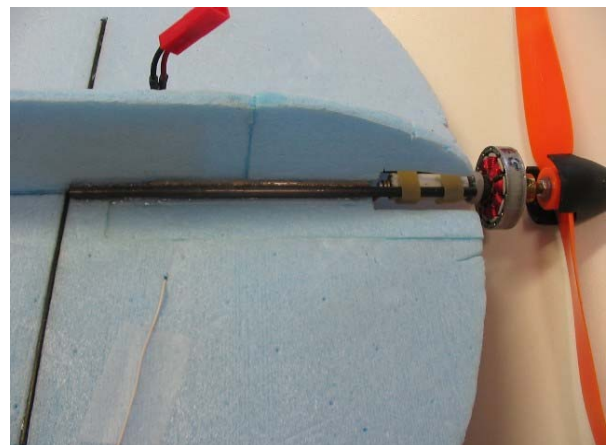
Dennis Robbins



Bottom view
Latex bands loop over motor and carbon tubes



Top View



View showing the carbon tube placement

For Sale

Contact Bill Coombes at 689-8359 or email at:
Snj24@earthlink.net

Top Flite Spitfire kit60 size....complete NIB \$75.00
Top Flite Airacobra kit...60 size with cockpit kit \$75.00
World Models Clipped Wing Cub (electric Power) ARF
New in the box. \$60.00
Horizon Hobbies PT-19 (electric power) ARF Never
flown, almost ready to go. \$60.00

If you have something to sell, let me know and I will list
it here. My phone number is 570-6262 or email me at:
hksmith35@prodigy.net



Dennis Robbins and his JAR number 4 in hover mode.



Gene Laughlin with his Laser Arrow



A break in the action at the Fajita Fun Fly.



Dennis Paschall and his 4 Star 40 at the Fajita Fun Fly.

Everyday we are confronted with many opportunities that are
cleverly disguised as obstacles. Anon

You don't need a weatherman to know which way the wind
blows. Bob Dylan



Jim Ruple showing his electric planes.



Bruce Hoover shows his electric Lama helicopter.



Mike shows us how to use the wind for hovering.



From the Prop Masters RC Aero Club, Downers Grove IL
Preflight Inspection by Ivan Cankov

Preflight training teaches the student how to inspect and prepare his model for flight. Like full-scale airplanes, a model airplane flight does not start with takeoff and end with landing. It starts with preflight inspection and ends with inspecting the airplane for any damage because of hard landings or suspicious behavior during flight. As are full-scale airplanes, our model airplanes are complex machines. To ensure a successful flight we must make sure that all components are in proper working order.

We are in this hobby mainly for the fun, but we all crash—we just don't know when. Even trainer models flown with an instructor using a buddy box will crash. The causes can be component failure or pilot error; yes, instructors err too.

To keep it fun we have to follow safety rules—both general safety rules as well as specific rules that apply to our model aircraft field. Students must learn to follow these rules to ensure that all pilots and spectators are safe and property damage, if any, is limited to our model airplanes only. Safety is of concern to everybody—all pilots at the field whether club members or not, flying or not, spectators, and people just passing by. All model-aircraft pilots should enforce the rules and make bystanders aware of potential hazard areas around the field.

Inspection of a new airplane starts with checking the integrity of the main glue joints and all screws. A student's model comes to the field already assembled so it's not possible to thoroughly check whether it is perfectly put together—whether it's scratch-built, built from a kit, ARF, or RTF. Despite this, an instructor is able to check the components that are likely to fail under stress during flight. These likely failures are the wing joint, tail feathers, control surfaces, landing gear, engine mount, and firewall.

Models are not considered airworthy if there are any problems found. Remember, you're a winner when you get your airplane(s) home in one piece even if you haven't flown them. Any problem(s) found need to be fixed and another inspection performed. Some of the problems can be fixed right at the field. Others require more time and the convenience of a workshop.

Test the wings by placing the center flat on your chest and pulling the wingtips with a reasonable force. Performed the test in both directions—top and bottom of the wing. The joint should not crack. Some ARF and RTF manuals state to use tape or small plastic straps and screws to hold the wing halves together. My advice is to glue the wing halves together using 30-minute epoxy unless the wing is specifically designed to use a different method, such as the NexSTAR wing.

Pulling the tail feathers up, down, and sideways should not move them. Again some ARFs and RTFs use studs glued in the fin and nuts (with plastic inserts to prevent them from unscrewing) to bolt the tail feathers to the fuselage. It's somewhat handy for transportation and

storage but they are also more likely to fail, so my advice here is to glue them in place while still using the nuts.

Pulling the control surfaces—ailerons, elevator, and rudder (and flaps on some airplanes)—is the easiest way to check them. They should stay in place. Inspect the hinge gap; is it too big? If so, seal it. The easiest method I've found is to use regular Scotch tape. I always carry a roll in my flight box for repairs at the field (including repairing holes in the covering caused by landing in the weeds).

Check all linkages: there should be no play or slop. Play or slop in the linkages as well as big hinge gaps can cause flutter that can in turn destroy the wing, stabilizer, or fin to which it is attached. Although trainers have smaller control surfaces, moderate speeds of operation, and are not very prone to flutter, it can still happen—usually after the beginner pilot has soloed and starts performing aerobatic maneuvers with the trainer model at higher speeds. It happened to me; I lost my trainer due to aileron flutter.

Check all screws. I put Loctite on all metal-to-metal screws—from landing gear to fuselage. Don't tighten any engine screws if you are not familiar with the particular engine and its carburetor. Some of these should not be tight at all while others are torque-and-sequence sensitive.

All wood screws should be tight, too. Use thin cyanoacrylate glue to harden the holes. First, run the screw in the hole so it taps it, then remove the screw and put a drop of thin cyanoacrylate glue in the hole. Wait for the cyanoacrylate glue to fully cure and reassemble the part. These include, but are not limited to, servo screws—the ones that hold the servos to the servo tray—hatches, tail landing gear (most high-wing trainers are not tail-draggers but use tricycle landing gear and don't have a tail wheel), main landing gear, etc.

Most RTFs come with already assembled engines and landing gear. Usually they are not properly tightened and sometimes they become unscrewed and fall in the box. The result is a model that arrives at the field with screws missing or not tightened. Beginners are not knowledgeable enough to notice or even know how many screws should be used, and are misled by the Ready-To-Fly advertisement of the product they just acquired.

Check the propeller. Is it the proper size for that particular airplane/engine combo? Is it suitable for training? Small diameter high-pitch propellers provide a lot of speed that is not needed for a trainer model. A typical propeller for a .40-.46 size engine on a trainer plane is 11 x 5.

Next check to see if the propeller is properly attached to the engine crankshaft. The propeller nut should be tight—very tight. The modern engines have hardened crankshafts and use hardened propeller nuts, so don't be afraid to tighten it. With an electric starter, from a safety and ease point of view, a spinner or spinner nut should be used. It should be tight, too. If the screws holding the spinner cone to the backplate are not tight, the cone will start to vibrate when applying the electric starter and shatter if it is a plastic one.

Check the center of gravity (CG) of the airplane with an empty tank. An improperly balanced airplane is hard to impossible to control. If done at the field and it's windy, try to find a place where the wind will not affect the airplane's attitude. Using your fingers is not the most precise method but it works. For most trainers the CG is located at the main spar. Check the CG with the fuel tank empty. When it's full, the CG is slightly forward. It's easier to fly a slightly nose-heavy airplane than a tail-heavy one. Most of the fuel is gone by the end of the flight, so the CG goes back to where it was set up with an empty tank.

Check the direction and the amount of control surface deflection. Do not exceed the manufacturer recommended values—they make the model more sensitive to the controls. That, combined with the inherent tendency of beginners to over control the airplane, will lead to aggravation from the student. He or she will be constantly fighting the airplane.

Do a thorough range check with the transmitter antenna fully collapsed and the engine running at idle, half, and full throttle. You can do it while breaking the engine in (if the engine is new). The servos should not twitch when you walk up to 30 paces (60 feet) away from the airplane. Twitching servos might be caused by low battery voltage for the receiver and/or transmitter pack. (Were they charged overnight?)

Break in the engine. ABC/ABN engines normally take one to two tanks before they can run reliably. Ringed engines take longer. Run the engines on the rich side of the needle valve, especially ringed engines. The airplane is ready to fly when the engine can idle and transition reliably.

Some engines (Evolution) are advertised as factory broken in. My advice is to take the time to run at least one tank of fuel through it. After that, if its performance satisfies an experienced pilot, the engine can take an airplane in the air. Keep in mind that the engine will continue to break in until it burns a gallon or two of fuel. How much depends on engine design. During that period, the engine will require some readjustment of its needles.

Leave the maiden flight to an experienced pilot. He will fly the airplane and trim it out. He will also readjust the linkages if necessary when the airplane is back on the ground so the trims can be recentered (if the transmitter is not a computer one).