



HI-SKY R/C FLYER

November 2008

Volume 37 Issue 11

President: Bruce Hoover
Vice President: Dennis Paschall
AMA Charter Club #851

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

Meeting: The November meeting will be held in the First Baptist Church Activity Building November 4, 2008. We will be meeting downstairs in the arts and crafts room. The meeting will start at 7:00 PM. Be sure to vote before the meeting.

Elections: Nominations for club officers for the year 2009 will be presented at the meeting November 4. Be sure to be there to make your wishes known.

HI SKY R/C Club Minutes: October 7, 2008

Meeting was held at the First Baptist Church. Dennis Pascal called the meeting to order at 7:05PM. 11 members were present.

Minutes: Minutes were approved as published in the newsletter.

Field Report: Field looks pretty good. It has been mowed and cleaned up very well. Need to have a clean up party next Saturday, 10/11 at 8:00AM. Mainly weed eating and spraying.

Safety Report: A.J. Lee says everything has been safe.

Treasurers Report: Ed Anderson is back from

Don't Fly Beyond Your Abilities

By Jim Rice AMA District VIII Vice President

Three times in the last 2 months, it has been brought to my attention that modelers from various clubs have been involved in incidents or near misses solely because they were flying airplanes that were beyond their abilities. In one instance the pilot's skills have eroded over the years to the point that he is unable to fly the faster, quicker airplanes. In the other two instances the relatively new pilots have advanced their aircraft beyond their skills resulting in dangerous situations.

Two of the three pilots are angered when asked to go back to some remedial training and gentler airplanes. The third voluntarily has gone back on a buddy box and is working hard to develop the skills required to fly the airplanes he would prefer to fly. The last fellow is both smart and a good club member. The first 2 are endangering their club members and spectators as well as potentially endangering the utilization of their flying fields. Landlords do not like bad publicity or law suits and a stupid mishap that injures or kills someone may be the final blow which would cause all modelers to lose their flying site.

This is a sticky situation for everyone. Perhaps the person in your club that is flying dangerously because of inability to fly the airplane of choice is a close friend or even a club officer. It becomes hard to tell them or they become beligerent when told. But believe me, it is better to tell them than watch them hurt themselves or somebody and wish later that you had taken action. If you think you will have a problem telling the person or with their receiving the criticism, get several different opinions of the situation and present the issue to the pilot as a compilation of several inputs. Tell the person you are trying to be safety conscious and you need their help to improve safety at your field. Have one of the club officers involved as well, so you insure that club policy/bylaws are properly followed. Try not to make it a lynch mob atmosphere (at least initially).

On the other hand, if you are approached by one or several people about your unsafe practices, try to keep

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vacation. We have money in the checking, savings and CD accounts. The Horseshoe has been paid.

Activities: General discussion of upcoming activities.

Electric fly at the Horseshoe. Publicity going out. \$20 landing fee, which we will collect. Dennis will handle the raffle. The Horseshoe will handle everything else.

San Angelo fly in is this weekend, 10/11&12.

Need to start thinking about what we want to do next year. Some of the ideas include a mall show and something to get more publicity for the club.

Old Business: Make sure the gate is locked when you leave. It was left unlocked earlier this month.

The Calling of the Hogs went well. Ten flyers signed up. Flying was good. Lunch was for about 25 people, so we had visitors and family along with the flyers. Good Show

New Business: Time to start thinking about officers for next year. **We** should make nominations next meeting.

Show and Tell:

Jim Tartt brought his Sukhoi electric from Hobby Lobby. Weighs in at about 10 oz. Runs on a brushless 400 motor.

Jim Ruple brought two planes. An E-Flite Spitfire flying with a brushed 380. Jim says it flies very fast. He had an OV10 Bronco flying with twin brushed 480's and 7-3 props. Flies very well. Even sounds like a turbo prop in the air.

Next meeting: At the Baptist Church, 7:00 PM November 4th.

Meeting adjourned at 7:45 PM.

Picked Up Passing By

Cool weather is here and the sun is lower on the horizon. The mornings can be hazardous if you fly into the sun. At least the wind isn't as bad as it was almost all summer. The Fall and Winter months in Midland provide some great flying days. There have been more members taking advantage of the good flying weather. I hope the mild weather holds for the rest of the year. Meanwhile, get out there and enjoy yourself.

The following article on hinging is from the "Classic Robbins File". I hope you enjoy reading it.

From the Robbins Nest:

By Dennis Robbins

RE-HINGING ELEVATORS, AILERONS, AND

RUDDERS: As I continue to work on my new plane, I seem to encounter items that I feel would be of interest to others. The latest discovery involves control surfaces. This all came about during discussions with friends about covering, and recovering planes. I'll explain.

The plane I currently fly has about 250 flights, all acquired during the last five-seven years. The fuselage is in need of recovering. I always use the CA type hinges, and just cut the rudder and elevator from the plane, recover the surfaces, and re-attach with CA hinges. Sounds easy enough, and usually is, except when it is time to re-hinge.

During the initial construction of the fuselage, most plans call for the placement of about four or five hinges along the elevator surface. I like to get the two outside hinges as close as possible to the end of the elevator, because I feel this will help prevent flutter. I do the same on the ailerons and rudder. This complicates the re-hinging process by not leaving enough room out on the tip for an additional hinge location, since the hinges cannot be reinstalled in an existing hinge position. If the new hinge is placed closer to the center of the elevator, you could end up with as much as 2" inches between the tip of the elevator and the first hinge. I do not consider this to be acceptable.

(During the next part of the discussion, please keep in mind that most CA hinges are about 1" inch long and ½" inch wide.)

To solve this problem, during the initial hinging process, I move the outside hinge location about ¾" inch away from the tip, toward the fuselage. On most of my planes, this seems to still prevent flutter problems, but helps if I need to re-hinge the flying surface.

To re-hinge, I cut a CA hinge in half, (now only ½" wide), which I place in the ¾" inch space between the old hinge location, and the tip of the elevator. The half hinge seems to do just as good a job as the full hinge, and makes me feel better knowing I don't have 2" inches of unhinged elevator hanging out in the wind to possibly flutter.

One word of caution: examine your plane plans, and see what would work best for you. All planes are constructed differently, and may not allow for the replacement of hinges as described above. This has worked for me in the past, but may not be suited for your type of construction or aircraft design. Also remember that my planes are all .40-.60 size, and different hinging methods could be used on big birds.

Think as you build, and keep in mind that some day you too, may need to recover a plane, and if you do, how will you re-hinge the flying surfaces? A little pre-planning could make the process a lot easier in the end.

CALENDAR OF EVENTS

HORSESHOE FLY-IN

HORSESHOE ARENA

NOVEMBER 1, 2008

Fly in for electrics.

Editors note:-

There are numerous clubs hosting “toys for tots” fly ins. These are a long ways away, but it is a worthwhile event to host.

Multiblade Propellers

From the Suffolk Aero Modelers, Long Island, New York

Originally from Hooked-on-rc-airplanes.com

Three-bladed model airplane propellers are less efficient than two-bladed propellers. In fact, the more blades that are added, the less efficient the propeller becomes. The only advantage of a multiblade propeller is a smaller diameter.

Multiblade propellers are used with full-scale airplanes when ground clearance is an issue. World War II fighter planes are a good example. For this reason, many pilots use multiblade propellers on their scale model airplanes to make it look more like the full-scale airplane.

Twin-engine airplanes often use multiblade propellers because the smaller diameter is needed for the propeller to clear the fuselage. This is true of full-scale airplanes and often the case with twin-engine model airplanes as well.

Evolution Engines offers a three-blade propeller to be used with a trainer. The inefficiency of the propeller “tames” the engine a bit for the beginner by allowing the airplane to fly slower while maintaining the thrust needed for easy takeoffs and climbs. The extra blade also helps to slow the airplane down when landing. After the beginner becomes comfortable flying the airplane, he or she can tap into the rest of the engine’s power by changing to a more efficient two-bladed propeller.

The difference between golf and government is that in golf you can’t improve your lie. George Deukmejian

Buy land. They’ve stopped making it. Mark Twain

We don’t stop playing because we get old; we get old because we stop playing. George Bernard Shaw

your cool (this might be hard but try). Listen to the input and see if the picture painted of the situation is the picture you would see if you were sitting back and watching. If you have a different view, calmly and quietly explain the circumstances that are different and then as you fly later, be critical of yourself and see if there is any validity to the complaint. If so, do something about it!

Each club has a different procedure for applying sanctions to a member and eventually dropping the member from the club roles. If the situation worsens, make sure you follow the procedures in your by laws to the letter so as to insure fair treatment to everyone.

Each of us has pet peeves that affect our attitude about another person's flying. We may not like buddy box training while others are flying, maybe turbines or helicopters unnerve us or perhaps 3D flying distracts us to the point that we are uncomfortable. Make sure that what you are complaining about is really an unsafe act and not a prejudice against a style of flying or type of aircraft. Each of the above examples is a safe activity when done by experienced pilots in a smart and cautious manner. Try to find a flying time/site where you can avoid the flying style that bothers you or propose windows of flying activity at your next club meeting so that each discipline can have its own reserved time to fly.

This is a hobby and supposed to be fun but it is hard to have fun when people are feuding or when people are being unsafe and endangering others.

FOR SALE:

Great Planes Super Sportster 90/120 NIB 72” wingspan. Not an ARF. .90 2-stroke or .90 – 1.20 4-stroke makes this a terrific performer. It is stable at low speed and aerobatic at throttle up. \$125.00

Saito 1.20 engine – good compression, engine flex mount - \$130.00

Great Planes Kaos .61 size. 58 inch wingspan - Aerobatic to say the least - \$75.00

Hitec CG335 Field charger for NiCad batteries. Glow driver, 4-24 cells input voltage 9-13.9 volts - \$35.00

If interested call Henry Smith @ 570-6262 or email at hksmith35@prodigy.net

Servos

By Richard Lindberg

Rocky Mountain Flying Machine Website

What's a "servo"?

Servos are small electro-mechanical devices that are mounted to your RC airplane. When connected with push rods, they move control surfaces such as elevators, rudders and ailerons.

What's "in" a servo?

A typical servo consists of a motor, drive gears, output shaft and arm, a circuit board and a potentiometer. The circuit board contains a signal amplifier and comparator circuits. These items are configured as in the following diagram:

Position + Position
Reference Output

What differentiates one servo from another?

Primarily the motor, then the amplifier type. Inexpensive servos contain cored motors, which are incredibly common and cheap. The core, or armature, is comprised of metal plates (poles) sandwiched around a metal shaft that's supported by bearings at both ends, and each pole is wrapped with wire. The armature spins inside a hollow center permanent magnet that lines the inside of a metal can (the enclosure). Power is introduced to the windings, generating an electro-magnetic field, which is opposed by the permanent magnet field, thus causing the armature to rotate. More expensive servos contain coreless motors. These motors have the armature on the outside (imagine a hole saw with an arbor attached) that's very light, and rotates around the fixed permanent magnet. Because of the larger size (diameter) of the armature, a coreless motor has a higher torque rating, and the lack of poles allows the motor to center more accurately while maintaining or holding position with increased authority.

OK, that's fine, But what about the amplifier?

There are two basic kinds of amplifiers: analog and digital. Analog (conventional) amps interpret RX commands and pulse power to the motor armature at 50 cycles per second. The space between pulses is known as the dead-band. If a signal is received from the RX or the servo arm is deflected the amp pulses power to either move the armature or resist the opposing force. The duration of the pulse speeds up the motor (longer pulse) or slows it down (shorter pulse). Digital amps interpret RX commands and pulse power to the armature at 300 pulses per second (!). The increased pulse cycles command the servo motor to react and perform with more precision. This results in faster response to control command signals, lower dead-band numbers, increased holding power and much better resolution. Also, these digital amps are microprocessor controlled, and some can be externally programmed. Center and end-point positions, speed, dead-band, rotation, failsafe and more are programmable.

Wow! Digitals seem to be the way to go. What's the downside?

In a word, cost. While there's no inherent reason why a digital amp couldn't be incorporated in a cored motor servo, the built-in limitations of such a servo would make the benefits very small. So, multi-pole (>3 poles) motors or coreless motors are used, and the cost is commensurately higher. The microprocessor cost is somewhat higher, too, but that's coming down as more servos come to the marketplace.