The Tailwind

AMA Charter No. 704

SEPTEMBER ***DON LEWIS, EDITOR*** **2016**

Next Meeting on Thursday, September 15 – At the Field!

Be sure to check out the website at www.fly-hrcc.org

MEETING MINUTES

Don was not at the last meeting. Minutes will be caught up in the next issue.

TREASURER'S REPORT

Ditto!

WHAT'S IN A NAME?

By Clay Ramskill

Maybe the British got it right. They just give their military (and civilian, too) aircraft a name (like Spitfire) and let it go at that. If there are major modifications, then they will put a number behind the name of the plane, like Spitfire 9. This is a simple, easy to remember system, which also tends to allow citizens to sort of identify with their aircraft.

But not so here in the colonies. We Americans seem to require more, like some sort of designation to go along with the name. The word "Scorpion" just isn't enough- it has to be the F-89 Scorpion. "Stratojet" could not be enough, it had to be the B-47 Stratojet. Oh, yes, adding the designation does give you more information; in the case of the Scorpion, we can then know that this plane is a fighter, and was the 89th fighter bought by the Air Force. Likewise, a B-47 was the 47th bomber bought by the USAF.

Unfortunately, the Navy did not use the same system. Until the services were forced to adopt the same designation system in the 1960's, the Navy had a completely different way to designate their aircraft, which was very confusing for those who were not too familiar with the military way of doing things! The Navy designations started much like the Air Force system, in that the first letter described the type of aircraft, i.e. "F" for fighter, "C" for cargo, and so on. It was the rest of the designation that was so different. The number following the aircraft type letter was the number of aircraft of that type the Navy had bought from the MANUFACTURER. And then the next digit was a letter denoting the manufacturer of that aircraft.

So for instance, the F6F Hellcat was a fighter, and was the 6th fighter that the Navy had bought from the manufacturer, Grumman. The letter "F" denoted Grumman. Likewise, the letter "B" denoted Boeing- so an F2B was the 2nd fighter that the Navy had bought from Boeing. A P2V was the second Patrol plane the Navy had acquired from Lockheed, denoted by the "V". For the first plane of any type, the number was just omitted. Thus, the first fighter obtained from North American ("J") was simply designated the FJ "Fury". The Douglas Skyraider was the first Attack plane bought from Douglas ("D"), and was therefore designated the AD.

Thoroughly confused? Oh, this can get to be fun. Let's take the 4th fighter the Navy had from various manufacturers. The F4B was a Boeing biplane. The wonderful little Grumman Wildcat was the F4F; the McDonnell Phantom 2 was the F4H. And we also

had the Douglas Skyray, the F4D. Oh, and don't forget the Vought Corsair, the F4U!

Now, wasn't that fun? Let's do another. The Navy called their bombers "attack" planes, the type designation being "A". For the third one bought from various manufacturers, we have: The A3D Skywarrior, a twin engine jet from Douglas, and the A3J Vigilante, a supersonic bomber from North American. But there were also torpedo bombers- these got a "T" for the first letter. The famous Avenger of WW2 fame was the first of its type bought from Grumman, and was therefore designated the TBF. Interestingly, the TBM was the same aircraft, manufactured by General Motors during the war!

The two services also differed in how they added modifications in the design to the designations. An Air Force modification to the P-51, for instance, would show up as a letter added to the initial designation, like P-51B. A Navy modification would usually be added as a dash, then a number, like F8U-2.

Alas, everything changed though, in about 1960. Designations for Air Force and Navy planes would be the same, and later most of the numbering systems were "sort of" reset to zero. Many of the Navy planes in the inventory were able to keep a recognizable number; the F8U Crusader, for instance, simply became the F-8; the A4D Skyhawk then was just an A-4. There had to be some changes, though. We've already noted two A3's; these were both in the inventory at the time of the designation changes. The A3D Skywarrior kept the A-3 designation, the A3J Vigilante became the A-5. Any differences between Air Force and Navy versions of the same plane were taken care of in the modification letter. An A-7D was the USAF version of the Corsair 2, an A-7E was a Navy version.

The present system for numbering our military aircraft, then, is far simpler and more logical than what we saw in the past. But where's the romance- the oddities? Where did all the "pursuit" planes go? And just what kind of plane drops torpedoes?

Windy Weather Planes

Unknown

All too often, on an otherwise nice, but windy day, folks just don't fly. Obviously, for a beginner, that's just common sense - but for someone who has some experience, the wind should just be another challenge to add some spice to their flying.

While it's easy to see that experience level has a lot to do with how much wind is too much, it may not be quite as apparent that the type of plane you're flying also can have a great effect on your ability to handle winds. Let's go through a bunch of airplane design features and see which ones give us the best flying characteristics to handle winds and the resulting turbulence.

Size: In general, the larger the plane, everything else being equal, the better it will handle winds of all kinds; they just don't "flop around" as much!

Dihedral: The more dihedral in a plane's wing, the more it is going to be affected by crosswind gusts; it is hard to keep the wings reasonably level, and therefore lineup to the runway is difficult in a crosswind situation.

Wing Loading: The higher the wing loading, the less a plane will be affected when hit with a gust.

Aspect Ratio: Lower aspect ratio (stubby) wings will be less bothered by gusts; there is less leverage for side forces to upset the plane, and the lower aspect ratio wing has a greater tolerance to changes in angle of attack caused by gusts.

Power: Pretty obvious - having the power to overcome the forces provided by the wind is a must. The same goes when you get into a sticky situation.

Lateral Control: Ailerons are very beneficial in a crosswind, in landing and takeoff phases. The ability to dip a wing into a crosswind without changing heading is essential, as is the ability to rudder the plane parallel to the runway heading while keeping wings level with aileron while landing.

Landing Gear: tri gear planes are easier to land and take off in a crosswind than tail draggers. And the wider the spread on the main gear, the better.

Maneuverability: This one's a bit harder to quantify. You want a plane with stability, yet you do need good maneuverability to cope with gusts. So you want a plane that is stable, yet responsive.

Wing Mounting: Generally, a low wing plane will handle crosswinds better. This is because the CG of the plane is nearer, in a vertical sense, to the aerodynamic center of the wing. So the low wing plane is not as easily rolled by a side gust. And by mounting the main landing gear on that low wing, we can spread them out wider.

It's unfortunate that almost every item above is in direct opposition to the characteristics found in a lot of popular trainers, the main exception being the requirement for tricycle landing gear. But even with trainers, there are differences; compare a Seniorita with the Cadet Mk2. While the Seniorita may be a bit slower and a bit easier to fly, the Cadet, with its ailerons, higher wing loading, lower aspect ratio, and lower dihedral, is a far better plane flying in windy conditions.

Going a step further with the same kit manufacturer, their Cougar (.40)/Cobra (.60 size) kits embody ALL the right characteristics for windy flying.

And in closing, I offer Confucius' only known saying about R/C flying - "To learn to fly in wind, one must fly in wind!"

Celebrating Flight

The Lost Bugatti

From the Canandaigua Chiefs R/C Flying Club, Canandaigua, New York

In the late 1930s, automotive genius Ettore Bugatti built a radical race plane to capture the world speed record from the Germans. Decades later, it was found in a barn in France and is now being restored in Connecticut.

The Model 100 is a remarkable airplane. It was hidden from the Germans when they invaded France in June 1940 and wasn't to be discovered again until 1973. Even after 30 years, it astounded the aeronautical world.

The airplane is an engineering tour de force, a showcase of innovation and ingenuity. U.S. and foreign patents were taken out for almost every significant part of the structure. Bugatti build almost every part of the airplane in his shop except the main landing-gear legs. The instruments were remarkably similar to those found in Bugatti automobiles.

The power train is perhaps the airplane's most unorthodox feature. The front engine was canted to the right, joined to its drive shaft by a universal joint at the firewall behind the pilot. The drive shaft passed by the pilot's right elbow. The rear engine was canted to the left, driving its drive shaft through a universal joint along the pilot's left elbow. The two drive shafts entered a reduction gearbox at the pilot's feet. The two-input gearbox allowed the propellers to be contra-rotating, a major advance for such a small, high-powered aircraft. The engines and power train were built in Bugatti's Molsheim auto factory, tested in a mock-up, and then shipped to the Paris furniture factory where the airframe was constructed. A patent still protects this revolutionary power system.

The aerodynamics of the Model 100 are almost as mind boggling as its power train. The basic problem of aircraft design is a trade-off between high-speed and low-speed efficiency. Bugatti attacked this problem with a unique and complex system of self-adjusting flaps. The Model 100 used split trailing-edge flaps. Both flap surfaces could be moved up and down to suit the speed and power situation.

The flaps would automatically set themselves to any of the six positions for take-off, cruise, high speed, dash, descent, landing, and rollout. The flap control

was linked to a complicated system that sensed manifold pressure and airspeed. At low airspeed and low power, not only would the flaps drop into landing position, the landing gear would automatically extend. Not bad for May 1939.

You'd hardly expect such an airplane to have a normal structure, and it doesn't. In contour, the streamlining was remarkable for the day. It presented drag coefficients not attained until the mid-1970s. The fuselage is built up of a wood "sandwich," buttressed by rectangular box sections. On this polyhedral frame, layers of balsa wood, that's right—balsa wood, were glued then carved to obtain the subtle aerodynamic shape.

After shaping, hardwood rails and supports were set into the balsa wood around engine mounts, canopy, and inspection panels. The structure was then covered with thin strips of tulip wood to form the skin. After sanding and filing, it was covered with linen and dope.

The Model 100 was not quite complete by the time of the unfortunate visit by the German Wehrmacht. And by the time it resurfaced decades later, it wasn't the best of shape to take on the rigors of 500 mph flight. However, with a lot of TLC from the restoration team, it will be brought back to its original beauty.

Bugatti Specs
Gross Weight: 3,086 pounds
Wingspan: 27 feet Length: 25 feet 5 inches
Wing Area: 22.7 square feet
Wing Loading: 13.9 pounds per square feet
Power Loading: 3.44 lb/hp
Design Max Speed: 500-550 mph
Engine: Two Bugatti Type 50B, 450 hp at 4500 rpm

Editorial

HELP!

Finally we got a break in the weather! Though we have had a little rain, and some wind, the weather has been ideal for flying. I hope that everyone has taken advantage of any flying opportunity in the last couple of weeks.

Our October event is just around the corner. Please do what you can to advertise the event on October 22.

I am positive that if we all pull together we can have a great event this year!

That's my opinion – it oughta' be yours! ☺

Letters To The Editor

Need to get something off your chest? Want to solve all of the club/s problems? Write a letter! I welcome anyone (member or not) to submit an opinion in writing so long as it is civil in its expression (I reserve the right to make that determination). You can email your letters to the editor to me at Don_Lewis@comcast.net, or just give them to me at a club meeting.

Novice Nuances

A Variety of Tips

- If you are using dual rates, return to high rate before entering the landing pattern. Do a couple of turns to adapt to the greater sensitivity again.
- On flat bottom wing trainer planes: Low speed handling (banking characteristics can be improved by raising each aileron an 1/8" or so. It makes the "up" aileron more effective.
- Installing larger (3"+) wheels on your trainer will:
    1. Make taxiing in grass easier.
    2. Improve your visual orientation in the air.
    3. Improve your landings as gear won't bend as easily.
- Maintain your flight path. Do not make any erratic maneuvers to avoid faster, more maneuverable overtaking aircraft (experienced pilots etc.). It is their responsibility to avoid you. However, make a conscientious effort to not be a hazard either.
- If it is obvious that you are going to crash, kill the power to minimize damage.

Why Didn't I Think of That?

Easy-Start Nylon Bolts

After you cut a plastic wing bolt stick it in one of those cheap plastic pencil sharpeners and give it a beveled tip this makes it much easier to insert the bolt and cleans up the start threads. In addition, run the bolt through a steel nut several times after making the point to clean the threads.

Smoother Filling

By Don Lewis

If you use a lightweight spackling as a balsa filler, spray a light mist of water over the area you are going to fill prior to applying the spackling. It will help the spackling fill the area more thoroughly and allow it to spread to a smoother surface.

Flight Trimming

By Jack DeLisle

Proper Center of Gravity (CG): Method A Roll model inverted.

A. Slight down elevator required for level flight—no adjustments.
B. Significant down-elevator required to sustain level flight—move battery pack backward.
C. No down-elevator required to sustain level flight—move battery pack forward.

Proper CG: Method B From level flight, roll model to a knife-edge.

A. Model falls without dropping nose or tail—no adjustments.
B. Nose drops—move battery pack backward.
C. Tail drops—move battery pack forward.

Engine thrust up/down: From level flight out around 100 yards, pull to a vertical climb directly in front of you, release sticks and observe deviations.

A. Model continues straight up—no adjustments.
B. Model pitches toward wheels—decrease down thrust.
C. Model pitches toward canopy—increase right thrust.

Engine thrust- left/right: Fly model straight and level into the wind and pull vertical.

A. Model continues straight up—no adjustments.
B. Model veers left—increase right thrust.
C. Model veers right—decrease right thrust.

Knife-edge flight—pitch: Fly model into wind, maintaining knife-edge flight with minimal rudder. Do this from each direction.

A. Model continues on knife edge without deviation—no adjustments.
B. Model pitches toward landing gear—mix in up-elevator with rudder.
C. Model pitches toward canopy—mix in down elevator with rudder. Knife edge flight—roll

Fly model into wind: do this from each direction, maintaining knife-edge flight with minimal rudder.

A. Model continues on knife edge without deviation—no adjustments.
B. Model tries to roll—mix in opposite aileron with rudder.

Aileron differential: Fly model level heading into the wind or downwind. Pull to a 45-degree climb, and roll with aileron.

A. Model rolls without yaw—no adjustments.
B. Model exits yawed in opposite direction of roll—increase differential. Increase up throw on aileron.
C. Model exits yawed in direction of roll—decrease differential. Decrease up throw on aileron.

Product Review:

Electrify Rifle

By Matt Krisch

What's red and white and fast all over? The Electrify Rifle, of course! Electrify has put their engineering team to work once again, and the result is the

appropriately-named Rifle, a compact, all-fiberglass mini-hotliner powered by their affordable Ammo motors.
Electrifly certainly picked a can't miss color scheme for the Rifle: White with enough red to make the plane visible in the air, plus black pin striping to make it look good on the ground. Plus, it matches all the Electrifly accessories.
Motor installation is the trickiest part of assembling the Rifle. That long narrow nose is just slightly larger on the inside than the motor is on the outside, and there's just enough space for the electronics. Even though the instructions state that shortening the motor leads is an optional step, I highly recommend it. When you shorten the leads to 1" as directed, the ESC tucks nicely up in the "roof" of the nose area with no excess wire to deal with. If you've ever had to figure out how to deal with trying to coil up uncooperative wires in tight locations, you'll appreciate the foresight that Great Planes's designers put into this airframe.

It turned out much easier than I'd been told by others who have put this plane together. Maybe I just have nimble fingers, but my reputation as a ham-fist doesn't give that theory any credence. Actually, it's the generous cooling holes that give access for easy positioning of the motor.

Don't forget to follow the wisdom of the instructions, and check the rotation of the motor before you install it. Everything has to come back out to swap leads if the rotation turns out to be backwards. If you roll the dice on a 50/50 shot, guess what'll happen... I'm glad I checked mine, otherwise I would've ended up with a Elfir instead of a Rifle.

SPECIFICATIONS:
Wingspan: 31 in
Wing Area: 112 in²
Weight: 17-18 oz
Wing Loading: 21.9-23.1 oz/ft²
Length: 24.5 in
Motor: Ammo 24-33-3180
Battery used: Electrifly 3S 11.1V 1800mAh
ESC used: Electrifly SS25
Radio equipment: Futaba 8FG, R617 FASST Rx, S3107 Servos
Propeller: APC 4.75x4.75

In a word, flying the Rifle is a thrill. It needs a good heave to get going, but once the prop gets some traction, we're off to the races. As hokey as it sounds, the Rifle tracks like a bullet. The recommended elevator and aileron throws don't seem like much, but they're plenty when your primary goal is to maintain a smooth pattern. You're not going to be doing snap rolls or rolling harriers with it.

Landing is about the hairiest part of the entire flight, and something I truthfully have not yet mastered. My test pilot "greased" it in like he knew what he was doing, but so far I've managed to knock landing skegs off trying to come in too fast. Entirely my fault. The landing approach needs to be as long, as low, and as flat as possible to allow the sleek Rifle to bleed off as much speed as possible before touchdown.

One thing not often mentioned in reviews like this is crowd impact. The Rifle is a crowd-pleaser, for sure. When flying in front of an audience, you are guaranteed to hear a few mumbled expletives about the speed of the little plane, along with several exclamations of "Where is it?" or, "I lost it!" You can't buy moments like that!
As exciting as it is, this is not a plane for everyone. I say that not because there's anything bad or wrong with the Electrifly Rifle, but because it takes a good set of eyes and the utmost concentration to keep it in view, along with a steady pair of thumbs on the sticks.

There are planes that anyone can enjoy flying, and there are planes that you need to wait for the right level of experience before you can enjoy it properly. This one falls into the latter category. I absolutely love the thoughtful engineering, the handy size, the way the Rifle handles, and the thrill of putting the spurs to it and chewing up sky, but it is definitely something you should have a few planes under your belt, including at least one fast sporty type, before you attempt. Intermediate to advanced pilots will simply plotz over the performance.

See the full review at:
http://www.rcuniverse.com/magazine/article_display.cfm?article_id=1263

Origin of Common Expressions

In George Washington's days, there were no cameras. One's image was either sculpted or painted. Some paintings of George Washington showed him standing behind a desk with one arm behind his back while others showed both legs and both arms. Prices charged by painters were not based on how many people were to be painted, but by how many limbs were to be painted. Arms and legs are "limbs," therefore painting them would cost the buyer more. Hence the expression, "Okay, but it'll *cost you an arm and a leg*."

Pioneers of Flight

Otto Lilienthal: First True Aviator

From Century-of-Flight.net

The German engineer Otto Lilienthal was the first man to launch himself into the air, fly, and land safely. He also was an important source of inspiration and information for the Wright brothers in the next decade.

Lilienthal was born in Pomerania, Germany in 1848. Even as a teenager, he was interested in flight, and with his brother Gustav, in 1867 built a frail contraption of thin birch veneer. They intended to strap themselves to the pair of 6-1/2-foot (two-meter) wings, run down a hill while flapping their arms, and take off into the air. Their experiment was unsuccessful, but they persevered and built two more winged vehicles. These failed too, but Otto remained committed to the idea of human flight. He studied at Potsdam and Berlin and received a degree in mechanical engineering from Berlin University in 1870. After an interruption to serve in the Franco-Prussian War of 1870-71, he continued with his aeronautical pursuits.

After the war, Gustav became an architect and left Otto to open his own factory in Berlin to manufacture boilers and steam engines. Otto resisted the urge to plunge ahead with building flying machines, even though the pull was strong. He first devoted himself to studying the principles of aerodynamics and analyzed how birds flew before he attempted to apply those principles to a structure.

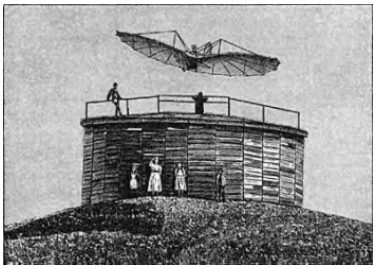
After experimenting with ornithopters, in 1889 he published a book on the flight of birds that outlined his theories and which became one of the classics of aviation. In *Der Vogelflug als Grundlage der Fliegekunst* (Bird Flight as the Basis of Aviation), he examined in detail the types and structure of bird wings, the method and aerodynamics of bird flight, and the application of the data he gathered especially that dealing with wing area and lift to the problem of human flight. He described how birds propelled themselves by the twisting, or airscrew, action of their outer primary feathers. Lilienthal tabulated the amount of air resistance offered to a bird's wing with various degrees of camber and determined that the curve was necessary to flight because it offered more resistance than a flat surface.

He built his first glider in 1891. Before his death in 1896, he had built eighteen models—fifteen monoplanes and three biplanes. He had also taken more than 2,000 glider flights.

Lilienthal's first glider, the 1891 Derwitzer Glider, was constructed of rods of peeled willow covered by highly stretched strong cotton fabric. He used a springboard in his garden at first at a height of a little over three feet (one meter), then gradually increasing to 8.2 feet (2.5 meters) to launch himself into the air. His first flights took him only a few feet but gradually the distance lengthened until he could glide almost 80 feet (24 meters). The glider originally had a wingspan of 25 feet (7.6 meters). During the course of the experiments, he reduced its span to 18 feet (5.5 feet). As in all his gliders, he controlled the glider's direction by shifting his weight a task that required considerable strength.

In 1892, he constructed a more sophisticated glider with fabric that covered both sides of the wings. This glider had a wingspan of 31 feet (9.4 meters). He could fly it up to a distance of 270 feet (82.3 meters).

Lilienthal realized he needed more flying space. In 1894, he built an artificial hill topped with an earth-covered shed for storing his machines. He would run down his hill and leap into the face of the wind, reportedly gliding more than 150 feet (45.7 meters). He could also launch himself from the top of the 13-foot (4-meter) shed.



From there, he progressed to his Maih-he-Rhinow-Glider. He called this a convertible flight apparatus, and Lilienthal received a patent for its design. It had a bat-like construction and when collapsed, measured 6.6 x 10.5 x 1.6 feet (2 x 3.2 x 0.5 meters). He could change the wing profile by inserting different ribs.

Lilienthal needed still more space for his experiments as well as a location with height and strong, steady winds. He began flying in the Rhinower Hills, about six miles northwest of Berlin. Launching himself from the hillside, he glided up to 1,150 feet (350 meters).

Like several others before him, Lilienthal never quite abandoned the idea that flapping wings was the key to motion. In 1893 and again in 1896, he built gliders with flapping wings in the ornithopter fashion. Each machine had a lightweight carbonic acid engine that produced about two horsepower (1.5 kilowatts). The engine was supposed to make the wing tips flap up and down and move the aircraft forward. Neither model was successful.

From 1894 until his death in 1896, Lilienthal constructed his ôstandardö glider. These monoplanes were highly successful, and he sold or gave several of them to clients. They had cambered wings with radiating ribs that could be folded for transport and a fixed rear fin and tailplane that freely hinged upward. With these machines, Lilienthal could glide from 300 feet (91.4 meters) to more than 750 feet (228.6 meters). His design incorporated a *prellbugel*, or rebound bow. This was a flexible willow hoop fitted in front of the pilot that would reduce the impact in case of a crash. The apparatus saved Lilienthal's life during one flight when the glider stalled and nose-dived toward the earth from more than 60 feet (18.3 meters) above ground.

Lilienthal continued testing and enhancing his standard glider. In 1895, he tested unsuccessfully a leading-edge flap device that was intended to counteract air pressure on the cambered upper surfaces of the wings as well as steering air-brakes and a form of wing-warping. At the time of his death, he was developing a body-harness elevator control to supplement his body movements. He became a skilled pilot and could ride the wind and handle his craft skilfully. During this time, he also was visited by several aerodynamic experts, including Samuel Langley, secretary of the Smithsonian Institution in Washington, D.C., and N.J. Shukowsky, an aerodynamics expert from Moscow.

However, Lilienthal's gliders had one major fault. They had no means of control other than the motions of the pilot who had to contort himself and exercise considerable strength to affect the direction and stability of the glider. To fly the glider, Lilienthal had to crawl under the craft, position his arms in a set of cuffs, grasp a bar near the front edge of the wings, and run down a slope. Once aloft, his legs dangled below him. His only way to balance the craft was to shift his weight. He moved the lower half of his body in the direction he wished to go, which changed the centre of gravity. By shifting his weight, he reacted to the movement of the glider rather than directing it.

On August 9, 1896, the glider he was piloting stalled and went into a nosedive. It had no prellbugel to protect him, and he died the next day

of a broken spine. His last words were, “Sacrifices must be made.”

Although his designs had flaws, Lilienthal had an immense influence on aviation. His writings were translated and distributed worldwide, and the photographs that documented his flights visually proved that a human could launch himself into the air and stay aloft. He demonstrated the importance of identifying the principles that governed an experiment before proceeding, and his meticulous documentation of his research provided guidance for those that came after him.

www.century-of-flight.net

Sometimes You Just Have to Laugh…

An atheist was walking through the woods. He said to himself:"What majestic trees! What powerful rivers! What beautiful animals!"

As he was walking alongside the river, he heard a rustling in the bushes behind him. He turned to look. He saw a 7-foot grizzly charge towards him. He ran as fast as he could up the path. He looked over his shoulder and saw that the bear was closing in on him. He looked over his shoulder again, and the bear was even closer. He tripped and fell on the ground. He rolled over to pick himself up but saw that the bear was right on top of him, reaching for him with his left paw and raising his right paw to strike him. At that instant the Atheist cried out, "Oh my God!!!"

Time stopped.

The bear froze.

The forest was silent.

As a bright light shone upon the man, a voice came out of the sky. "You deny my existence for all these years, teach others I don't exi st and even credit creation to cosmic accident. Do you expect me to help you out of this predicament? Am I to count you as a believer?"

The atheist looked directly into the light, "It would be hypocritical of me to suddenly ask You to treat me as a Christian now, but perhaps You could make the BEAR a Christian?"

"Very well," said the voice.

The light went out.

The sounds of the forest resumed.

And the bear dropped his right paw, brought both paws together, bowed his head and spoke:

"Lord bless this food, which I am about to receive from thy bounty through Christ our Lord, Amen."

You Might Be An R/C Modeler If…

By Bill Atkins, Byron, GA

- ...You have complained about your wife forgetting something at the grocery store and you having to go back for it, yet you will drive 60 miles for a $3 part to finish a plane for Sunday.

- ...It's September and you have already given your wife your Christmas wish list (with nothing but R/C stuff on it).

The Lighter Side of R/C