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A LIFETIME OF BALSA GLUE AND DREAMS

By Bob Shernick

When one gets to the age of being qualified as an old fogey, there comes a time when you start to reminisce about how you got started in this hobby and what it was that kept you so interested for all those many years.

As we look around us, we again keep wondering what we can do to interest young people in learning how to build and fly model airplanes. I have come to the conclusion that there must be certain spark that is ignited either by a person, an event, or a very motivated author. Kids of today have such an abundance of external enticements; they flit from one thing to another, and never really get the full-bodied flavor of any particular, so to speak. Sports are so diverse in the schools that they can consume a youngster, so there is no time left over for other things like model building or flying.

I was born at the start of the Great Depression, which heralded a time of great personal deprivation and struggle. We have all heard and some of us have lived during that time, and I feel confidant in saying that we would like to never go back. However, there was a greater simplicity to our lives then, and a whole lot more personal interaction. My dad was able to keep the family going with being a house painter, but keep in mind that he was coming down from being a nationally recognized fine arts muralist. He was lucky to make about nine to 12 dollars a week, and that was it.

A boy growing up during those days was just as curious and precocious as they are now or were before, but there was one great exception. If you wanted something to play with, or got tired of climbing trees, playing hide and seek, kick the can, etc., you had to figure out how to make it.

Thinking back on that kind of demand now, convinces me that it gave me the ability to create something from practically nothing. One soon learned that what appeared obvious from one point could be thought of from a different viewpoint and made into something else.

A case in point: there was an open air fruit and vegetable market about a mile away from where we lived on the west side of Denver. My folks, my brother, and I would walk up on a Saturday, and do some modest shopping there. As a boy of six or seven, I was not interested in the quality of peaches or apples, but did love to rummage around in the back of the tent area in their scrap pile. There they had such things as grape baskets with delightful thin wood, and wire bales.

Asking if I could have a couple of them, I would later take them apart very carefully, and then go through a process of soaking and flattening the wood, using bricks or boards with stones on top. Once I had the raw materials, I could then use one of my dad's castoff razor blades, and follow my hand-drawn lines for a profile fuselage, the wing, and the tailpieces. My first efforts were very crude, but I gradually learned how to think about design,

proportion, and even introduce some degree of realism with colored pencils or watercolors.

One day, in the middle of summer, my attention was drawn to the sky above Denver where I observed something happening that I never thought possible. An airplane was flying quite high, but it was creating a line with smoke. As I continued to watch, the pilot would turn on the smoke, and cut if off while forming the letters of the drink Coca-Cola. I went to bed that night dreaming that maybe one day I might have such a wonderful job like that pilot. I saw more airplanes gradually flying nearby as World War II began. As the country became deeply involved with the war, more of my attention started to focus on heroes in airplanes, and I set out on a plan that later became a formidable task. I had decided to model one each of all the fighter airplanes in the war.

You could buy model kits for as little as 15-25 cents that were made by Guillow and Cleveland model companies. For a 10-12-year-old boy, they might as well have cost $10, but I managed to scrimp and save, and do odd jobs to buy a few.

Many times the balsa was pretty inferior and had hard spots in it. Many of the cheaper kits were made from a very poor grade of basswood and had the lines printed on the wood. I would have given anything to have a X-Acto knife back then. I soon discovered there was a very fascinating world of reading in a magazine called Model *Airplane News* and I kept all my issues for reading; reading and rereading them over and over.

Through that magazine, I learned how to do tissue covering, build lighter, and how to construct models that actually flew. Those were exciting times and I can remember building one airplane that flew at the end of a fishing pole. I spun around in circles, making me so dizzy that I was sick for hours, but I would get up and do it again because that airplane could actually fly! I cracked it up many times, but thanks to a big tube of Ambroid cement, I stuck it back together. It was a continual habit, incidentally, to sit in class at school and peel Ambroid cement off my fingers.

I tried doing rubber-powered airplanes and had lots of fun with them, but the sheer joy of building a glider was the most fun and best learning experience. I probably would have gotten into CL flying earlier if I could have afforded a lot of equipment, but a good Ohlson & Rice engine during the late 1940s went for a hefty $19.95. I would have to save a long time to get half of that. Besides, I could now keep a glider flying that was my own scratch-built design by just buying some better quality balsa, and learning things like how to balance and build lighter.

RC was just beginning to be talked about in the magazines, but it was not until the late 1950s that I ever saw an airplane fly with that kind of equipment, and even then, the transmitters and receivers looked like jury rigged chunks of tubes and wires. By this time I had quit being a loner and met some other fellows who taught me how to do CL flying, but even then I still did not really feel comfortable with the tethered aircraft. Sailplanes had a certain majestic, pure flight, regal aura about them, and seeing a few full-scale sailplanes in flight one day made my heart pound and shivers run up my spine from their sheer beauty.

I had had a ride once in a Piper Cub that was fun, but there is just no comparison to a fully dressed sailplane.

Naturally, when the Korean War came along, and I was about to be drafted, I joined the Air Force, and spent quite a bit of time in airplanes, but never learned to be a pilot. I never sat in a sailplane nor was I ever affluent enough to charter a ride in one.

No, I look back on it now, and really love the memory of all those cold winter nights crouched over my building table down in the basement next to the warm furnace. Learning what chord, empennage, dihedral, ailerons, etc. were about, and then the sheer joy of watching that new bird stay up in the sky, if only for a little while.

I have come a long way from the time of the grape baskets, but I have a tremendously long way to go yet. It wasn't until I joined the Pine Peaks Soaring Society that I realized just how much more I needed to know. There were guys like Bob Avery, Barry

Welsh, Jack Dech, and Milt Woodham who were so very patient with me, trying to get my brain and transmitter to work together in this new challenge … an honest-to-goodness flying kind of sailplane that could become a speck up there if you just learned how to "see" thermals, or watch the hawks.

What a great club to belong to. It makes all those years of Ambroid cement on the fingers have some meaning about quality time. So, go buy some balsa guys, and get out to the club field as soon as you can.

Propeller Safety

From the Temple Aero Modeler's Newsletter, Temple, TX

Propeller Sense

Never use or try to repair a damaged propeller. You may get by with it a time or two, but is the cost of a propeller worth risking injury to yourself or a friend?

If the propeller is visibly damaged, then whatever force did that could also have caused other damage that remains invisible to the naked eye. So, please when you have a damaged propeller, either use it strictly for static display purposes only, or better yet, break it clean in half before discarding to keep anyone else from using it. Don't even think about using it as a back-up spare.

There are some solid black propellers on the market, which become invisible to the naked eye once they're spinning. This is a dangerous hazard which can be remedied by simply painting the propeller tips with a bright color. You can even use the paint to help balance the propeller. You do balance your propellers don't you?

Why bother balancing a propeller? It won't hurt the engine any.

This may be true, but the vibration and shaking caused by an out-of-balance propeller tends to loosen nuts, bolts, and screws, both on your engine and throughout the model. Here again, it's a simple matter of spending five to ten minutes to balance a propeller, or risk spending ten hours or more repairing or rebuilding your model. Just consider the few minutes that it takes as a sort of insurance.

When installing a propeller, always use a hard metal washer that's flat on the surface facing the propeller, in between the propeller and the propeller nut. This washer should be larger than the propeller nut too. The washer is there to give additional surface area to be tightened against. The smaller the washer area, the greater the chance of the propeller being crushed under the pressure of the tightened propeller nut.

When the propeller is crushed at the hub, it can be damaged to the point of being dangerous to use or it can become loose to such an extent that it becomes dangerous. This "crushing" action is also why it is important to recheck the tightness of the propeller nut every so often, especially with new wood propellers. In most cases, the propeller washer supplied with the engine is adequate, so don't use anything smaller. But again, never tighten the propeller nut directly against the propeller itself. You need more surface area to secure the propeller safely, plus there's a good chance that the action of twisting the nut tightly into place will tear into the propeller hub.

Propeller Markings

Nearly all propellers have some sort of identification marked on them, be it brand name, propeller size, something else, or all of the above. In addition to noting the size of the propeller, the marking also denotes the front of the propeller, and the front of the propeller always faces toward the front of the airplane. Don't make the mistake of installing a propeller backwards. You'll probably get lots of RPM from the engine, but very little thrust from the propeller.

Propeller sizes are almost always marked with at least two numbers such as 10x6. Sometimes there will be three numbers, such as 10x6-12. The first number represents the length of the propeller, or the diameter of the "disk" formed by the spinning propeller. Propellers are usually pretty accurately marked when it comes to their length/diameter.

The second number represents the pitch of the propeller, which is theoretically the distance the propeller moves forward in one complete revolution, disregarding slippage. One might think at first that the angle of the blade would be constant from hub to tip for a constant pitch propeller (one having the same pitch all along its length), but it isn't so. Remember, the farther out from the hub a given point on the propeller is, the father it travels to complete one revolution. So, the farther out from the hub a given point is on a constant pitch propeller, the smaller its angle will be.

When a propeller has a third number, such as the example of 14x6-12, it means that the pitch progresses from 6 inches near the hub, to 12 inches near the tip. This is called a progressive pitch propeller, and in this case, the angle of the blade might actually be constant from hub to tip, since the progressive pitch has more pitch near the tip than at the hub. Progressive pitch propellers, however, are commonly seen only in sizes appropriated for 1.20 size engines and larger. And, as far as I know, the verdict isn't in yet on whether they have any advantages over constant pitch propellers.

Some manufacturers of propellers are very precise. There are propellers marked with their pitch out to the second decimal point, as in 8x3.8. Don't mistake this "second number" as described above. In this example, the second number is a fraction of the first, and has in fact a pitch of 3.8.

Regretfully, the number shown on the propeller representing the pitch is not universally accurate. Some manufacturers are very good in this aspect, while others are downright terrible. In a series of tests conducted by R/C Report, it was found that in most cases, propellers have less true pitch then indicated by their markings.

Not all propellers are created equal. Much of the variations in the way they perform have to do with their shape, airfoils, and the material it's made from. If you're tweaking every last bit of power out of your engine, it's worth experimenting and finding the propeller that works best for your engine/airplane application.

Play it safe, and keep your propellers clean, tight, and balanced.

Celebrating Flight

Laser 200

You can no more talk about Laser 200's without mentioning Leo Loudenslager than you can talk about Pitts Specials and not talk about Curtis Pitts. These landmark airplanes are the direct result of the landmark people behind them.

Leo is the primary reason for the demise of the Pitts Special as the competition aerobatic airplane. Although the Pitts armada pretty well cleaned the collective clocks of the Europeans and their Czech Zlins in the very early '70's, the writing was on the wall: the day of the biplane was near an end and Leo's monoplanes drove the final nails in the biplane's competitive coffin.

By the time I flew Leo's airplane in 1973, I had been a Pitts pilot for years and had a fair amount of Zlin time, and, as I climbed out of it, I knew I had seen the future. That particular airplane was his Stephens Akro, the pre-Laser bird from which the Laser evolved.

It was almost axiomatic that Leo's airplane would be in a million pieces up to a week before the national contests were to start. That's because he was always changing, redesigning and rebuilding the airplane. By the time he was done, only about ten percent of the original design still existed: the tubing from the wing back to the tail.

Gradually, as the canopy lines came down and the turtledeck flowed smoothly into the flight deck, the Laser we all recognize appeared. Inside, however, were a million little secrets known only to Leo. He was, for instance, the penultimate weight freak. He went to such extremes as painstakingly spot drilling the inside surface of his canopy frame, removing aluminum half way through the thickness. He

shaved 12 pounds off the motor just by grinding away unnecessary bosses and casting flash. We used to accuse him of having had a butt-ectomy to save weight, because it didn't look as if there was anything back there holding his jeans up.

And he knew exactly how to make the airplane behave the way he wanted. A careful examination of the wings would show how at times he used model airplane trim tape down the leading edges to trip the airflow more predictably during snap rolls. Later that mutated into lapping the edges of the paint trim in such a way they too were to control airflow separation.

Leo, who died in a tragic motorcycle accident a few years ago, was one of the most driven, most intensely focused people I have ever known. He was my first glimpse into the mind of a true champion and he went on to win seven consecutive national championships and a world championship. He and his airplanes were unbeatable because he didn't simply strive for perfection, he exceeded it by a wide margin. He rewrote the book on aerobatics and set new standards that even today are met by only a few pilots.

The Smithsonian National Air and Space Museum credits the Laser 200 for heavily influenced a new generation of aerobatic aircraft - the monoplane, including the Extra, which dominated competition throughout the 1990s. Monoplanes have less drag, full-length ailerons for crisp maneuvers, and, for the judges, better presentation in the sky than biplanes. The monoplane design offers a stronger frame so that more powerful engines can be attached to provide power for high power but precise maneuvers.

The Laser Z-200 is constructed from traditional steel tube 4130N and wood and fabric. The aircraft can be built entirely from scratch from plans (purchase "waiver form" required) or the builder can purchase pre fabricated components from York Enterprises.

There is no complex building situations yet some knowledge of aircraft construction and practices is highly recommended. The Experimental Aircraft Association is a great source for books / videos / manuals on aircraft construction and practices.

The Laser Z-200 fuselage structure is also available in "CNC" profile machined tubes by VR3 Technologies located in Stratford Ont. Canada as well. The quality of their work is exceptional and to the highest degree. This enables the builder of a Laser Z to reduce the time of construction significantly and ensures the greatest in accuracy and precision during the contruction of the fuselage to within +/- .005".

Length	19' 2"
Wing Span	24' 4"
Wing Area	98.0 sq ft.
Wing Loading	14.29 lbs/ sq ft.
Aspect Ratio	6:1
Gross Weight	1300 lbs
Aerobatic Weight	1225 lbs
Empty Weight	950 lbs
Fuel Capacity	20 US gallons
Engine	Lycoming 150-230hp.
Max Speed	168 mph
VNE	210 mph
Stall Speed	64 mph
Rate of Climb	2,500 fpm
Range	355 sm, 308 nm
Takeoff Roll	1,000 ft
Landing Roll	1,500 ft
Stressed	+/- 9.5 g's

Novice Nuances

Multiblade Propellers

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.

Why Didn't I Think of That?

Transferring Parts from Drawings

By Ken Sulkowski

Always wanting to transfer layouts from drawings to wood I found the best way was by using Reynolds Freezer paper, the plastic coated kind. The part can be easily copied through the semi-transparent paper. With care this paper can even be run through an ink jet printer. Place the paper plastic side down on the wood and iron it down with a covering iron set at high. The paper will stick to the wood until you are finished cutting and sanding the part. When through the paper will peel off easily.

Securing Hinges

By Don Lewis

One easy way I have found of ensuring confidence in the holding ability of the hinges used in aileron, elevator, rudder and other control surfaces from the flight loads they are exposed to is as follows. I use simple round pointed, wooden toothpicks inserted through the surface, piercing the hinge material in at least two locations on each side of the hinge. If necessary, an appropriately sized pilot hole can be drilled first to accommodate the outside diameter of the toothpick. Once secured with a drop of thin CA glue which quickly wicks into place, the protruding excess is easily sanded flush with the surface material.

For hinging ARFs, the same thing can be done with a T-pin. Simply push the T-pin through surface from the bottom to within a 1/16" of the top surface. Cut the pin as closely as possible to the bottom surface with a pair of nippers. Then use an Allen wrench or the tip of a pair of needle-nose pliers to push the remaining amount of the pin to the surface or just below. This is almost invisible.

Product Review:

WiSpy 2.4i Spectrum Analyzer for 2.4 GHz

From RCModelReviews.com

With most RC manufactures discontinuing their narrowband FM/PCM products in favor of 2.4GHz spread-spectrum versions, chances are that if you're not already flying on 2.4, you soon will be.

One of the key aspects of this new RC gear is that it has to contend with a wide range of signals generated not only by other RC systems but also from devices such as WiFi nodes, cordless phones, microwave ovens wireless keyboards etc.

There are some times (such as before test-flying a very expensive or potentially dangerous model) you might just want to have a "sniff" and see what else is cluttering the 2.4GHz band with noise.

Or maybe you're just curious about how your own system is making use of the band. Either way, you'll need a device called a spectrum analyzer (SA).

Until recently, SAs cost the earth and were quite large bits of gear but with the advance of

technology, you can now get one that's as small as your thumb and can plug into your laptop at the field or your desktop PC at home.

What's more, a unit like the one reviewed here, the WiSpy 2.4i can be purchased for under $100.

While $99 may sound very cheap for a specrum analyzer, you might find yourself wondering if the WiSpy device is made of solid gold. That's because it's very small -- about the size of a USB drive and weighing in at just 0.3 ounces (8 grams).

Don't be deceived however, the folks at MetaGeek have packed an awful lot of functionality into this little device and on a bang-per-buck basis it's hard to beat.

Shipping and customer service

The review unit was purchased from MetaGeek themselves and they shipped it the very next day by FedEx. The product is great but FedEx sucks, their local contractor couldn't be bothered delivering it to my door so I had to travel to their depot to uplift it.

I'll give MetaGeek **full marks** for customer service though -- when they heard of FedEx's lousy performance, they immediately offered to refund the freight cost. I declined their kind offer because it wasn't their fault that FedEx dropped the ball but that's an excellent commmitment to customer satisfaction on their part and I'd certainly have no hesitation in recommending them as a supplier.

The device itself comes in a small cardboard box that does an excellent job of protecting it from the best efforts of freight carriers to crush things into oblivion.

Installation

Inside the box you'll find nothing more than the WiSpy USB device and a small card with instructions as to where the software can be downloaded.

There are Windows XP/Vista and Apple versions of the software.

I installed the software on a Windows PC which was pretty painless except for the fact that the Net2.0 framework and DirectX 9 drivers were also downloaded -- a process that took several minutes, even with my fast broadband connection.

Unfortunately the instal wizard doesn't create a desktop shortcut so that's something you'll have to do yourself.

Firing it up

Once the software is installed, firing up the analyzer is a simple matter of plugging the WiSpy hardware into a spare USB port and starting the Chanalyzer Lite program.

Within a few seconds you get the default views, consisting of three windows that show exactly what's happening on the 2.4GHz band.

It's obvious that this product is primarily targeted at those wanting to set up and trouble-shoot WiFi networks because the frequency line defaults initially to WiFi channel numbers rather than actual frequencies -- but this can be changed with the click of your mouse.

The WiSpy device itself uses an internal antenna which means it is not as sensitive as an analyzer that uses an external dipole or other antenna. However, this is great for those wanting to just see what's going on around them and how their transmitter is using the band. Excess sensitivity could effectively swamp an analyzer like this and make it hard to interpret the readings.

I found that with a typical 2.4GHz RC transmitter placed between two and three feet from the WiSpy,

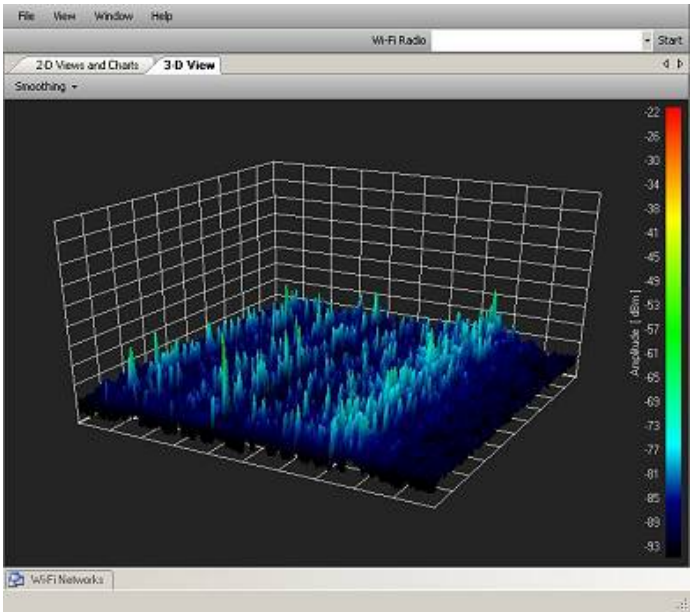
I was getting readings that peaked at around -30dbm to -20dbm which is great.

Switching to the 3D view gives an impressive representation of just how "spread" a system's signal really is, both by frequency and time (although there's no extra information involved -- it's just presented differently).

The WiSpy 2.4i is the baby of MetaGeek's USB-based spectrum analyzer product range and as such, it doesn't have all the features of their more expensive products -- but most of the time, the average RC flier won't need much more than a snapshot of the band they're planning to fly in. This makes the WiSpy 2.4i a very good deal.

Although I have built my own spectrum analyzer (and sold a few to other modellers) those units are designed specifically to be carried aloft in a model so as to get a bird's eye view fo the band and have just a small monochrome LCD display. The WiSpy device is more flexible and the user-interface makes great use of color so I intend to use it to document all future 2.4GHz system reviews here at RCModelReviews.

The great software and the ease with which I can grab a screen shot for inclusion on the site make it a wonderful tool. The LCD display on my own units pales into insignificance when compared to the results you can get from the WiSpy product and Chanalyzer-lite software on used a laptop or desktop PC screen.



It's hard to find fault with this product. It's affordable, comes with nice software and does exactly what MetaGeek claim it does.

MetaGeek also seem to provide top-notch support by way of their online forum and there's even some third-party software available for platforms such as Linux. This would seem to open many doors...

For instance, how about a WiSpy-based noise alarm at your club. This could be a PC or laptop that uses the WiSpy system to "keep an eye" on the 2.4GHz band and sound an alarm if the noise level rises above some predefined level.

Summary

In summary, I love this product and am uber-impressed with MetaGeek's service.

At under $100 this is just a really cool device that I'm sure many will want to buy, either out of curiosity or as a very real tool that could help identify and track down potentially dangerous interference. At the very least it may be one thing that can provide extra peace of mind if there have been unexplained crashes at your flying site.

And, as another bonus it could even be useful in sorting out your home WiFi network if you live in a neigborhood where the 2.4GHz band is cluttered.

Pro's:

- affordable
- simple and easy to use
- does what is claimed for it
- top quality support

Con's:

- Limited shipping options from MetaGeek
- Needs a PC/laptop to be used
- Requires Microsoft Net framework and DirectX 9

Steven Wright Statements

If you're not familiar with the work of Steven Wright, he's the famous erudite scientist who once said: "I woke up one morning, and all of my stuff had been stolen and replaced by exact duplicates." His mind sees things differently than most of us do, to our amazement and amusement. Here are some of his gems:

- I almost had a psychic girlfriend, but she left me before we met.
- OK, so what's the speed of dark?
- How do you tell when you're out of invisible ink?
- If everything seems to be going well, you have obviously overlooked something.
- Depression is merely anger without enthusiasm.

History of Flight

Louis Blériot

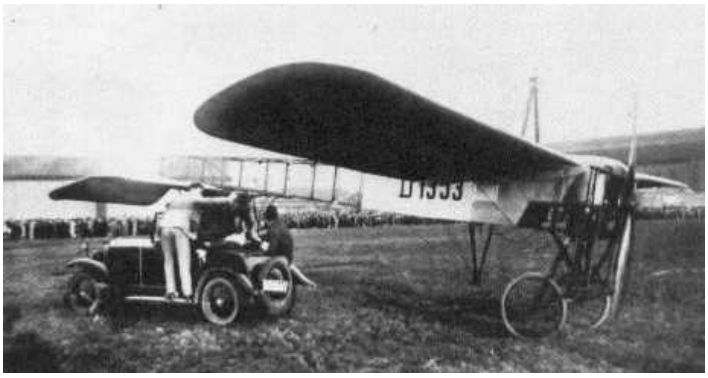
From Century-of-Flight.net

By now, flight attracted all sorts of people, including possibly more than its share of eccentrics and droll characters. Arguably, the best example of this is Louis Blériot, who went from a national joke to a national hero in the space of the thirty-seven minutes it took him to fly across the English Channel. Blériot had made a fortune manufacturing gadgetry for the booming automobile market. He had an engineering degree, but his reputation was that he was clumsy and erratic, a charming walrus-moustached bear of a man, quick to anger, and just as quick to be gripped by some half-baked notion and run off with a gleam in his eye and a mutter on his lips.

Of all the avocations Blériot might have considered, aviation should have been last: he was a dreadful pilot. He did not seem to grasp aeronautics at even the most basic level, and he had an uncanny knack of being present when machines went wrong in extraordinary ways (Americans would call Blériot a "jinx"). None of the mishaps he endured or caused, and none of the designs he kept ordering and crashing, deterred him from his goal of one day being hailed as a great aviator. They also failed to teach him much about aeronautics or aviation. Many of Blériot's aircraft were built by the Voisins, who knew better and tried to dissuade him from some of his notions.

Most of the time they were not successful, and some of the designs are among the most misguided in the early history of flight. On one occasion, Blériot and Gabriel Voisin took one of their designs to the Bagatelle, a field in the Bois de Boulogne park in the middle of Paris. The aircraft had a tubular tail and looked like a beer barrel with wings. The aircraft was never tested since it fell apart while it was taxiing to the starting line. this was probably fortunate since it spared Blériot the pain of a crash. But on the same field that afternoon, November 12, 1906, the spectators who had gathered to watch Blériot still managed to witness history in the making, as Alberto Santos-Dumont flew his 14-bis on its historic first flight in Europe, to the cheers

and huzzahs of nearly everyone in the crowd. (Of all the luck!) With nearly all his fortune squandered.



Blériot's aircraft being attended to by his frantic skeleton crew.

Blériot used a last-minute loan to enter the competition for Lord Northcliffe's Daily Mail prize to the first to cross the Channel. It was, he realized, his last chance. Blériot faced stiff competition—men and planes that brought a great deal to the race. One pilot was the popular young aviator Hubert Latham, a sophisticated Frenchman of English ancestry, suave, debonair, and already a record holder for endurance flying.

His airplane was an Antoinette IV, an elegant tractor monoplane (in fact, with both engine and propeller in front) with an effective wing-warping system of control (though Latham was more comfortable with the ailerons with which the Antoinette was usually fitted), and with the Antoinette engine as the power plant. The plane and the engine were the work of a burly red-bearded engineer, Leon Levavasseur. The engine was a water-cooled V-8, meticulously crafted and able to produce 50 horsepower with a power-to-weight ratio of 1 to 4. It was already being widely used by European aviators. It had one fault, however: it had a tendency to cut out.

The other competitor was Count Charles de Lambert the first European trained to fly by the Wrights, who brought two Wright-built airplanes to Sangette, down the coast from Calais and the starting point for the competition. The Wright planes were considered in a class by themselves, the best in the world, but during a test run, de Lambert crashed one of the planes and decided to drop out of the race rather than risk the other plane.

Everything about Latham's effort was first class—the ground crew, the hangars, the landing site—in marked contrast to Blériot. Blériot's plane, the Blériot XI, was smaller and less powerful than the Latham craft, used an untested wing-warping system for control, and was barely fully constructed, with no instruments of any kind. To make matters worse, Blériot had been badly burned in a recent racing accident and could barely walk, let alone fly a plane as rickety as the Blériot XI. Worst of all, the engine was a homemade product of a coarse Italian motorcyclist named Alessandro Anzani. It was crude and sputtered hot oil and smoke on the pilot (something the injured Blériot did not need), but it nearly never faltered.

Blériot calculated that its meagre 25 horsepower would be enough if the engine would run for the half-hour he needed. On July 19, Latham took off from Sangette and headed toward Dover. Seven and a half miles out, the engine failed and Latham landed on the sea, smoking a cigarette while he waited to be rescued. On land he shrugged off the failure and declared that he would try again and that he would succeed. The Latham camp did not give Blériot much of a chance, and with de Lambert out of the race, believed they had the field to themselves. The Channel weather remained blustery for the next five days, but on the evening of July 24, the evening was calm and the next day promised to be clear.

Latham went to bed and left instructions that if the weather was good, he was to be awakened at 3:30 A.M. (The flight had to take place in daylight; the Daily Mail was not interested in a night flight, when no photographs could be taken.) But 3:30 came and went, and no one woke Latham up. As the dawn neared, it became obvious that the weather was going to be clear. A car was sent to Calais for Blériot; he had to be coaxed into going (as he was probably fighting off an infection from the burn injury). He finally roused himself, went to the hangar and, after seeing his wife onto a destroyer escort, donned his ridiculous aviator cap and boarded his plane.

Journalists were so certain that Latham would be first to cross the English Channel that illustrations showed the Antoinette making the crossing trailed by a French ship (later described as a Blériot)

The flag signalling sunrise went up at 4:41 A.M. on the morning of July 25, 1909. Blériot took off and headed into the dark western sky. In mid-flight, with not so much as a compass to guide him, Blériot flew on. Believing that he had been blown north, when he spotted some boats heading south, he guessed they were headed for Dover, so he followed them. He soon came upon the cliffs and searched for the pass through them to the field where Charles Fontaine, a newsman, was waiting for him. For once, luck was with Blériot—he found Fontaine waving a French flag in Northfall Meadow near Dover Castle, just as the newsman had said he would do.

Blériot often crashed on landing and this time was not an exception!

Blériot cut the engine and thumped into the field, crushing the landing gear and the propeller. It was only a thirty-seven-minute flight, and in many ways Wilbur Wright had been correct: it did not prove much. But Blériot had done it; he had beaten Latham and had been the first to cross the English Channel.

another shot of the bent 'plane

The effect Blériot's achievement had on his own fortunes were immense. Orders for his Blériot airplane came pouring in and he was honoured everywhere with parades, banquets, and medals. The effect of the flight on the British was considerable as well. It drove home the point that Britain was vulnerable to attack from the air and that the English Channel would not provide the buffer it had in the past.

Blériot's crossing of the English Channel in 1909 gave a boost to French aviation. In reality, Blériot did not fly over the Cliffs of Dover, but through a gap in the cliff wall.

Baron de Forest promptly offered a four- thousand-pound prize to the flier who crossed the Channel in the other direction, hoping to remind the Europeans that invasion was possible from either side. Hubert Latham attempted a crossing the next day anyway, but failed again when the engine cut out within sight of Dover. The Antoinette Company eventually failed and Latham retired from aviation, only to be trampled to death in 1912 while on safari in Africa. The only thing not affected by Blériot's feat was Blériot's flying. After he lost by a hair to Glenn Curtiss at Reims, he crashed his plane during a flight in Turkey later that year, sustaining a serious injury that took him out of flying. He died of a heart attack in 1936, after predictably squandering his second fortune.

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Sometimes You Just Have to Laugh…

Cletus is passing by Billy Bob's hay barn one day when, through a gap in the door, he sees Billy Bob doing a slow and sensual striptease in front of an old green John Deere.

Buttocks clenched, he performs a slow pirouette, and gently slides off first the right strap of his overalls, followed by the left. He then hunches his shoulders forward and in a classic striptease move, lets his overalls fall down to his hips, revealing a torn and frayed plaid shirt. Then, grabbing both sides of his shirt, he rips it apart to reveal his stained T-shirt underneath. With a final flourish, he tears the T-shirt from his body, and hurls his baseball cap onto a pile of hay.

Having seen enough, Cletus rushes in and says, "What the heck're ya doing, Billy Bob?"

"Good Lord, Cletus, ya scared the bejeezers out of me," says an obviously embarrassed Billy Bob.

"But me 'n the Ol' Lady been havin trouble lately in the bedroom d'partment, and the therapist suggested I do something sexy to a tractor."

You Might Be An R/C Modeler If…

By Bill Atkins, Byron, GA.

- ....You use a chain saw to improve your landing approach.
- ...Your wife uses your spare props to stir her paint can.

The Lighter Side of R/C