

Propwash

The Newsletter of the Mercer County Radio Control Society
September 2006

Those Magnificent Men and Their Flying Machines

Imagine. It's Sunday morning in late summer. The sun is well above the horizon as you lay out the picnic blanket and place the basket on one corner to keep the gentle breeze from lifting it. In the distance sprawls a clear blue sky. Closer, your companion, a budding French beauty, eases herself onto the ground, her gentle curves smoothing out the wrinkles in the blanket. As you move to join her you hear something and look up to see a Curtiss JN-4 "Jenny" observation plane on its morning patrol of the lines.



Behind German lines, two Fokkers, a D.VII and a Dr.1, prepare to do mischief.

Then, without warning, the Jenny is challenged. First by a pure white Fokker Dr.1 tri-plane, which is followed almost immediately by a crimson red D.VII. The Fokkers streak across the sky, playing with the Jenny in the way a cat plays with a mouse. The situation looks bleak for the unarmed Jenny, alone in the sky with two of the most fearsome fighters of the war in hot pursuit.

But then, in the blink of an eye, an Allied Sopwith Pup and a Nieuport 17 join the fray, one taking on the tri-plane and the other chasing the D.VII. The D.VII

dives, the Pup follows. The tri-plane pulls an Immelman turn. The Nieuport follows suit. Time seems to stop as the air fills with aircraft, smoke, and bullets. Then, suddenly it ends; the Fokkers cut to the right and the Allies go left, the Jenny long having departed the fray.



The tri-plane pulls an Immelman.



The Nieuport follows suit.

And you return to your wine and French — Oops, make that coffee and French bread. (Wine isn't allowed at Warren Kruse Field.) And that budding French beauty? And the bullets? Well, maybe imagination got the better of you for a moment. But it surely seemed real as

five detailed WWI scale models took to the air on that morning of Sunday, August 13th.



The Jenny, long having departed the fray.

This time the Jenny belonged to Greg Lucidi. Keith Zimmerly was flying his Nieuport. The Pup was flown by Augie Lucidi. Bob Levanduski flew the Dr.1 and Frank Figurelli flew the D.VII. Like many real air battles, the occasion wasn't planned. But the confluence of planes and pilots on that balmy Sunday morning created an atmosphere markedly reminiscent of times past. The difference is that, this time, you were there.



The men and their machines: Augie Lucidi, Keith Zimmerly, Bob Levanduski, Greg Lucidi, and Frank Figurelli. (Photos by Richard Lee)

September: The Month for Warbirds and Electrics

September is event month for the MCRCS. It begins with our annual Warbirds Over Jersey show the weekend of the 16th and 17th and finishes with our annual Electric Fly on Saturday the 23rd. The Warbirds show is a regional event that is widely publicized and, we hope, will be heavily attended. Scale military aircraft of all sizes are welcomed at this event, which provides

us with a rich opportunity to display our building skills and marvel at those of others.

Setup day for the Warbirds show is the 15th and all event teams will be needed to handle the crowd of pilots and spectators over the weekend. The Electric Fly, the following Saturday, is a lower-key event. Food will be served all three days, however, prepared by our semi-professional chefs and staff. (Applications are now being taken for trainee positions in the kitchen, which is a great way for new members to immerse themselves in club activities. Call David Vale at 609-430-9633 to apply.)

Bombs Over Jersey

Sunday, October 8th has been designated Cub and Bomb Drop day for the MCRCS. (October 15th is the rain date.) Regarding the Cub part, just bring your Cubs (airplanes are the intent here, although kids are welcome too). For the bomb drop, pick your favorite (or depending on your flying skill, your least favorite) airplane and re-fit it as a bomber. Events will begin at 10:00 AM and continue until everyone is done.

Be aware that some members are taking this event very seriously. Rumors have floated around the field that one member is planning to drop eggs, so bring an umbrella. Others are hard at work developing accurate releases and other forms of bounce-less bombs. Clearly those dropping baggies filled with flour from a cup taped to the top of the wing will be at a disadvantage.

The official rules have been developed by Carl Gubkin and are spelled out below. Note that, for those members less bent on destruction, a parachute-drop contest will be held on the same day. Prizes will be awarded for accuracy and other notable achievements. If you have questions or suggestions for the event, Carl Gubkin is ready to assist you at (609) 716-1799.

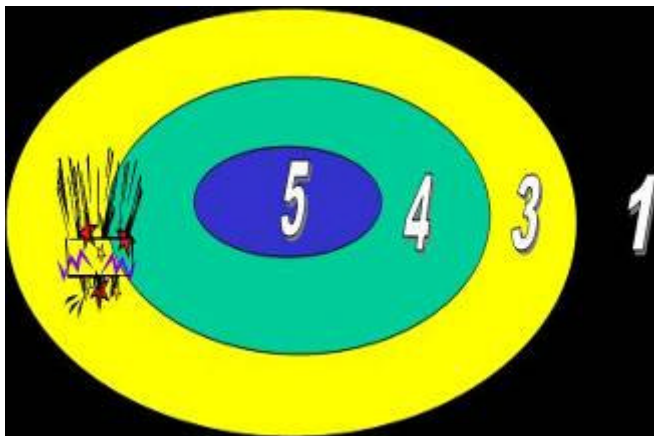
Bomb Drop Rules:

- You get to make up to three bomb runs (drops).
- One bomb drop per flight or between landings.
- You are awarded points for most accurate drop to center marker.
- Distance is measured from where bomb comes to rest.
- Best two scores out of three count. Highest total wins.
- Any type of bomb is okay - Use your creativity as long as it's safe!

- Points awarded for successful drops as per the below diagram.
- No Helicopters or Kamikaze type flights!

Parachute Drop Rules:

- You get to make up to three parachute drops.
- One parachute drop per flight or between landings.
- You are awarded points for most accurate drop to center marker.
- Distance is measured from where parachute first touches the ground.
- Best two scores out of three count. Highest total wins.
- Any type of parachute is okay - Use your creativity as long as it's safe!
- Parachute must fully deploy before hitting ground!
- Points awarded for successful drops as per the below diagram.



The point system: Five points for a bulls-eye, one point for missing completely (but you must have successful deployment).

Building a Bomber

By David Vale

The only bomb I ever dropped was a bag of flour, which I released from a cup taped to the wing of my Impulse. But that was another time, another place, and another club where modelers get a lot less serious about events. Being keenly aware of the competition I was likely to face at the MCRCS bomb drop contest, I realized that if I hoped to earn the nickname of Dead-eye Dave, I'd need somewhat more sophisticated hardware. Being that it is also Cub day and with my Cub in the

car, I have no room for much more than my field box and myself, I figured that the best option was to re-fit my Cub as a bomber.

Now I should mention that my Cub is electric and its bomb bay is pretty much filled with batteries. But then a real Cub would probably carry a bomb on the outside. So I ordered a plastic bomb with release (part number HLH207, \$4.90 from Hobby Lobby) and went to work.



Parts of the bomb release. The clever bracket on the right was omitted to provide ground clearance.

I wanted to attach the bomb with minimal modification to the model itself. While the bomb release could be attached directly to the bottom of the fuselage, with only a small hole necessary, I didn't have room inside for the necessary mechanism to make it work. (Yes, I could have made room when I first built the Cub, but I wasn't thinking about dropping bombs at the time.) So I built an exterior release, intending to actuate it electrically. The parts picture shows a neat bracket that I planned to connect using the strut bolts. Unfortunately, I forgot about ground clearance and, with the bomb attached, the Cub would have been more a plow than a bomber.



The inner workings of the mechanism.



The system installed. Originally planned to fit between the struts, it was moved forward a few inches.

The mechanism, at least in concept, works fine. It is spring loaded so the bomb can be inserted when the release is closed. This means that you don't need your transmitter turned on to load the bomb. I have noticed, however, that the spring mechanism puts a load on the servo in the released position, so it will be a good idea to close it after the bomb is released. I have also found that the bomb tends to hang by the front bracket after release, rather than dropping cleanly away. I suspect that this problem will disappear with the slipstream acting on it. The final installation was also a few inches forward of the CG, but it didn't appear to put the balance of the Cub outside allowable limits.

The bomb is built to split apart on impact and can be filled with flour or chalk powder. However, since the rules state the measurement will be from where the bomb comes to rest (which half, I wonder?), I'm planning to fill it with something to make it stick where it hits. What, you ask? Well, that's going to have to remain a secret for a few more weeks.

On the Bench

With the proliferation of ARFs on the market, one can form the opinion that no one builds anymore. However, that's simply not the case in our club. There are always several airplanes under construction at any given time, although sometimes these take months (or years) to make it to the field. This column describes some models that are currently "on the bench."

Everyone who flies at Warren Kruse Field is familiar with Keith Zimmerly and his large-scale creations, including his B-17 and his Jenny. Thus, it should surprise no one to learn that he is currently working on another one, this time a scale model of the Lockheed Constellation. The model, currently being sheeted, was built from Don Smith plans and cut by Precision Cut

Kits. When complete, it will have a wingspan of 134 inches, weigh between 42 and 47 pounds, and be powered by four YS-63 four-stroke engines. Keith plans to fiberglass it and finish it in civilian markings.



Like many of his models, Keith Zimmerly's Constellation dwarfs his workbench.



Another view of Keith's partially sheeted fuselage.

Dave Vale is at work building a Starfire electric ducted fan (EDF) model. Designed by Tom Cook for a glow-powered ducted fan, the model is being constructed from a kit sold by Yellow Aircraft. It has a wingspan of 50 inches, is 62 inches long, and will weigh approximately 13 pounds. Dave's model will be propelled by a Schubeler DS94 five-inch ducted fan powered by a Lehner 2250-13 electric motor. Juiced by a 10S LiPo pack, this combination should generate 8-10 pounds of thrust from about 3,000 Watts of power and be capable of pushing the airframe to near 200 MPH. Working his way up to that speed, Dave is about halfway there with the MicroJet he currently flies at the field.

Seth Hunter is at work on a WWI Pfalz D.IIIa. Seth's efforts, over 700 hours to date researching and building the model, exemplify scale modeling at its best. See

the article by Seth in this issue describing his efforts in more detail.



Dave Vale's EDF Starfire, shown here fresh from the box, should satisfy anyone's need for speed.

Recreating the Pfalz D.IIIa

By Seth Hunter

The Pfalz D.IIIa was the most successful fighter built by the Pfalz Flugzeugwerke in Speyer on the Rhine. Named after the region of Bavaria and founded by the three Eversbusch brothers, the factory started producing Morane-Solnier like monoplanes and some unsuccessful biplanes. They were then directed to produce Roland D.I, D.II and D.III airplanes under license. With the techniques they learned building the Rolands, especially the molded plywood fuselage "wickelrumpf" construction method, Pfalz introduced the D.III and D.IIIa in 1917. The airplanes were much stronger than the highly successful Albatros series and were well received by pilots because they were not subject to lower wing flutter that plagued the Albatros.



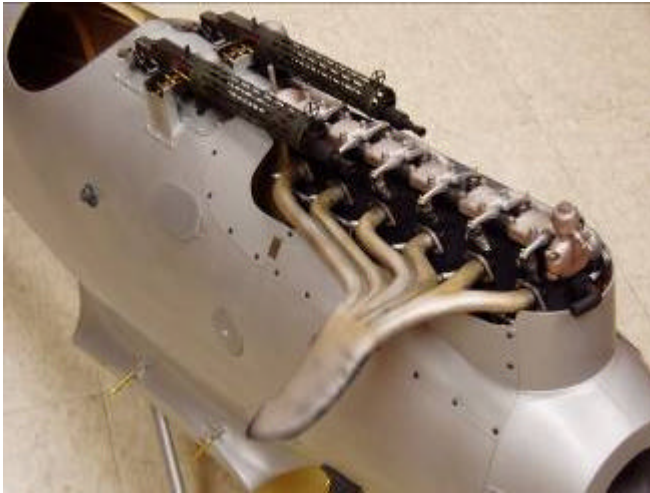
The fuselage of the Pfalz D.IIIa under construction.

But while the craftsmanship was generally superior to Fokker, the designs were not. Nonetheless, by 1918, Pfalz D.IIIa types accounted for 25% of the German air power at over 400 machines in service. The Pfalz D.IIIa used the common Mercedes 180 HP water-cooled engine that brought the machine to 10,000 feet in 17 minutes where it would cruise at 102 mph, armed with two Spandau light machine guns. Despite its lackluster combat record, the Pfalz D.IIIa stands out as one of, if not THE most streamlined and technically advanced fighters of WWI.



The front of the aircraft, showing scale engine, guns, and wing mounts.

I picked the Pfalz because it is rarely modeled, and began designed the quarter-scale model using numerous sources of information, including factory illustrations provided by WWI Aero Inc, the definitive book *Pfalz Aircraft of WWI* by Jack Hennis, Windsock Datafile 21, correspondence with Robert Mikesh (Restoration Curator, Smithsonian Air and Space Museum) and his wonderful book about the museum's Albatros D.Va. Noted modelers Dan Schmidt and (Top-Gun) Tom Polapink provided lots of suggestions and encouragement via the Internet. Both have built a Pfalz D.IIIa. My model duplicates the strip-molded plywood fuselage technique using 1/64 plywood. The wingspan is 92-5/8". The final engine selection will depend on final weight, which I expect to be 20-25 lbs. A four stroke gasser in the 35-45cc range seems likely. The plane will be finished in the markings of Lt. Fritz Hohn, Jasta 21 traditional Pfalz silver, with Hohn's unique red spiral bands. A Proctor Mercedes engine kit along with an Arizona Modelers gun kit dress up the front end. The rest of the model, including the Teves-Braun radiator and numerous other details, such as hinged doors on the fuel- and ammo-bays and pilot steps, are scratch built.



A closer view of the Guns and the Mercedes engine.

As of August, the fuselage, tail, undercarriage, wing center-sections, cabanes, and many scale details are done. All of the struts on the model use hand-made ball-and-socket joints. Rigging cables are spliced. I have about 700 to 800 hours vested in the model, including research on the plane and various experiments to develop the fuselage construction method (okay, I'm also a slow builder). Sal Calvagna was kind enough to publish some detailed pictures of my landing gear in September's "Model Aviation" and Tom Polapink made brief mention of the project in his "Models Column" in the May 2006 issue of "WWI Aero." I plan to build the wings and wheels this fall and hope to have the plane flying before the builder's contest next Spring.

A Discussion On Regulations and NAS

By Jay Mealy, AMA Programs Director

Winds of change are blowing in the direction of aviation and will rustle the leaves of the "aero tree" as we have come to know it. There may appear a modified flying environment once the dust settles and we should prepare ourselves now for such changes.

The possible changes are indefinable at the moment and there is no telling whether they will be major or minor, immediate or gradual, restrictive or negligible. None of these questions can be answered now except when asked, "...will there be changes?" The answer to that question is yes.

"Why?"

Because of the proliferation of Unmanned Aerial Vehicle (UAV) development, the federal government is being barraged with requests for space in the National

Airspace System (NAS) in which UAV flights can take place, a daunting challenge, to say the least, but inevitable.

UAVs have been flying military missions successfully for years so it was a matter of time before that technology would end up in the civilian world, assigned tasks such as traffic surveillance, air-quality monitoring, communication, border patrol, or photography—the list goes on forever. The problem is that the NAS and Federal Aviation Regulations (FARs) were never structured for utilization by vehicles without human operators on board.

That may not sound like a big deal but take this into consideration: the air is full of all types of manned vehicles that fit into the system by following rules from simple to complex, depending on the purpose and nature of their flight.

Adherence to these rules and procedures is totally the responsibility of the pilot-in-command (PIC) who, in the current way of thinking, is occupying the best seat from which to conduct flight safely in the vehicle. Pilots of aircraft operating under visual flight rules (VFR) are operating among pilots operating under instrument flight rules (IFR) and everyone knows what everyone else is doing, and should be doing, in a comfortable operating environment.

Now suddenly along comes technology that removes the PIC from the vehicle, operating in the same space as all these manned vehicles, and questions start being asked regarding safety. How will that craft be able to see "us?" How will the vehicle communicate with others? What if a system fails? What if, how, and so on. You can see the potential volume of such questions and the concerns that must be addressed.

To make a long story short; regulations for the operation of UAVs are in the works.

Why should that concern us as modelers? Well, the most obvious reasons are the similarities between model aircraft and UAVs as seen by the public. This image could influence the rule-makers into including model aircraft in the UAV category, which in turn could make us susceptible to regulation created for the UAVs.

We don't want that to happen and that is why the Academy of Model Aeronautics is working diligently to represent our members and activity to the regulatory agencies.

We are fortunate that our long history—more than 70 years of self-regulation and self-policing—has estab-

lished us as a responsible and effective organization with members who truly cherish their privilege to operate in the NAS and will work tirelessly at preserving that privilege.

Now to the point of all this rambling: As our sport evolves and our equipment and skills improve, we tend to become complacent. We become accustomed to going to the flying field and just letting it all hang out, have fun, and partake in all types of challenging flying—higher, faster, further. But we must be careful so as not to get too far over the edge.

Model airplanes are different from full-scale airplanes in many ways but one of the most important differences we must all be aware of is their social acceptance. There is no real need for model airplanes except as a hobby, no real purpose except as recreation. In most cases, the public perception is that “they are dangerous.”

Full-scale aircraft “serve a purpose.” They provide transportation of goods and people. When a full-scale aircraft crashes, the event is publicized as a tragedy and rightly so, but it is socially accepted as a necessary risk and we move on.

Models, on the other hand, involved in the same type of incident, are not so fortunate socially. God forbid a model should be the cause of injury—or worse, death. This is an event that may generate the same type headlines but the social response is much more negative and the image of model flying takes a giant minus image hit.

These types of incidents and this type of publicity at this time in our history are the kinds of things that can have devastating effects on our continued use of the NAS.

As stated previously, there are many unknowns ahead of us. The only resource the rule-makers have upon which to base their regulatory decisions is our history and image. We, as participants, have our image and history to get us through these challenging times and we must diligently protect that resource. Everyone must strive to operate as responsibly and safely as possible and every club member should be fully briefed on the negative impact that careless, reckless, negligent, irresponsible, immature behavior in flight operations can cause.

(Reprinted from the July 2006 issue of the *AMA Insider*, a publication of the Academy of Model Aeronautics.)

For Sale

The following items are offered by Rich Pierson, (732)-657-4930 or rpier44768@aol.com:

World Models-Super Sports Senior, 81” wing, Evolution 1.00 NX, (w/servos) \$300

Hobbico Quick Field Charger (Pro Series) \$25

Bates Sea Fury Kit (Kit cut by All American Kit Cutters) Jerry Bates Plans + Cowl + Canopy \$350

E-Flite 4CH PPM Transmitter (New) \$25

Joss Stick by Model Tech (w/servos), 67” wing \$100

The following items are from Doug McMillan’s estate and are available through Stan Blyskal (609)586-3239, Fred Doldy (609) 883-3902, and Joe Raimondo (609) 587-9047:

Zenoah Z3 (NIB) \$199

Supertigre .42, two-cycle \$40

OS Max .61 FX, two-cycle (NIB) \$145

OS Max .61 FX, two-cycle (used) \$90

Supertigre 2000 (NIB) \$125

K&B .61 w/muffler two-cycle \$50

OS .46 w/muffler, two-cycle \$60

Magnum Pro .45, two-cycle \$40

Webra Speed .91 w/muffler, two-cycle (NIB) \$175

OS FS-.91 Surpass four-stroke \$125

Invader A-26 kit, 68”, Wing Mfg. (NIB) \$75

Kaos .40 ARF, 55”, Tower Hobbies \$90

Kadet Lt. .25, Sig kit \$45

Skylane 72” trainer, Global kit \$75

Hobbico sealing iron (NIB) \$12

Five rolls of silver monokote \$25

Kyosho charger (NIB) \$30

Hobbico field charger (New) \$35

12 volt, 7 Amp Batt. & Charger (New) \$20

Three Futaba FP-S48 servos (NIB) \$25 (for 3)

Three Apollo heavy duty servos (NIB) \$75 (for 3)

Ace DDVC Varicharger (New) \$39

G-62 inverted muffler w/smoke (NIB) \$25

Six-shooter fuel pump (NIB) \$25

Quaker w/engine, servos, RTF \$150

X-acto knife set (NIB) \$15

Kaos w/OS .61 & 4 servos \$150

Propwash Club Mailing to End

The *Propwash* newsletter is now available on the club website (www.mcrcs.com) and this is the last paper issue that will be mailed to other New Jersey clubs. Mailing will continue to MCRCs members.

Upcoming Events

September

- 6th Meeting at WWL
- 15th Setup for Warbirds
- 16th-17th Warbirds Over Jersey
- 20th Meeting at WWL
- 23rd Electric Fly

October

- 4th Meeting at WWL
- 8th Cub Day/Bomb-Drop Contest
- 18th Meeting at WWL
- 31st Student Days end

November

- 1st Election Meeting at WWL
- 5th Turkey Fly
- 15th Meeting at WWL

Club Information

The Mercer County Radio Control Society is a New Jersey-based AMA Chartered club. Its field is in Assunpink Wildlife Management Area off Exit 11 of Hwy 195. It meets at the West Windsor Branch of the Mercer County Public Library on the first and third Wednesday of each month at 8:00 PM. The club publishes this newsletter for members six times a year in odd-numbered months and operates a web site at www.mcrcs.com. This newsletter is available, in color, on the web site.

Officers

- President: Keith Zimmerly
- VP, Membership: Sal Lucania
- VP, Events: Armand Graziani
- Secretary: James Feszchak
- Treasurer: Jans Brower

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