

ARCS NEWS

**AERO RADIO CLUB OF SYRACUSE
CLUB NEWS - MARCH 1993**

VOLUME II

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NEXT MEETING MARCH 12, 1993 AT WALT'S

25TH WRAMS SHOW ANNUAL

The 25th Annual WRAMS show was held on February 27th and 28th. In some cases it was the same show it's always been, but there have been a few changes since the last time I was there. Most notably was the fact that most all the exhibitors were selling merchandise instead of just showing their products. There also seemed to be more retail operations like Bruckner's Hobbies, Polk's, and America's Hobby Center that had booths set up to sell to the public. It's been along time since I had been to the WRAMS show but I don't remember there being nearly as much selling going on.

Most of the major manufacturers were there although some of the largest were noticeably absent. I don't recall seeing DuBro, Carl Goldberg, Midwest, TopFlight, or Great Plains. On the other hand there seemed to be quite a few small operations, names that I'd never heard of, with booths this year. Apparently, the show was filled to capacity though, because we asked about a model

that was in the Precision Engine booth and the guy there said he was displaying it for another company who couldn't get booth space. According to the show program there were 156 companies represented at the show.

In addition to booths, the WRAMS show also has a static display and a swap shop similar to what we do at the CNYMAA Symposium. I didn't see much of the swap shop but I didn't think the static display was nearly as good as ours. There were fewer models, and except for a Gee Bee that was on display, I don't think the quality of the models was up to that of the Symposium's. There was also a number of informal programs and meetings that took place including a District II AMA meeting, a NSRCA meeting, and a presentation on old time RC.

So what was the hot item this year? Well there were a number of things that were kind of interesting. There were a number of companies selling large scale built up ARF's. Ohio RC had a nice looking Sukhoi with an 84 inch wing span that weighed in at 17 to 19 pounds. It sells for \$849.00 ready to cover. If you wanted something a little more finished, a company called Pirate, out of Texas, had an Extra on display in the Precision booth. It was about the same size as the Ohio RC Sukhoi but was covered and ready for engine and radio installation. It was selling for \$2,700.00 (no that's not a misprint). If that didn't do anything for you, a company called Arrow Straight Aircraft would build you the model of your choice. The price for any foam/balsa airplane was \$1500.00 finished and ready for engine and radio. Of course the cost of the kit was on top of the \$1500.00.

Some of the nicest kits were in the Byron and Yellow Aircraft booths. Byron had two nice Sukhoi on display (the Sukhoi seemed to be the most popular model this year). One had an 82" span and the other was, I'm guessing either a .90 2 stroke or 1.20 4 stroke size. The large kit went for \$520.00. Yellow had a number of their models on display including their P-38 that has a 100" wing span and weighs in at 28 to 32 pounds. Recommended engines are two Supertigre 3000's. The price of the kit is \$780.00. Custom retracts are \$525.00 and custom wheels, tires, axles, and pneumatic brakes cost another \$235.00. Yellow also had their new 117 on display although it isn't in production yet. If you want the ultimate Yellow kit then you want their F-14. The deluxe kit with retracts, scale wheels, and accessories is only \$3,500.00. Of course I'm sure you'd also want the plug in elevator system for \$50.00 and the CPU based Multiplex radio with a special F-14 module and 8 special servos for \$1,800.00.- and since you've gone this far you might as well buy the channel expander for the arresting hook and canopy for another \$500.00.

Back in the real world the other item that seemed to be hot this year was batteries and battery accessories. MAT had their gel cell type airborne batteries on display along with their charging system. This is a high capacity 6 volt battery which will work with any radio system even though the standard packs are only 4.8 volts. The advantages are longer flying time and they're less prone to vibration. They also don't develop a memory and once fully charged can sit all winter without any maintenance. The disadvantages are that they weigh 10 oz., are rather large (3.75x2x1) and require a special charger to charge them. Another company, Universal Energy, claims that within the next few weeks they will be selling battery packs made up with the new nickel metal hydride batteries. These will be higher capacity than nicads of equal size and weight. They won't develop a memory and won't have a continual degradation in capacity that nicads do. Initially they should run about \$5.00 a cell. Universal also had a slick battery backup system on display. The system used a lithium battery that would automatically kick in if your flight pack batteries dropped below 4.6 volts. It would also activate a buzzer that you could hear once you were

on the ground to alert you that your main pack had failed.

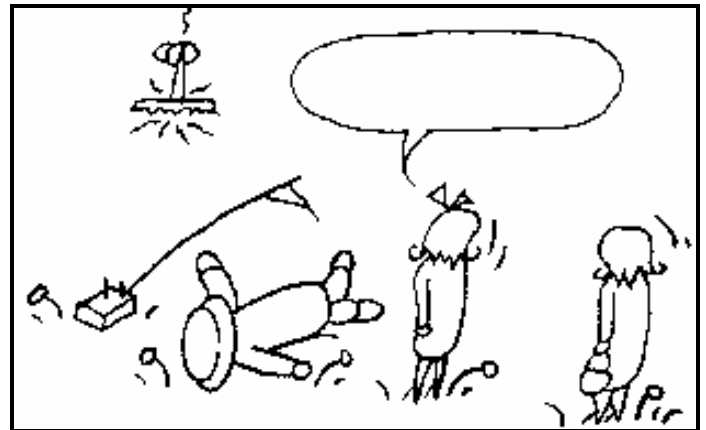
All in all it was a pretty interesting show. It appears that the hobby is getting more and more sophisticated with the advent of new technology. Synthesized radios are now on the market, many of the larger airplanes use redundant systems to protect against failure. Composite materials are now part of many kits. It will be interesting to see what the next few years bring.

NEW TREASURER

The club has a new treasurer. Paul Fleig was elected to fill the term of Gary LaVancher. Gary needs the extra time to spend with his business and was finding it difficult to handle club business. Gary will still be flying with us though. Actually, if he built an airplane with only one wing like I suggested, he would have the extra time to handle the club stuff.

THE LAST TIME - REALLY!!

I know this issue has been beat to death but it seems that each newsletter something drops in my lap that's too good to not use. So to make things more interesting I've left the caption blank for you to use your imagination. Some key words you might want to use are MIDSTAR, TRIP, & PRESIDENT.



SPRING FLYING

With spring almost here I'm sure everyone is anxious to get out to the field. As the snow begins to melt, typically, there is about a week or so when we shouldn't be driving in past the Airport

driveway. Until the frost is out of the ground the water has no place to go. As a rule of thumb if you're leaving marks on the grass on the way down to the field it's too soft to be driving on. If you drive on the field when it's too wet two things will happen. First, you'll get stuck and you're on your own. Second you'll leave deep ruts that sometimes are difficult to roll out and can't always be seen by the full size pilots. It doesn't take much of a rut for the nose wheel on a small plane to fall into before there's a prop strike. Use good discretion. If it's wet and you absolutely have to fly, walk down to the field. Remember too, if you are driving down to stop before you cross the end of the runway and look for full size traffic before crossing.

AEROBATICS LESSON THREE

Last lesson you learned to fly back and forth in perfectly straight and level paths, in the flight corridor . Out at the far end of the corridor you practiced making a vertical turnaround called the Split S because that kind of turn simplifies maintaining the aerobatic corridor, pass after pass. And finally, you learned toward the end of the flight to make elevator trim adjustments to keep the plane in level flight, as it tended to become light in the nose with loss of fuel. With this lesson you are ready to practice some basic maneuvers. I have selected the Inside Loops as the beginning maneuver because it is the one maneuver that can be performed on any type of model aircraft, including a 3- channel trainer, with flat bottom airfoil and no ailerons. One loop is easy, as you proved when you were still a fledgling student. Three loops is another matter. The problem with three loops is that by the third loop, things can get awfully cock-eyed. In addition to the exit heading problem three loops can blow way in or way out during a crosswind. This is because it is a relatively long maneuver in terms of time, and during that time the air mass in which the plane is flying will have moved quite a bit by the end of the third loop. Initially you may have to start by practicing only one loop, building up to three loops as you develop the knack for keeping the wings level, and the figure nice and round. No trainer or sport model aircraft will fly a loop with the wings level unless you introduce some aileron or rudder correction

during the loop. This is because under the added G-forces present in a loop, the heaviest wing is going to be forced farther outward-downward than the lighter side. Failure to correct for this condition results in the loops cork screwing the entire plane in the direction of the low wing. Since you now know your wings are not likely to remain level, you can be watchful to apply aileron or rudder correction as soon as you notice "wing walk" taking place. With experience, you'll be able to see the heavy wing effect anywhere in the loop, and to apply correction anywhere, perhaps even constantly, so that observers think your wings are remaining level naturally. But initially you may only be able to see, or at least react, at the very top and bottom of the loop. If you can start out making corrections at both the top and the bottom, rather than just at the bottom, you'll not have as drastic a correction to

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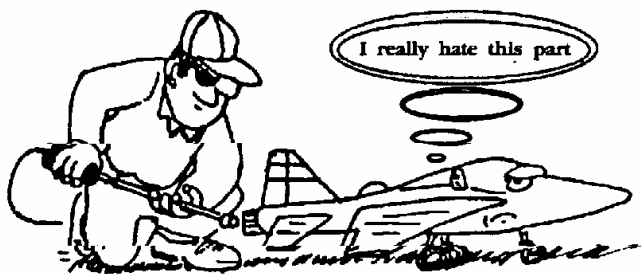
TREASURER

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make at the bottom. Making that leveling correction

while the plane is inverted at the top is easy. This is because the rule of "pushing the aileron/rudder control stick under the low wing" works upside down as well as right side up. How large a loop is right for your model is dependent upon how much engine power you have. A very large loop has the disadvantage that you are exposed for a longer period of time to destabilizing influences. Keeping your loop just a tad on the tight side will help it "groove" a little better. Applying a constant amount of "up" elevator will not produce a round loop. This is because you are fighting gravity on the way up, and have it helping you on the way down. Headwinds are also a factor. Across the top of the loop, they can blow you horizontally so that you produce an elongated shape. To get a round loop in light winds, ease off of the elevator coming over the top, and then apply more again as you are coming to

level and starting back up again. In high winds, elevator procedure may need to be reversed from the light wind procedure. In the initial climb, lighter application of elevator will be useful, and coming over the top both throttling back and tightening the elevator control quite soon will help to stop the elongation that otherwise takes place in strong winds. Except under almost calm conditions, loops are very hard to perform downwind because of the cumulative effects described above. One of the graceful and satisfying parts of the Inside Loops is the achievement of a smooth transition from looping to level flight at the exit, without getting a dip or rise, searching for level. The trick in getting a smooth exit is to completely get off elevator just before dead bottom center of the last loop. If you stay on the elevator right down to the bottom, and then release, the combination of your delayed reaction time and the momentum of the plane will result in the plane starting another loop, and then dipping back to level, or even below level. The Immelman turn maneuver was invented in 1915 during WW I by the German ace fighter pilot, Max Immelmann. Like the Split S Turn, you have already learned, it is a vertical maneuver. The Immelmann consists of an upward half loop, rolling out of the half loop into level flight, which means the plane is now traveling back the way it came, but at a higher altitude. It is the mirror image of that form of Split S that is performed without an initial pull up, as we discussed in Lesson 2. Unlike the three inside loops, the Immelmann is rather quick and simple. Pull up, roll out, complete. In fact this is really a better first maneuver than the three loops, if the plane has ailerons. Without ailerons, however, the roll out can be very sluggish on rudder only. In a sluggish roll out the plane tends to lose some



DEAN MONTICELLI AND HIS BYRON F-16

altitude, giving the transition from half loop to level flight an awkward

looping dip. If you have both ailerons and rudder, applying ailerons full and rudder partially can give

you a brisk, snappy looking roll. Allowing for the delay in your reaction time, and response of the controls, start that roll out just before top dead center of the half loop. Like the loops, the Immelmann is designated an upwind maneuver, though it can be done creditably well downwind in lighter winds. Also, like the loops, the G-forces generated in the pull-up through the half loop will cause the heavy wing to roll outwards. At the top of the half loop, you will be faced with a plane showing one wing hanging low. If you have good reactions and can roll out toward the low wing, you'll have a snappy axial roll to upright flight that will look pretty good. But if you roll the other way, the extra time it takes to bring the low wing back to level and then all the way around over the top will make the roll sluggish, plaguing you with a dip in altitude. The answer is to go back to the inside loop part of this lesson, and concentrate on correcting for the heavy wing effect by applying aileron or rudder on the way up the loop. That way you come out level on top, and can roll either way.

PRODUCT REVIEW

One of the new gadgets that I saw at the WRAMS show was an airborne battery backup system from a company called Universal Energy R/C Supplies. The weakest link in any airborne system is the batteries. Nicads by their nature will appear to be working perfectly and then, without warning, quit. I had been looking at a number of systems on the market, but each had drawbacks. The ACE system required that you use two battery packs of the same capacity. This meant the extra weight of another standard pack. The ACE system ran about \$45.00, plus you would need to purchase another battery pack. Jomar also markets a backup system. With this system you could use a smaller backup pack, say a 200 ma. pack for example. The drawbacks to this system was the price which was about \$50.00 plus again you had to purchase a second pack. With both these systems, each time you charged your main system you would need to charge the backup. The other disadvantage to both

these systems was that the only way you would know if you had a main pack failure would be for you to open your model and look at the system case to see if a red LED was lit, something your not likely to do at the field. The system that I preferred was the one manufactured by Universal. The unit weighs just two ounces with the battery and plugs into an unused servo plug in your receiver. If you don't have a spare channel you can use a Y adapter. It comes with its own high capacity Lithium battery that has a shelf life of ten years. That means you never have to charge the backup pack. Instead of a LED this system uses a small buzzer that you can mount inside your model. If your main pack fails during flight and the backup kicks in the buzzer will activate. This can easily be heard once you are on the ground after your flight alerting you to a problem. Because of the capacity of the battery it's estimated the battery has enough power you run your flight pack for up to four hours. The best feature of this system is the price. Until 3-31-93 Universal is selling this product for only \$19.95. After that the price goes to \$29.95, and this includes the battery. At either price the system is cheap insurance against battery failure. For more info you can call Universal at 516-586-9584.

FREQUENCY STATUS

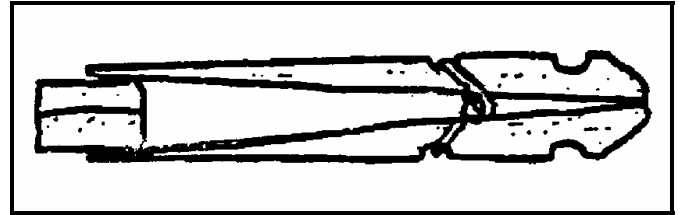
As many of you already know the response period for the FCC NPRM regarding our frequencies has been extended until May 28th. This means that all you guys who didn't get a chance to send a letter still have a chance to do so. As of the end of February, according to AMA, the FCC had received more than 11,000 letters. There will soon be a fax campaign and a petition drive started by AMA. As soon as we have more information on that we will pass it along.

CALENDAR OF EVENTS

March 12, 1993 - ARCS monthly meeting held at Walt's Hobby starting at 7:00 PM.

March 18, 1993- CNYMAA monthly meeting held at Walt's Hobby.

April 2,3,&4, 1993- 39th Annual Toledo Show. Held at the SeaGate Centre, Toledo, Ohio.



A clothespin with the spring reversed makes a nice clamp with deep jaws for an extra long reach

(taken from the newsletter of the CRRC)

AMA INSURANCE INCREASE

The AMA recently announced a major change in its insurance coverage. Beginning on March 31, 1993 new coverage will become effective through a policy issued by Royal Surplus Lines Insurance Company. This new policy will have an occurrence limit of \$2,500,000, and will cover AMA members, AMA Chartered clubs and chapters, designated additional insureds, and AMA sanctioned events and event sponsors. In addition the policy has a per location limit of \$5,000,000 in the aggregate.

AMA RENEWAL

Speaking of AMA, Fritz has received a printout from AMA Headquarters showing our members renewal status for 1993. Remember that we are an AMA Chartered club and our rules require that all club members be members of the AMA. There are a number of members in our club who have not renewed their AMA for 1993 yet. Spring, believe it or not, is just around the corner and soon we'll be flying. An accident at our site by a non AMA member will void both our club and site insurance. Because of this, the club officers will be checking for current AMA as the season gets underway. So as not to put anybody in an awkward position why not send your renewal in now and be ready to fly when the weather improves.

Quote of the Month - Thirty days hath September, April, June and November. All the rest have 31 except for January and February which have 30!!!!!!!!!!!!huh???

