



DCRC Club Newsletter

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AMA CHARTER CLUB No. 329

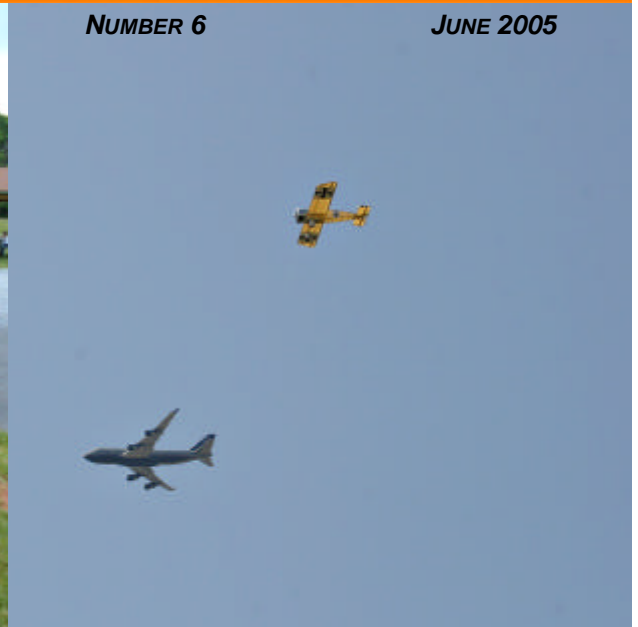
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Tom Pfarr showing off some of his newest planes, SR Batteries Eindecker, and all electric B-17



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V.P.: Kevin Jackson
County Liaison: Jim McDaniel

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Visit us on the web:
www.dc-rc.org

Did you know that any airplane brought in to the model shop will receive 3 free raffle tickets. Bring in your models each month for your free tickets, and to share ideas.

TABLE OF CONTENTS

AT THE FIELD	PG 2
CLUB/BOARD MEETING MINUTES	PG 3
GOOD STUFF	PG 4
TOC OF MARYLAND/CALENDAR	PG 5
BATTERY STUFF	PG 6
KEEP IT COOL	PG 7

BACK

*On the Cover:
Tom Pfarr's planes at Walt Good RC Field
Photos by Andy Kane and Tom Pfarr*

A day at the Field

By Andy Kane



Rob Sarlan, back at the field



Dave McQueeney enjoying his Pitts



Ray Wolf, Radio craft 330 40%



Fred's New 1/4 Scale cub Roto 25

The latest addition to the field



Club Meeting Minutes

By Mike Peizer



The meeting was called to order by president Walt Gallagher at 8:01 PM. New Member: Ed is a new member who is looking forward to learning to fly. Walt quickly ran through the agenda for the evening and went right to the reports.

Webmaster: The porting of our website to another server will happen soon.

Community & Public Relations & County Liaison: Jim McDaniel reported the astronomy club would be out at the field on June 4th. They have all the permissions necessary and plan to start at 8:00 pm.

The model boat park is open and the Blue Crab Model Yacht Club is operating. There are also RC cars and trucks operating in the SoccerPlex parking lots. There is a huge potential for radio interference, so we are asking Park and Planning to stop the unauthorized running of vehicles. Jim said Dave Brown's piece on park flyers in the AMA magazine is worth reading to gain insight on this issue.

There was a bit of discussion of the new spread spectrum technology and how it might work for the car guys.

The county has agreed to install a bulletin board with two sides so things can be posted on both sides. It may already be assembled and waiting for installation to be scheduled. There was some discussion about where to place the bulletin board. Walt said that it needs to be in a prominent place because it will have the field rules posted.

Membership & Newsletter: Andy Kane reported that he, Doug Harper and Dave McQueeney attended the Top Gun 2005 competition in Lakeland, Florida. Doug and Dave took second place in Pro-Am Am Class.

Events: Andy Finizio reported that County Appreciation Day is June 18th. We need every member to show up who can. The event starts at 11:00 am. We will have a flight training session for the public starting at lunch and running for about an hour. There will be all kinds of cool stuff there. Bring an airplane or two and come have fun.

Flight Instruction: Michael Peizer reported flight instruction is well under way. We've had two sessions and one rained out.

Old Business: Don Gray asked about a sign posting a speed limit on the driveway to keep dust down. Walt replied it is in the works.

Electric park flyers on the 27MHz band are allowed to fly at the DCRC field. Those who bring them to DCRC to learn to fly will be encouraged to move to a glow-powered trainer. Those who wish to stay with electric park flyers will be encouraged to fly at the CASA field located at the landfill off Gude Drive, since it is reserved strictly for electric aircraft.

Raffle: Bruce Carlson won an Ikarus Shock Flyer electric plane, three props, a motor and mount. Jim McDaniel won a paper towel holder/spray bottle combination type thing, donated by Andy Finizio. Jim donated it back to the raffle. It was then won by Ben Shakelton. Next, Bill Garner won a Hangar 9 ESV. Since he already had one, he asked to trade it for the paper towel holder/sprayer combination thing. Ben agreed to the trade.

Program: Walt did a presentation on battery chargers of all types. He started by asking the audience what characteris-

tics they wanted in a charger. The main responses were, capable of charging all types of batteries, capability to charge more than one battery at a time, able to be powered by a 12 volt source or house current, easy to use, has a discharge cycle, can charge super fast, adapters for different types of connectors, temperature probe to monitor battery being charged, compact size, and inexpensive. Walt remarked that such a charger does not exist. Then he and Jim McDaniel demonstrated many different types of chargers. It was a rare opportunity to assess and compare the most popular battery chargers.

The meeting was adjourned at 9:55 PM.

DCRC Board Meeting 5/25/05

The meeting, held at the home of Nir Schweizer, was called to order by president Walt Gallagher at 7:30 PM. In attendance were Walt Gallagher, Scott Davies, Andy Kane, Andy Finizio, Allan Hoffman, Mike Dooley, Nir Schweizer, Jim McDaniel, and Michael Peizer.

Awards & Field Improvement: Allan Hoffman reported the container is gone thanks to Nir.

Sound & Safety: Nir Schweizer reported the first aid kit keeps getting wet and he is trying to come up with a way to make the kit waterproof. Jim suggested we remove the top left shelf in the impound and install a small weatherproof cabinet to contain the first aid kit. Rubbermaid makes an inexpensive cabinet that would do the job. Another possibility that was discussed is to put doors on the front of the impound to enclose it. Jim and Nir will pursue the issue.

Jim mentioned he would like to see the sound measurement procedures refined to take into account the new technologies that are now available and to assure sound level compliance.

Hal Baker just sold a fifty-acre parcel of land along White Ground Road, just past the bridge. Three houses will be built on the parcel in the near future.

Walt noted that we need to formally update the field rules to reflect the new position regarding combat flying. The field rules need to reflect the findings from the sound testing conducted at the field last year. After much discussion the Board decided to do another sound testing session to see where we are with the larger airplanes.

Field Maintenance: Mike Dooley said he is ready to entertain suggestions about what needs doing. Popular opinion seems to be that tables in the pits need to be lowered about eight inches. Storage shelves need to be installed in the shed. The shed windows need to be painted. Andy Kane said that it would be very helpful to have a small wooden ramp to get the grill in and out of the shed. The pit area shelters should be replaced, maybe next year. It was decided that a maintenance day would be scheduled in the near future.

Flight Instruction: Michael Peizer showed the card to be used by flight instructors to note the progress of students to the Board members. The response was good, and a couple of suggested modifications will be made.

Events: Andy Finizio reported County Appreciation Day is June 18th and all will be ready.

Treasurer: Scott Davies reported that he is up to date on all treasury reports and other business.

Membership & Newsletter: Andy Kane reported 213 paid members.

Old Business: Jim McDaniel moved the club purchase a laptop computer to be used for club business such as events, to produce the newsletter every month, to be used for club meeting presentations such as playback of DVDs and video CDs, and to accomplish membership functions. The cost of the computer is not to exceed \$2,500.00. Andy Finizio seconded the motion. The motion passed.

The meeting was adjourned at 9:10 PM.

THE GOOD STUFF

By Don Gray



The number of good-weather flying days last month was somewhat less than desirable; however, it gives many of us a chance to catch up on our shop projects and honey-do lists.

As some of you know, occasionally I have been known to play a prank or two and this April 1st (April fool's day) was no exception. Several of us were enjoying the beautiful weather



that day with a good cross section of models ranging represented in sizes from 40 % down to park fliers. I convinced those in attendance to line up on the runway with their models for a group picture. After spending several minutes having them rearrange their models for the "perfect picture", I reach for my camera and acted as if I had left it at home. Just as



some started to move their models back to the pits in apparent discus, I quickly displayed my camera and shouted April Fool! The resulting group picture (before they started to disband) is my first photo and includes, from left to right, Nir Schweizer, Bert Matos, Randy Smith, David Littleton, Terry Lamb, Bill Garner and Al Anderson. Thanks for being so patient guys.

As many of us who are parents know, getting our youth involved in an activity such

as sports, scouts, church and clubs, including the Four-H and model airplanes, boats or cars can be very healthy and often leads to benefiting them in their personal, educational and professional lives. The AMA along with the DCRC and other clubs have always supported having youngsters join and take part in our great hobby.

The next couple of photos capture two of our youngsters doing just that. The first shows Jonathan Ford posing with his Hangar 9 T-34 Mentor. His model is powered by a Satio 72 4-stroke and he is using a Futaba 9CAF radio. Jonathan was certified last year at the age of ten and is progressing very

well. In addition to flying his T-34, he also enjoys flying his dad's Funtana 90. Who knows, if he continues flying scale, he just may end up being selected to compete in Top Gun one year.

Another one of our younger club members, Joseph McDaniel, shown in the second photo practicing his IMAC maneuvers with dad, Jim, and Marvin Napier observing. Joseph's flying ability has steadily progressed over the past year and in talking with him and his dad re-



cently, I was not surprised to learn that he has already entered two IMAC contests and has most of those initial "butterflies" out of his system. There is a lot to say for investing in a good flight simulator. Who knows, if he continues to improve his flying precision, he may become a future Chip Hyde or Jason Shulman.

The final photo this month shows one of our regular MWF members, Al Anderson, posing with his new Hobbico Twin-Star. Hobbico suggests using two .20 to .40 2 stroke engine's and Al chose equipping it with two OS 40LA's. He let me take it up for a flight. It flies very well, is quite responsive and has enough power to climb vertical almost as far as I can see. Ben Patamawenu also has a Twin-Star and is using two OS 25LA's. He says that it is very east and enjoyable to fly. Although I have never owned a twin, that unique sound of two engines competing for the same RPM is always a pleasure to my ears.



That's it for this month. Don't forget our 4th Annual County Appreciation Day on Saturday June 18th, starting at 11AM. Let's show the County how much we appreciate having our own model airpark by showing up and bringing several models; even if they are not flyable, bring them out for display. There will be food open flying before and after the mid-day demonstrations. See you there.

TOC of Maryland
SWAP Field in Baltimore
IMAC STYLE Contest
June 4, 5, 2005



Me with my Composite-ARF
YAK-55



Joseph and Jim McDaniel along
with Rob Sarlan



Rich Fletcher, IMAC NE Director
with his Aeroworks Extra 300



Bob Sinksy and son with his
HANGER 9 Ultimate biplane



Barry Fink, Pete Castine, Brad
Lorance, Mike Brown, Chris Fink
all with their Composite-ARF'S



Joseph with some after hours fun
smoking up the weed's with,
"hey That's My Foamtana"

Calendar of Events

June

- 3-5 PGRC JR Gold Cup Races Bowie, MD
- 3-5 TOC Of Maryland SWAP Baltimore, MD Art Vail 410-247-4281
- 4-5 WSRC IMAC Winston Salem, NC
- 11 **DCRC Training, Walt Good field**
- 17 DCRC Club Meeting Allan Hoffman
- 17-19 Ray Gordon IMAA Harrisonburg, VA
- 18 **DCRC County Appreciation Day, Germantown, MD**
- 18-19 TCWS IMAA Lenhartsvielle, PA
- 18 PGRC Quickie Races, Bowie, MD
- 18-19 IMAA Buc Lee, Quakertown, PA
- 19 Fathers' Day
- 22 DCRC Board Meeting Allan Hoffman
- 25 **DCRC Training, Walt Good field**
- 25 **Airplanes of the world, FSA Laurel, MD**
- 25-26 Big Apple Jet Rally, Brooklyn, NY

July

- 4 Independence Day
- 5-8 IMAC Nationals Muncie, IN
- 8-10 Warbirds over Delaware Lums Pond
- 9 **DCRC Training, Walt Good field**
- 15 DCRC Club Meeting, Mike Dooley
- 20 DCRC Board Meeting, Mike Dooley
- 23 **DCRC Training, Walt Good field**
- 23 Loudon County Electric Fly In, Leesburg, VA Brian Allen 703-430-5849
- 30-31 IMAC Fayetteville, NC

August

- 6-7 NE IMAC Sizzle, Milford, PA Dan Ellsweig 845-926-5685
- 6 **DCRC Training, Walt Good field**
- 19 DCRC Club Meeting Andy Kane
- 20 **DCRC Training, Walt Good field**
- 24 DCRC Board Meeting, Andy Kane
- 25-28 IMAA Festival of the Giants, Danville VA

September

- 3 IMAA Rocky Mount NC AB Gentry 252-908-7229
- 3 **DCRC Training, Walt Good field**
- 5 Labor Day
- 9-11 **Beaeton IMAA Jim McDaniel**
- 10-11 PGRC Quickie Races
- 16 DCRC Club Meeting, Jim McDaniel
- 17 **DCRC Training, Walt Good field**
- 17-18 PGRC Warbirds, Bowie MD
- 21 DCRC Board Meeting, Jim McDaniel

October

- 1 PGRC Open House Bowie, MD
- 1 **DCRC Training, Walt Good field**
- 8 PGRC Quickie Races, Bowie, MD
- 12 Columbus Day
- 15 **DCRC Training, Walt Good field**
- 21 DCRC Club Meeting, Elections
- 26 DCRC Board Meeting, Walt Gallagher
- 29 **DCRC Training, Walt Good field**

November

- 12 **DCRC Training, Walt Good field**

If you have an event you want listed here please let me know Dcrcreditor@aol.com

Check me out on the web:
<http://members.aol.com/akane92802/DCRCEvents.html>

Battery failure

by Doug Gifford

Robert Braham, editor

Whether you are a seasoned pilot or a new flier, we all share the risk of experiencing a crash due to battery failure—the most common RC equipment failure.

Let's face it, rechargeable batteries die, and they often don't give us much warning. If the application is critical (such as with our glow-powered model aircraft) the trick is to stay ahead of the game and detect the pending failure before your prized creation goes down. If you are not paying attention to your batteries you will probably not see the signs of pending failure.

Most glow aircraft use a four-cell series connected pack of AA Ni-Cd batteries to power the radio flight pack in the aircraft. The series connection of four cells gives a nominal voltage of 4.8 volts (approximately 1.2 volts per cell), and usually can produce 600 to 700 milliamperes per hour (mAh).

Six hundred mAh means a healthy pack will supply a current flow of roughly 600 milliamperes (mA) for about one hour at near its rated voltage. Drawing an average current less than 600 mA will result in longer endurance time.

Our transmitters often use eight of the same cells in a series resulting in a nominal 9.6 volts (1.2v per cell x 8). Transmitters usually draw a constant current level of approximately 150 to 250 mA while transmitting.

Flight packs typically draw 30-60 mA when idle, but when flying the servo motors are in constant use drawing higher currents. Two standard servos can draw peaks of more than 400 mA. If a flight surface is a bit stiff, servo current draw can increase considerably.

The wall chargers supplied with typical radios do a fine job. They charge at a relatively constant current of 50-70 milliamps. This is one-tenth of the battery capacity specification.

These chargers are known as one tenth-C, or slow chargers. This is the most reliable and simple arrangement, because almost all Ni-Cds can tolerate considerable overcharge (days or even weeks) if the charge current is one tenth-C or less.

Higher charging schemes need charge-end detection and automatic

shutdown in order to prevent over-charge damage.

Sounds complex? It's not so bad. There is much you can do to enhance your reliability without spending money on extra equipment. For starters, here is a list of good practice items:

1. Protect the battery pack from excessive vibration by wrapping a layer of foam around it.
2. Make sure you have a good charge before flying—a full 10-12 hours. If you know your batteries are low give them a full 18-24 hours.
3. Avoid using a wall socket controlled by a switch. It might get turned off. Confirm charging by making sure the LEDs are lit.
4. Batteries self-discharge slowly over time. Batteries can differ in this area, and older batteries can lose charge more quickly. If you charged your batteries immediately after last week's flights, and you plan on flying tomorrow—charge them again. You want them at their best.
5. Keep connections clean and in good shape.
6. Typical transmitters have a battery meter, display, or LEDs to help monitor the transmitter. Learn how yours reacts when batteries are new. What does a normal full charge look like? How about after a half hour of use? If it begins to behave differently, have it checked out.
7. Batteries that are in their third flying season deserve more attention. With fourth and fifth season batteries you can almost expect a failure. Typically it will be a single-cell failing, but do not trust the other cells unless the pack is new. Individual cells can be replaced, but it's typically not worthwhile. A four-year-old pack with one bad cell replaced will probably give trouble again very soon.
8. With a full charge, how do the servos act? Are they responsive and quick? If you ever develop a sluggish servo get it checked out.
9. Consider four to five flights maximum if you don't have a way to check the batteries, and be sure to turn your equipment off between flights.
10. If for any reason you think you might have a problem, ask another flier for assistance. Many experi-

enced fliers have battery checking and field-charging equipment onhand and would be happy to help.

If you are thinking about purchasing extra equipment, I would recommend buying a digital voltmeter with an internal load specifically designed for RC use (I use a Hobbico. It cost about \$25).

Before digital became popular, there were analog Ni-Cd checkers. Expanded Scale Voltmeters (Hobbico still makes these at around \$12) provide a scale expansion that allows more accurate reading around the voltages of battery packs (the 4.8 and 9.6 volts).

Why expanded scale or digital? Ni-Cads (and also Nickel-Metal Hydrides - NiMH) are known to have a relatively flat voltage-discharge curve. In other words, as they progress from fully charged to fully discharged, the voltage decreases very little.

For this reason it is difficult to measure the battery's charge state without an accurate meter where you can see the small differences between the two. You also must have some knowledge of what the battery usually measures to see the change.

The load feature puts a brief 75 to 200 mA load on the battery. Always measure battery voltage under some load in order to see how voltage holds under typical discharge load.

The best defense against the battery failure, and/or the inadvertent "fly until discharged" crash, is frequent checking under load with an accurate voltmeter. You will hear fliers talk of cyclers that test and exercise batteries. These are good, but not necessary.

A cycler will discharge a battery and count how many milliamperes per unit time (milliamperhours) the battery will supply while maintaining voltage above a certain voltage (typically 1.1 volts per cell).

Know your battery's voltage history. Know that they are fully charged for the start of your session.

Check the voltage before your first flight, maybe after the third, and any other subsequent flights.

You will be doing the most you can to avoid the third most common cause of pilot error—the error of not paying proper attention to your equipment.

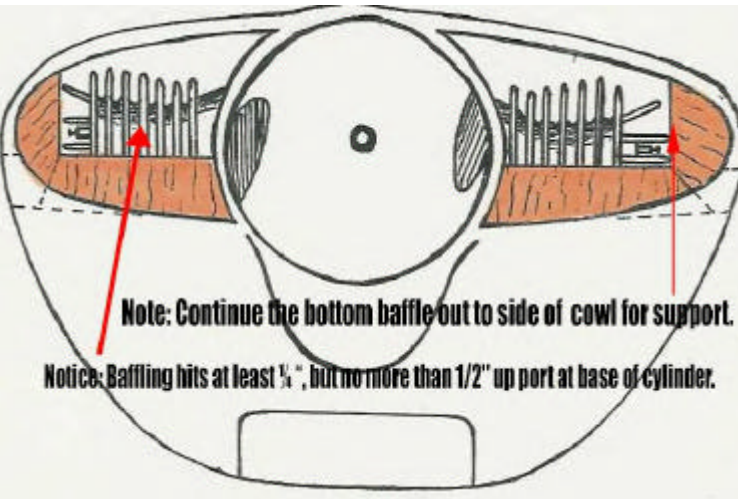
Technical Information/Cooling Your Machine

<http://www.cactusaviation.com/>

This is the business end of our 40% Extra 330.. You can notice the baffles that have been added for better air flow too and over the cylinders. Always remember, you must make the air go where you want it to go. Otherwise, it will take the easiest route in and out of the cowl. It will cool your mufflers great but will bypass the cylinders or give them very little cooling, at the most. Everyone has an idea how to cool. Just ask or look around at your local field. Everyone is an expert.



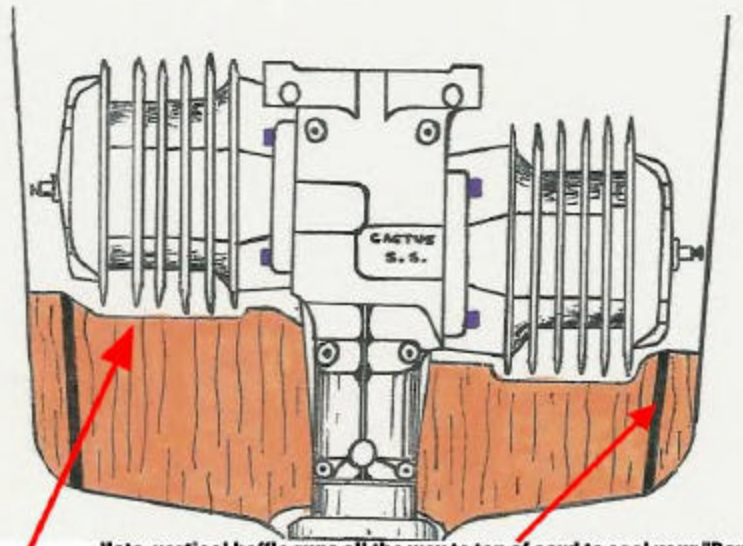
What I am showing you in the photo is the same way full scale aircraft engines are cooled. It is a misconception that you just put a ring around the cyl.'s from the air intake holes.



All this will do is again, let the air take the easiest route out of the cowl. It is imperative that you cool these engines in high heat maneuvers (Torque Rolls, hovering and other 3D flight). With correct baffling, you can lower your engine temp by as much as 100 deg.!

The material you use is not important. In an emergency at a meet I have used anything from cardboard to 1/16" balsa. I do suggest using 1/16" balsa, light cloth, glassing it (laminating epoxy) and painting for good looks. You will need to bring the horizontal baffle 1/4 above the port at the base of the cyl. but no more than 1/2. You will glue this baffle at the front (bottom) of the air intake on the cowl. It will be brought back to within 1/16" of the fins. Making sure you cannot see through the fins but only see the barrel of the cylinder. It will

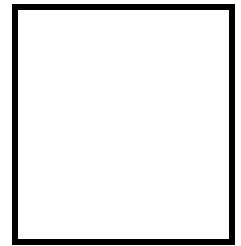
extend from the crankcase where the structural webbing is all the way out to the cheek of the cowl. Next, you will take a piece of 1/16" balsa and go vertical from the very top of the cow (enclosing the cheek to the spark plug but not over the cooling fins on the top of the cyl.). These fins are functional and help cool the cyl's. This piece of balsa will be at about a 20 deg. angle depending on aircraft style (cowl). It will be glued to the horizontal piece. Keep in mind, you do not want the air to escape under the fins. You will use the top of the cowl as the top of your air box. Doing these simple steps will make your engine a happy camper and not so prone to over heat and quit at a most



inopportune time.

Andy Kane
305 Natick Court
SILVER SPRING MD 20905-5875

FIRST CLASS MAIL



SEND TO:



June
2005



JPO District 4 Lee Reightler and Andy Finizio, Jet Log



**Doug's Hobby Shop 2935 Crain Hwy.
Waldorf, MD 20601
(301)843-7774**

Call and ask about their monthly specials for
DCRC Club Members.



New Club members, David and Edie Lozano