Radio Control Club of Detroit

The wind is our friend — Gravity wins!

Volume 52: Issue 4 — Newsletter Date Dec. 2005

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Inside this issue:

Featured Shop

Mariano's Modeling Mecca

Wow…….as soon as you set foot into Mariano Alfafara's Model Shop, it's evident that Mariano is a man with an eye for detail. His shop is clean, well organized and definitely set up for efficiency. Do not let this organization fool you though, Mariano is a very productive and detail oriented modeler, having successfully competed in the Scale Competition Arena.

Mariano Alfafara always had a love for models, but until 1990, his modeling was limited to the occasional car, sail boat or plastic airplane. There were times when he thought that someday he would try his hand at scale model railroading. As it turns out, his Father was a Chef on the C&O Railroad. Mariano is quite a cook in his own right and Railroading is "in his blood"...just like his Father. However, there was another kind of modeling in his future; the airborne kind. He just didn't know it at that time.

In the 1970s and 80s, he would sometimes watch an R/C event as a spectator. At other times, he would stop in and browse at Henderson's Hobby Shop.

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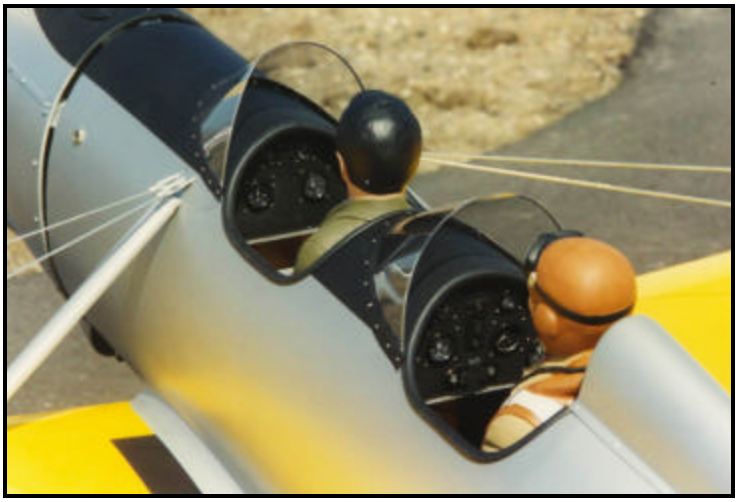
Mariano's Modeling Mecca

In doing so, he would always think to himself, "What a fascinating hobby. Someday I am going to build and fly radio controlled model airplanes". With his background as a tool and die maker and technical instructor, he was sure that he had the skills to build R/C aircraft. He just needed to wait for the right time in his life to follow that dream. The right time came in 1990 when Mariano's wife, Terrie, announced that she wanted to be a lawyer. It soon became obvious that for the next 3-5 years, his wife was going to be totally occupied with law school. Mariano was going to have a lot of time on his hands and he needed a hobby. In 1990, at 47 years old, his R/C dream would become a reality.

Mariano started by visiting the local hobby shops. He bought every R/C book and magazine he could find. He hung out at Henderson's on Saturday mornings, talking with the modelers that gathered there. Soon after, he bought and built a Goldberg Eagle II trainer. He contacted several of the local R/C clubs and chose to join The Radio Controlled Club of Detroit. It didn't take very long for Mariano to discover and appreciate the camaraderie and the technical assistance that the RCCD had to offer him. It also didn't take very long for him to realize that scale was the area of R/C that was going to be his passion. He understood that R/C had many different areas of participation, i.e. combat, pattern, sport etc. Nevertheless, for him, model aircraft should look like real airplanes. In fact, after his Eagle trainer, every model that he built there after was a scale model.

By the mid 1990s he was building expertly finished scale aircraft. Gone were iron-on coverings, because painted finishes provided greater surface detailing and realism. Mufflers, clevises and control horns were now concealed. Highly detailed cockpits were the norm on all of his projects. He became more and more obsessed with his new found passion. He was getting consumed and loved every minute of it. Daily work sessions in the shop were lasting well into the night, often until 3-4 O'clock in the morning on the weekends and at least until midnight on week days…every weekday.



Everything is close at hand and easy to find

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Mariano's Model Mecca

Soon, fellow RCCD members began to suggest that he should consider entering his aircraft into scale competition. Mariano started entering his models in the annual Toledo R/C Expo Scale Contests. One such aircraft was a 1/5 scale P-51 that featured a unique aluminum finish. When that aircraft won 2nd Place Military Scale at Toledo in 1996, it caught the attention of Frank Tiano. Frank was the CEO of the Top Gun Invitational Scale Championships that were held annually in West Palm Beach, Florida. Frank called Mariano and invited him to compete at Top Gun. Mariano asked friend and fellow RCCD member Dave Pinegar to join him and compete at Top Gun in Team Scale (Mariano building and Dave Piloting)….thus, a Winning Team was born.

For the next three years Mariano and Dave competed in many of the major scale contests; including the AMA Nationals in Muncie, Indiana, the Scale Masters Championships in Dayton, Ohio and the Top Gun Invitational in West Palm Beach, Florida. They won 3rd place at the Scale Masters Championships, 2nd place at the AMA Nationals, 9th place at Top Gun, 8th place at Top Gun and 1st place at Top Gun. They were appointed to the Futaba Field Representative Team.

Mariano was writing articles for Model Airplane News as a magazine contributor.

He was having the time of his life, meeting and making friends with some of the top modelers in the world.

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Mariano's Models

Mariano (left) and Dave (right) were teamed for the 1998 Scale Masters & 1999 Scale Masters (left photo) with a great looking Clipped Wing Cub.

But something else was going on in the background….Mariano was beginning to burn out. He was working in the shop almost every available hour of the day and night. The contest schedule enforced deadlines for his model completions. His once fun hobby now took on the aspects of a second job. In 2000, while drawing up plans to finish his basement, he decided that he needed a break. His entire basement, including his work shop, was going to be in complete disarray anyway. Therefore, it seemed like a convenient time to take a "vacation". He shut down his shop and all R/C activities

During the 3 years away from R/C, Mariano always knew that he would return someday. He also missed his fellow club members and friends. In 2004, with his basement completed, he rejoined the RCCD. For now, and for the foreseeable future, he would build and fly in a more casual way; no contests, time schedules or deadlines. His R/C hobby was again just that; a hobby, fun and stress free.

Mariano, you are truly an inspiration and I greatly appreciate you inviting me/us into your shop. I am, again, truly blessed to make friends with another great modeler in our club.

Lou Tisch

The Presidential Podium

Greetings to all,

We've had a great flying season, the field has been "buttoned up" for the season but that doesn't mean there's no flying. The recent work party has winterized the shelter, enclosing 2 full bays. This gives you a place to set, out of the wind on those Winter flying sessions. Have fun!

See the web site event calendar for opportunities to fly and participate in events. We had a great Christmas Party and the Swap Shop is coming up soon. Please note the new location. See the ad in this issue.

By way of keeping the club updated…...please notify us when there is a sickness or death in the family so we may send flowers, get well cards or pay our respects as the occasion dictates. Without this notice, we have no other way of knowing about our members' health and well being.

If you have any suggestions concerning club events, field improvements, club rules , etc., please bring them to the attention of the executive board, or better, bring them to a meeting.

O.K., I have to close now – that pesky news letter editor says I am holding up the works...again. (yup, it's true…..the editor)

'till next time,
Ernie

The Editor's "Edge of Reality"

Most pictures in the "pdf" formatted Newsletter are at a resolution high enough that they can be enlarged for viewing. In the "pdf" toolbar, merely click on sizing and enlarge to whatever size you'd like for viewing. Pictures in the newsletter can be emailed to you upon request. The Newsletters are now on the website as a downloadable pdf.

If you would like to receive the Newsletter via Postal Service only, please give me a "heads up" & I will put you on the "USPS only" list. You may also pick up the newsletter in person at a meeting or at the field….look me up. Emailing will save the club some funds throughout the year and allow us to better serve the club's needs. Be sure to check the website and update your email address so you will be able to receive the newsletter.

If you have something to contribute, please give me a holler: duckguylsb@juno.com or (586) 790-2678. Thanks much, Lou Tisch

Announcements

1. There are dozens of videos that are still outstanding, some for years. If you have any club videos that have been checked out for some time…..please take the time to return them so others may enjoy them also.
2. Our Swap Meet is coming up January 22, 2006 and it's in a new location. See the advertisement in this issue of the newsletter for details. If you'd like, I can email you a pdf file, along with directions.
3. If you have any "hints & kinks", please submit them to Ken Sulkowski for publication on the website.
4. There is a propane heater in the West shed that may be used by members during the Winter to warm the shelter up during flying sessions. Please be sure to refill the propane tank when needed.
5. Join the fellas flying at the field this Winter...you typically won't be alone.
6. Regular RCCD Club meetings are on the 1st & 3rd Tuesday of each month at Rosso Hall….unless otherwise noted. Here's one of those notifications: the May 2, 2006 meeting is canceled due to an election.

Thanks all, Lou Tisch

Round & Round

We're in the middle of our Michigan building season and I've just started a new model. The new one is a twin-engine, control-line stunt ship and it is huge by C/L standards. The wing span is 66 inches with about 840 square inches of lift surface. The fuselage is 53 inches long and I'll be using two Brodak .40s for power. The estimated weight is about 80 ounces. The only draw back so far is that the finished model won't fit into my vehicle but I have until Spring to work that one out. Here is what the kit looks like.

I started the wing first and took some pictures figuring wing building would be a good subject for this column. Whether you fly control line or R/C, at some point, you are going to have to build a wing ….. so here is how I do it. It's easy and produces a straight wing every time.

I begin with a building table that is true, straight and level. This is essential but you can get away without a perfectly flat surface using my method. On the table I have a piece of 1/4 inch thick, tempered plate glass that is 60 inches long by 24 inches wide. This is plenty big enough for building a wing. I place the plans under the glass and build on the glass, thus saving my plans. I glue blocks of balsa on the glass wherever I'm going to need to pin something. It's a lot easier to stick pins into balsa than it is to stick them into pine or drywall. If you don't have a level building surface you can use those blocks of balsa to adjust the wing parts so they are straight. In the picture you can see the initial set up. The little blocks at the leading edge are glued to the table and the wing spars are pinned to the blocks. You can raise or lower the spars to where they need to be in order to be straight, then pin them in place. The long balsa bar at the trailing edge is where I pin the tail end of the ribs. The bar can be shimmed until it is straight. I also glue the bar to the glass.

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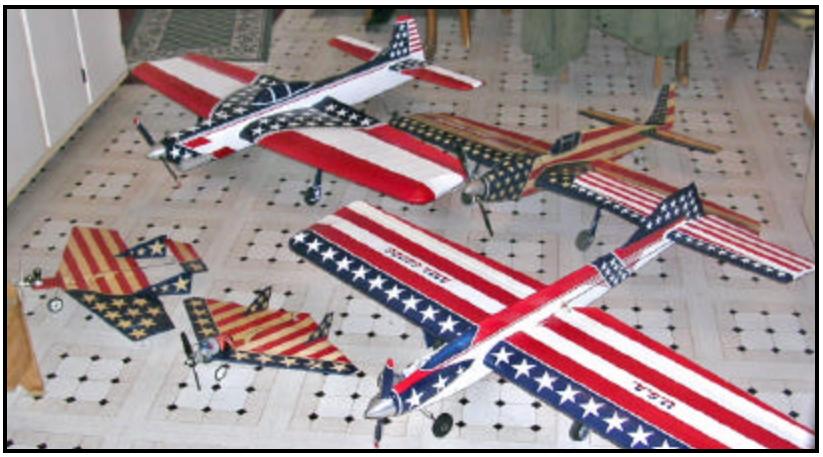
Round & Round (cont.)

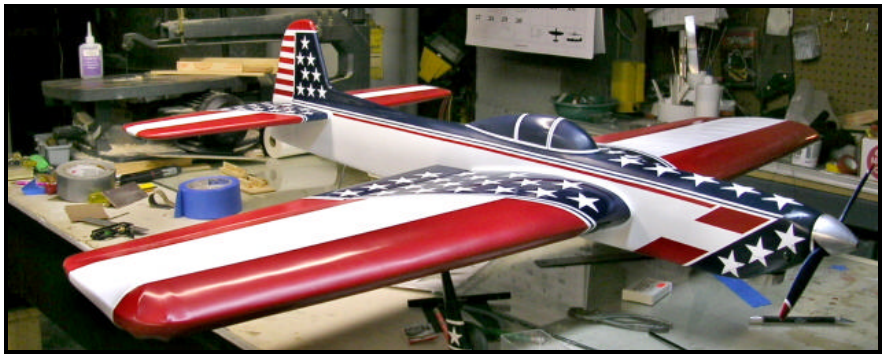
In the next picture I have the ribs pinned into place. Can you see how nice and straight the top spar is? I'll use 1/4 inch square balsa for the trailing edge and you can see that the butts of the ribs are located in such a way as to make it easy to glue the trailing edge to the wing. Next the leading edge gets glued, then the sheeting goes on. Before you know it, you have a wing for your next plane.

The beauty of this method is that you don't mess up the plans with gobs of glue or get the wing stuck to them.

It's hard to find perfectly straight 1/4" x 30" stock to use for spars and if you force them straight by gluing them in place the wing will probably warp when you take it off the jig. A remedy for that is to spray Windex on the spar stock and flex it until it is pliable. Once it's pliable, pin it in place and let it dry. When it's dry. it will have re-formed to the proper shape without building warping tension into the structure. After it's dry, glue it in place and continue building. By the way, it's the ammonia in the Windex that softens the balsa and makes it pliable.



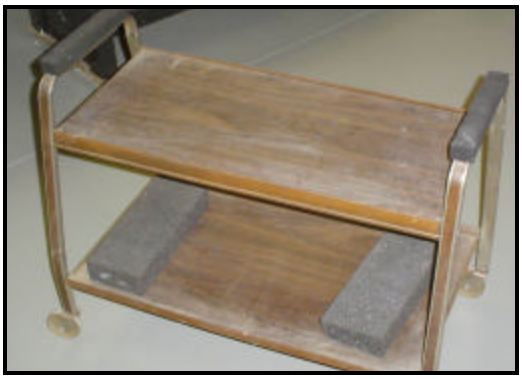
Well, there you have it, the Carlisle, wing building method. It will make straight wings and better flying airplanes for you.

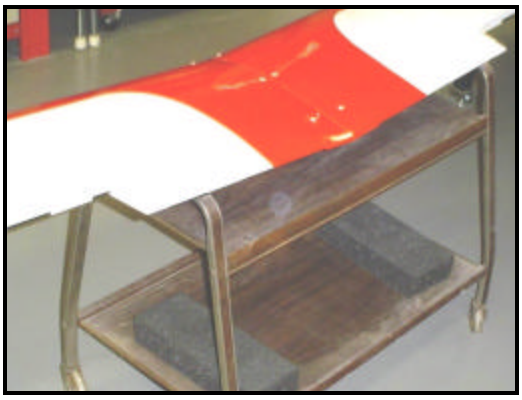


Have a great building season and remember--LIFE IS TOO SHORT TO BUILD UGLY AIRPLANES.

Frank Carlisle

Shop Features



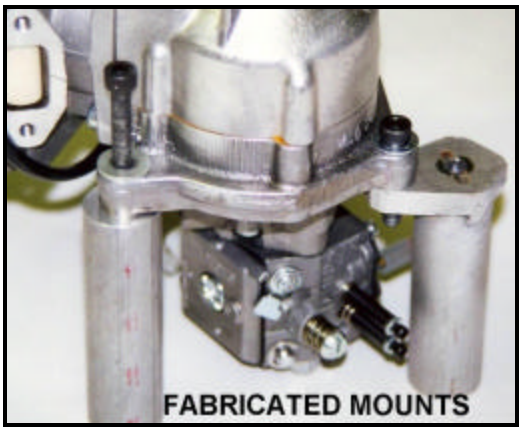


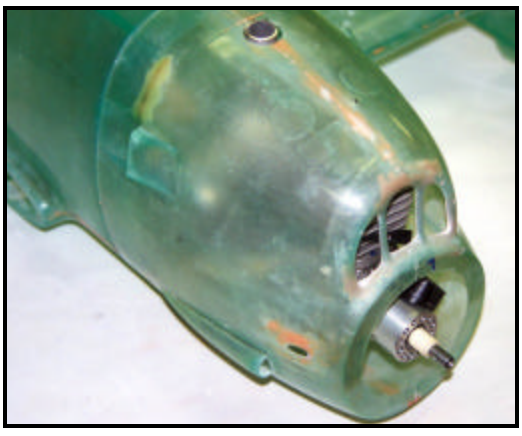
* There are a couple unique features and ideas in Mariano's Model Shop that warrant a closer look. One of those appears to be a lowly, old TV stand and that's what it looks like to the untrained eye. With a couple pieces of thick foam glued to it, you have a very workable wing working stand….voila.

Mariano's benches warrant a second, close look. You'll notice that they are all made from a product called Uni-strut. This gives you complete flexibility in the design and building of your benches.

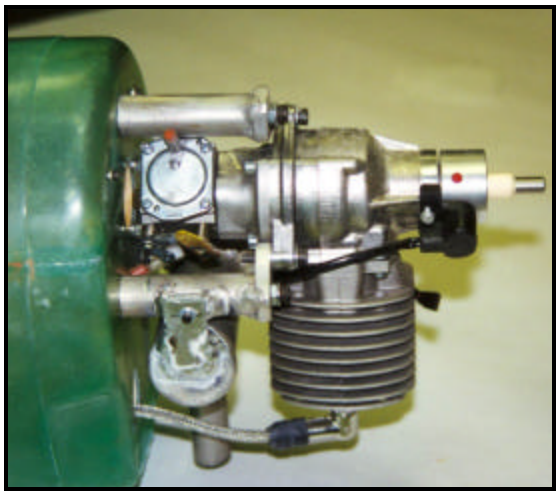
* You'll also notice the well organized boxes of pieces-and-parts. This eliminates the tedious searching for materials. When Mariano gets low on something, he goes out and buys a half dozen more so he always has a stock of the needed items.

Custom Engine Mounts





Mariano was deep into a Scale P-38 project when it was noticed that the planned motor mounts would not allow the motor to be properly hidden within the cowl……..a MUST for any competition Scale project.



Motor & mounts installed

Being a tool & die man, he decided the only solution was to fabricate his own. A little creativity and the problem was solved.

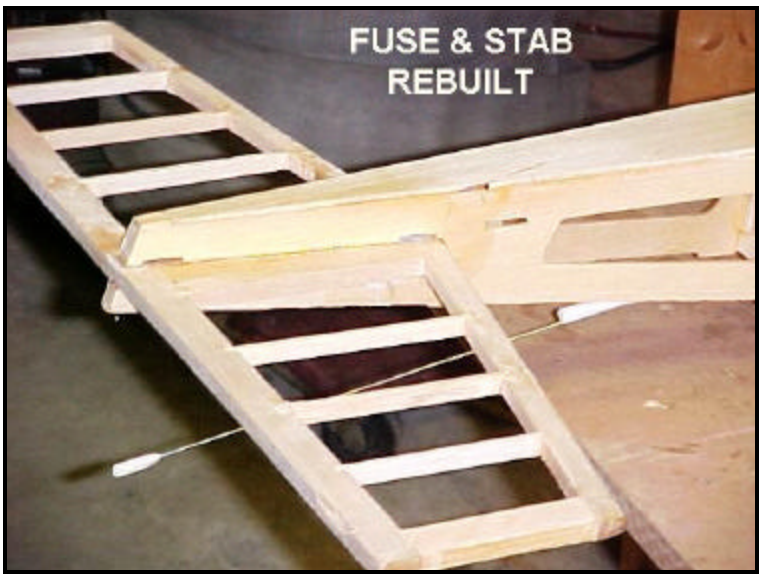
"Phoenix"

The Phoenix is a bird who has risen from the ashes. Well, it's not quite ashes but it's definitely a resurrection...of sorts. Back in my eBay days (ok, I'm still there) I purchased a "like new" Hobbico Superstar 60 trainer, complete with an OS Max. .61FX motor and Futaba radio system. It was slated to arrive in two boxes…..just before Christmas. Now, that's convenient.

UPS delivered the boxes and I opened them with great expectations. Well, that was the end of the good stuff. The seller had removed the main gear and merely set the plane into the box with nothing to anchor securely and the nose gear merely acted as a pivot for destruction. To make matters worse, the radio gear was put into a smaller box and set alongside the plane. Yes, you get the picture. The plane was trashed and the battery and charger were ultimately lost as well. I'm a builder, let's salvage it.

I stripped all the covering from the damaged areas and refit all the broken pieces. That was followed by a bunch of pinning, reinforcing and (of course) Cyanoacrylate. This "Phoenix" was beginning to take shape and might just be able to fly again.

Once all the structural components were repaired, the vertical stab and rudder were installed and fitting and covering could begin.



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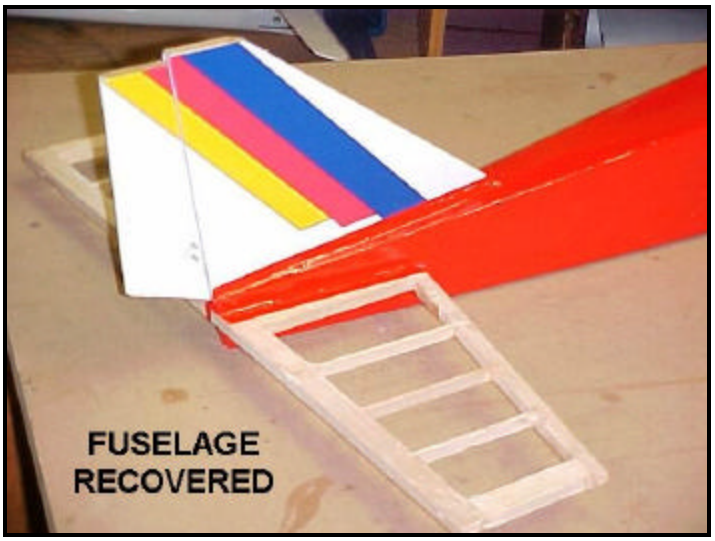
"Phoenix (continued)

Using some monokote, I started by covering the fuselage with a close match to the primary Red of the original, and contrasting the horizontal stab with a nice deep Blue. Add a little striping of Blue and Yellow and we're getting really close to a flyable plane……...again.



This plane was again, a "thing of beauty". It took to the air well, trimmed out fine and I had the motor purring like a tiger. I got several great flights out of her but, as you might expect, I couldn't leave well enough alone. I was on the West down-leg, lost orientation and flew right through a tree. Frank Carlisle (laughing most of the way) and myself, drove out to pick up the pieces. The "Phoenix" has received a proper burial in my spare parts bin. Lou "Crash" Tisch

SOME BASICS OF ELECTRICITY

Watts, Volts, Ohms, Amps, and Milliamp hours….what the heck are all these electrical terms and what do they mean to me? How do I use them? One of the easiest ways to understand all this is to compare these terms to a water tower:

Definition Stuff:
The higher a water tower tank is off the ground, the more pressure we will have available to us. This is like VOLTAGE.

But if we only provide a 1/8 inch pipe for the water to flow down, we have placed a lot of RESISTANCE to the flow and we will get very little flow or CURRENT. A larger diameter pipe offers less RESISTANCE, and allows more flow, or CURRENT.

The volume of water flowing in a given time will be affected by the height of the tower and the diameter of the pipe. This volume per minute can be thought of as the POWER generated.

How long the water will flow, depends on the CAPACITY of the tank on the tower. A bigger diameter tank will provide POWER longer than a smaller diameter tank. This is like a battery's CAPACITY.

What are the units for measuring these? For modeling purposes, we use the following:

VOLTAGE (V) is measured of course in VOLTS (V)
RESISTANCE (R) is measured in OHMS (O)
CURRENT (I) is measured in AMPS (A)
POWER (P) is measured in WATTS (W)
CAPACITY is measured in MILLIAMP HOURS (mAh)

As you can see from the water tower example, all of these are affected by each other. If we don't change the water tower height, but increase the pipe diameter to ¼ inch, we reduce the RESISTANCE and will get more CURRENT flow and therefore more flow per minute, or POWER; But the tank CAPACITY will be used faster.

Or we could get increased POWER from the little 1/8 inch pipe by increasing the height of the tower (VOLTAGE).

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Or we could get increased POWER from the little 1/8 inch pipe by increasing the height of the tower (VOLTAGE).

Formula Stuff:
Some deep-thinking dudes (like Mr. Ohm) figured out how these things are related:
For example: P = V I (or POWER equals VOLTAGE times CURRENT)

So if you want 12 Watts, you can use a 12 volt battery and a circuit that draws 1 amp (12V x1A = 12W)
Or you can use a 6 volt battery and a circuit that draws 2 amps (6V x 2A = 12W)

Also: V = R I (or VOLTAGE = RESISTANCE times CURRENT)

So in the 12 volt example above, if the circuit is drawing 1 amp, the resistance of that circuit must be 12 Ohms. (12V = 12 ohms x 1A). In the 6 volt example, the resistance must be 3 ohms (6V = 3 ohms x 2A)

Continued on page 12

All electrical circuits have some inefficiency. In our water tower example, this is like comparing a 1/8 inch pipe that ends only 10 feet from the tank, with a pipe that ends 100 foot from the tank. The longer pipe is less efficient at letting the water flow. An electric motor might be 75% efficient. 12 watts going into the motor would only generate 9 watts at the prop. (75% of 12W = 9W)

Real Stuff:

1. Receiver Batteries: Let's look first at battery packs: Many receiver battery packs that come with our RC systems, consist of 4 NiCd cells and have a VOLTAGE of 4.8V. Their CAPACITY is 600mAh. That means these packs can provide 600 milliamps at 4.8 volts for one hour. (600 mA is the same as 0.6A.) Then the VOLTAGE drops quickly. But a typical trainer aircraft (receiver and 4 standard servos) has an electrical circuit RESISTANCE that draws a CURRENT of about 360 mA

At 360 mA, a new 600 mAh pack will last about 1 hour 40 minutes! (600mAh / 360mA) = 1.7 hours). Note: It is not a good idea to test this calculation on your plane in the air!

And we can figure out the RESISTANCE of the receiver/servo combination: 4.8V = R x.360A (from V = R I). So R = 13.3 Ohms.

If we added a cell and used a 5-cell pack, would the pack duration go up? Let's figure it out – again, not with your plane in the air! The circuit RESISTANCE did not change (there might be a slight change due to changes in efficiency, but we will ignore this)

From V = R I, if the VOLTAGE went up and the RESISTANCE stayed the same, then the CURRENT had to also go up. So for the 5-cell pack:

6V = 13.3 Ohms x I (V = R I)
I = .451A or 451 mA

Therefore pack duration is 1 hour 20 minutes (600mAh / 451mA = 1.33 hours)

So changing from a 4-cell to a 5-cell pack, our pack duration decreases! Some guys like to install 5-cell (6 volt) packs in their planes for faster and stronger servo response, but be aware that pack duration decreases. And use caution: Some servos can't take 6 volts.

2. Power Supply Load Resistor: In the article on the 12V Power Supply, I mention a 10 Ohm, 10 W resistor. Why not use a cheaper 10 ohm 1/8 W resistor?

On the power supply, we connected the 10 Ohm resistor across the Common and +5V leads. So the CURRENT will be 0.5 A (V = R x I or 5V = 10 Ohm x I) And we can then figure out that the power that the resistor must be capable of handling is 2.5 Watts (P = V x I or P = 5V x 0.5A)

So the 1/8th W resistor would overheat and the next readily available size is 10W.

Are you getting the idea of how this stuff it used?

Disclaimer Stuff:

This basic explanation of electrical concepts is not intended to make electrical engineers out of anyone, but may help you understand some concepts, and perhaps help you make informed component choices. Contributed by Noel Hunt

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"THE BIG BIRD FLY IN"—-A Quick Peek

We didn't' get a chance to do justice to the Big Bird Fly In this season so here are a couple quick shots to tantalize us for next season. Let's get building so we're all ready for the Big Bird & Scale Fly Ins. We've got a great season coming up and guys are flying already. Let's Rock Fellas. Lou

Christmas Party 2005

Our "Intelligent, well trained Staff" aka: The Executive Board of RCCD were "officially" introduced: Don Veres, Keith Jones, Dave Novelly & Ernie Varilone.

Again, Rainel and her Posse (aka: The Culinary Cuties) did an outstanding job putting together a great Christmas Party with plenty of fun, prizes, friends and food….ok, maybe a few drinks as well.

Thanks for everything….what a great year.

RCCD

(THE RADIO CONTROL CLUB OF DETROIT)

PRESENTS ITS 10th ANNUAL

SWAP MEET

Sunday, January 22nd 2006

NEW LOCATION!!!

Lakeshore Knights of Columbus #2733 Hall
25003 Little Mack Ave.
St Clair Shores, MI
(200 Yards S of 10 Mile,
0.8 mile E of I94 exit#228)
Admission: $3
Children under 12: $1
Under 5: Free
Tables $15 (booked in advance)/$18 at the door
(includes 1 admission per table)

9:00am – 2:00pm
Table setup 8:00am

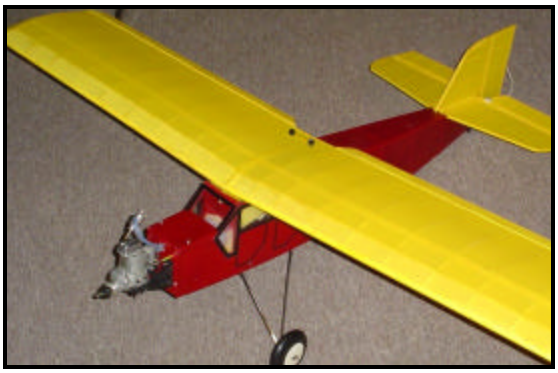
For more information,
contact Keith Jones
Phone: (586)-786-1474
KAYDEEJAY9@YAHOO.COM

Hourly Door prizes
50/50 Drawing
Food and refreshments available
More info? www.rccd.org

Over for map

Classified Section

Bruce Steingraber, due to increasing health problems, has decided to sell most of his model airplane equipment. A complete list can be acquired from Bruce or I can email it as well. There are several airplanes that are either ready to fly or very close to flying condition. Also available are a good selection of kits, plans, engines, electronics, gear, support equipment and an extensive collection of modeling magazines (over 1800-cataloged). This is a "must see" collection. You can reach Bruce at (586) 731-1273. Bruce is located just North of 19 Mile Road, just West of Schoenherr. Give him a holler and see what you can't live without. Lou



New Bridi RCM .60 Trainer w/ K&B .61……..$300
New Tiger Moth Premier Kit 66"ws-w/ Saito .80fs…$450
New Sig Citabria-69" ws-w/ new Saito .45fs-……...$375
New Goldberg J-3 Cub-converted to J-4 Coupe-
76.5"ws-w/ new Saito .50fs …..…….$350
New Scratch Built-1/4 Scale Heath LNB-4 Parasol-93"ws,
w/Saito .80fs……...$450
New Scratch Built-Robin Hood .25-New OS .26FS-51"
ws-442 sq.in……$250
K & B .40-#4011-NIB……..engine……$75
K & B .61-w/ Perry Pump & Carb..engine-used...….$75
GP Slot Machine w/2 sets of cutters...NIB…….$35
OS .40FS-NEW-w/ mount……..engine…$175
OS .26FS-NEW-w/ mount……..engine…$150
2-Ace Metered Vari-Chargers-0-123ma…$50ea
S&O Battery Tester……$30
Sullivan 12V Deluxe Starter w/batt.&chrgr.$30
Dynaflite Rearwin Speedster-77"ws….kit..$125
Great Planes Decathlon .40 size-……...kit..$85
A&A Citabria .40 size……. …kit…$45
Top Flite Woodpecker……...NIB……$15
Futaba Tachometer w/case……...$50
Radio Shack DB Meter w/case...new……$35
2 Robart Incidence Meters……$15

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WANTED: Norvel, 1/2A engines and parts, prefer .061 r/c, Big Mig or AME, but will consider u/c and .049 engines as well.
Scott Gilkey, (586) 786-7179 (daytime), (586) 786-1265 (evenings),
email karenagilkey@aol.com

RADIO CONTROL CLUB OF DETROIT

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Gravity Wins !

We're on the web
www.rccd.org

Coming Events

January 22 , '06	Swap Shop (new location)
March 18 & 19, '06.....	Mall Show
April 18, '06	Mini Toledo
April 29, '06	Spring Clean Up at Wetzel
	(Rain Date: April 30)
May 20 & 21, '06	Great Lakes Combat Challenge
May 27 & 28, '06.....	Spring Camp & Fly, Field Opening & Electric Fly (Sun.)
June 2, '06.....	2nd Annual Greater Detroit C/L
	Stunt Contest
June 13, '06.....	Kid's Night (RD: June 15)

Please check the club website (www.rccd.org) for updates and changes to the schedule.