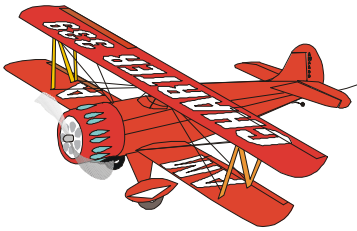
NEWSLETTER OF THE CHARLES RIVER RADIO CONTROLLERS, INC



CRRC FLIGHT-LOG

http://www.charlesriverrc.org/

AMA CHARTER 339 April 1999 Volume 35 Number 4

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MEETING AT NEW SUDBURY GOODNOW LIBRARY (see back cover for directions) Wednesday April 21 7:30 PM

Jenny Ross and Gretchen Campbell
From Wellesley College will speak on

ZERO-G FLYING

Or

RIDING THE VOMIT COMET

The talk is about a group of four Wellesley students who went to Houston to ride on NASA's zero-g demonstration plane (is it a converted KC135? or something more recent? I'll find out today.) They proposed to video tape some common everyday phenomena in the zero-g environment.

- ***What happens to a candle flame in zero-g?***
- ***Do bubbles rise in water?***

April Raffle

1. Hi Tech Flash4-Channel Radio with 2-model memory.
   This radio has some special features not found in standard 4-channel radios including a 2-model memory, three mixing functions including V-tail and elevon, adjustable travel volume, digital trims, and exponential stick. The package includes an 8-channel receiver, charger, batteries and 3 HS-300 servos. The other prizes will be an expanded-scale voltmeter and a gallon of fuel.
1. Expanded Scale Voltmeter
2. Gallon of Fuel.

RAFFLE INFORMATION:
Raffle tickets are $1.00 each and 3 for $2.00. To encourage people identifying themselves, a free ticket is given to anyone wearing a nametag. An extra ticket is also given to anyone who brings in a Show-and- Tell.

TREASURER'S REPORT

Don Black



REPORT DATE	**4/7/99**	
STARTING BALANCE		
Checkbook Balance (after check #1061)		$1,258.06
Savings Account Balance		$4,404.85
Cash		$27.80
Total Starting Balance		**$5,690.71**
INCOME		
Raffle		$108.00
Key Deposit		
Dues, Checks		$550.00
Dues, Cash		$35.00
Savings Account Interest February		$8.79
Total Income		**$701.79**
EXPENSES		
ITEM	**CHECK RECIPIENT**	
Bank Maintenance Charge for February		($9.00)
Newsletter	1062 F. Bien	($139.86)
Raffle Prizes	1063 J. Weigel	($24.95)
Total Expenses		**($173.81)**
TREASURY BALANCE		**$6,218.69**
RECONCILIATION		
Checkbook Balance (after check #1063)		$1,771.25
Savings Account Balance		$4,413.64
Cash		$33.80
Total Ending Balance		**$6,218.69**

Signature: Don A. Black

APRIL BOARD OF DIRECTORS MEETING

The April Board of Directors meeting will be held at the ***SUDBURY*** Library. This meting is scheduled for Tuesday April 27th at 7:30 PM. Come to this meeting and have your inputs. A map to the library is shown on the cover.

PRESIDENT'S COLUMN

Bill Dimpfl

President's Message

Last month I attended a meeting in Maynard which was being held to discuss the uses of the Fort Devens Annex land, which includes our flying field known as the Taylor Drop Zone. The land is being turned into a National Wildlife Refuge and representatives were there from the government to present the schedule for development of the land as a refuge and to hear requests from the public regarding the development and uses of the land. I appreciated being allowed to speak in the crowded meeting and made a plea for regaining use of our field. Talking with townspeople afterwards I judged that there was general sympathy for our cause. The Wildlife people however indicated that past attempts to use federal wildlife land for model airplane fields have generally not been successful. I felt that our cause had less public controversy than that from use of the land for hunting, which is allowed on wildlife land, so there may still be a chance.

At the February meeting audience reaction indicated that I might have some trouble with the Norvel .049 in my Gee Bee E. Not willing to struggle fruitlessly, I talked with the representatives at the WRAM show. That led to reviewing the advice on their web site, www.norvel.com. The basic message was that it needs a lot of breaking in. After running several tanks through it I found that a fuel filter helped prevent it from suddenly quitting too. The engine runs great now. I have since flown the Gee Bee from a parking lot but found that it flies like it has a parachute attached to it, so I am looking forward to trying it again without the elastic flying wires that I suspect are oscillating in the breeze.

I am sure all those that have subscribed to the CRRC e-group that Dave Walter has set up have found it a great way to help us enjoy our hobby. It has facilitated people getting together to fly, both on weekends and during the week, and is serving nicely as a clearinghouse for hobby related questions. Don't believe everything your read though, such as the posting I submitted reminding people of the indoor flying night on the wrong weekend!

This month our membership meeting will be at the Sudbury Library instead of GTE. Fritz and I visited the library to make a map to it. The renovated library is fabulous inside and the meeting room should do nicely.

GENERAL MEETING

March 17, 1999

Bill Dimpfl opened the meeting at 7:40 PM with the acceptance of the secretary and treasurer's reports.

FIELD REPORT:

Davis has been usable.
There was no report on Medfield.

OLD BUSINESS:

The indoors RC session at Sudbury High School was a success. There were5 RC aircraft plus a number of rubber powered free-flight models. The next session is scheduled for April 16 from 6pm 'til 10pm. Spectators are welcome.

NEW BUSINESS:

There was some discussion of creating a frequency usage list for the various flying sites. This list would show how heavily used each channel is at each site. A couple of options such as a roll call and a signup sheet were discussed but no definitive solution was identified.

Remember that EVERYBODY must sign in and out at the front desk.

In the May issue of **Model Airplane News**, there was a very nice article written around our last Rudder Elevator Spoiler (RES) contest. Check
it out.

We would like to welcome ***Rob Josephs*** as a new member.

I would also like to apologize to ***Charlie Johnson*** for Fritz getting his name wrong in the last newsletter.

The business portion of the meeting was close at 8:10 PM.

ENTERTAINMENT:

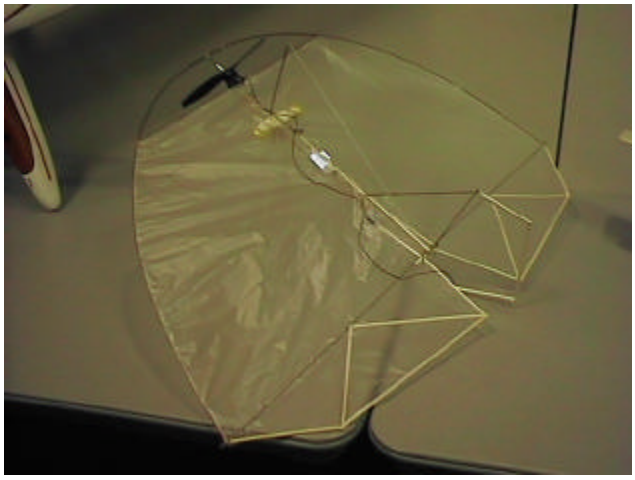
Since this was the winter projects night, the show and tell and the entertainment were one and the same.

Bob Doppler had a Sapphire from Whyte Wings.

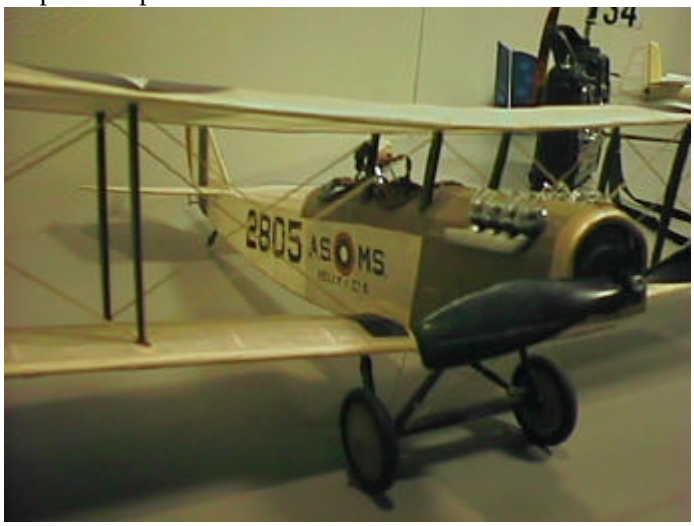
Dan Ross had a Wizard Lite from DJ Aerotech. He also had a set of 1/5th scale OV-10 plans (90" wingspan).
Neil Kaufman had a partially completed small aerobatic model with an OS 10 for power.



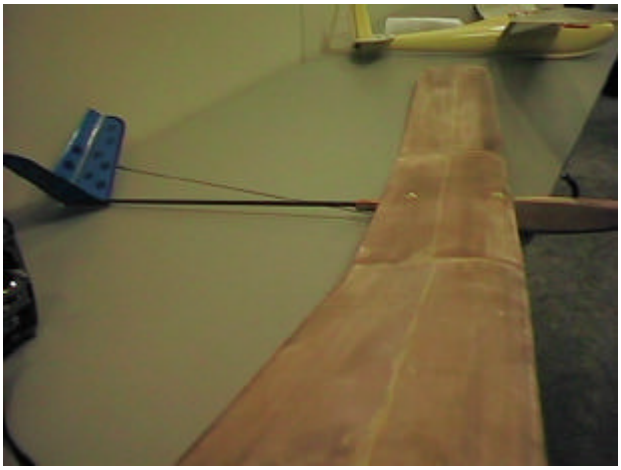
Ed Omiccioli had an OS120 powered Sig Spacewalker II. Ed plans to finish it using Stits paint. Ed also had some Rubbermaid drawer liner that he uses to prevent hanger rash.



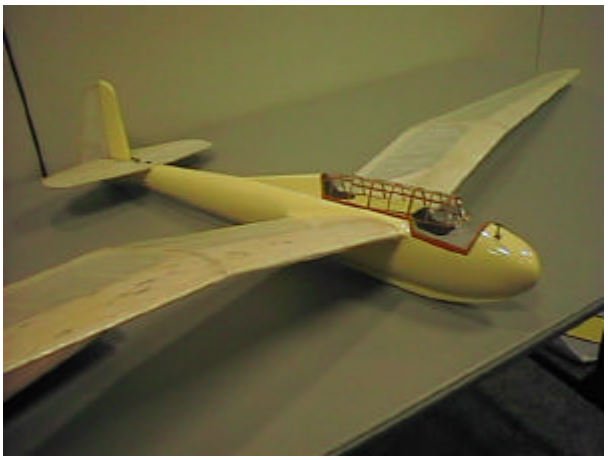
Fritz Bien had an IFO (Indoor Flying Object) which he picked up at the WRAM show.



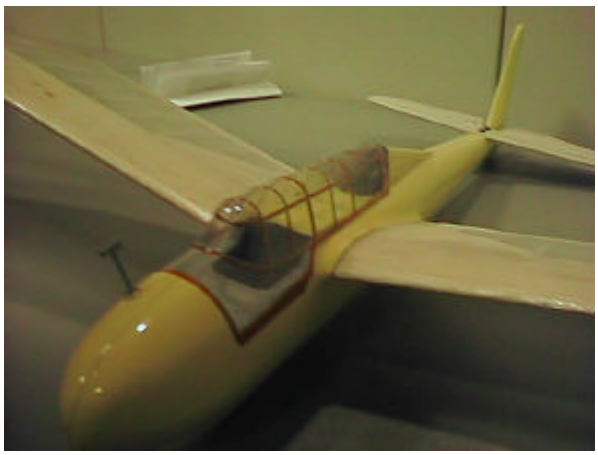
Bill Dimpfl had a Jenny built from a Sterling kit, which he has converted from CO_2 to electric power.

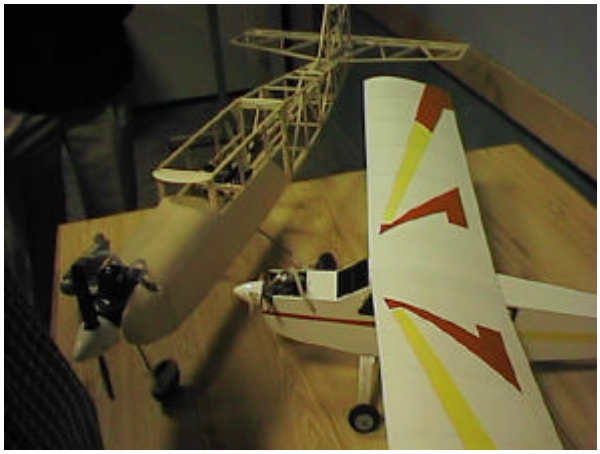


Dan Griscom had a Terminator HLG. He is close to finishing his update of the plans and they will be available on the club web site.



Rick Pendzick had a Kranich II scale glider (circa 1935).





Gene Rozea had an uncovered Seniorita, which he plans to power with an OS 25.

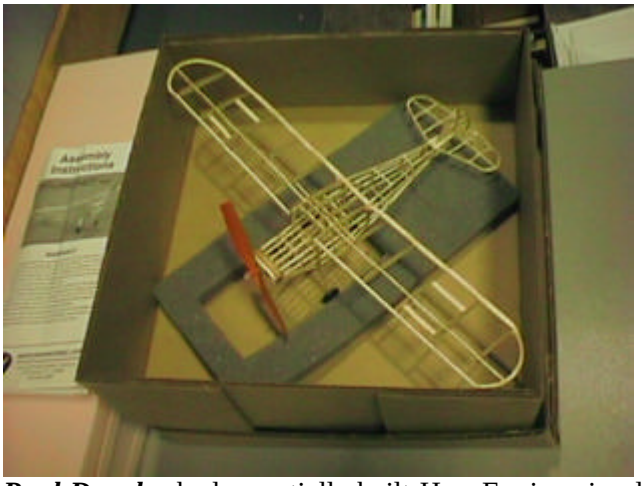
Carl Blaurock had a framed up Fan Trainer, which is being built for electric power. He also had a German Little Bee slow flyer.



Bob Scott had an OS FP40 powered Ugly Stik-like biplane. He also had plans for a P40 Pedal Plane.



Tom Bauer had a Dim Watt electric airplane.



Paul Doppler had a partially built Herr Engineering laser cut kit.
Jan Kansky had a Boomerang flying wing, the Boomerang, which he purchased on the Internet.

Charlie Johnson had a scratch built AMA Duster with an OS 46 for power. This was Charlie's first scratch built airplane.

Ben Schrader had his CO_2 powered LEPR (Low Energy Propellant Rocket).

APRIL CONTRIBUTERS TO THE NEWSLETTER

This month ***Rick Pendzick*** took the nice pictures at our meeting**,** ***Neil Kaufman*** contributed an article on the amount of power needed for successful flight**,** along with the usual articles by ***Glenn Schrader, Don Black***and ***Bill Dimpfl***.

If you want to make contributions, or have pictures, please send them to me at the address on the front of the cover. I will take articles in any form, though I prefer E-mail. My address is fritz@tiac.net.
Thanks in advance, *-Fritz*

CRRC Library

Videos:

1996 World Masters Aerobatic Championships
AMA – The Pioneers (25 min)
Byron – New Generation of Modeling Products (17 min)
Byron – R/C Wars
Combat Models – Fightertown USA Demo (8 min)
Coming of Jets & History of the DC3
Dynamic Soaring
Elmira ’97

Endless Lift
Hot Stuff Video (60 min)
Local Flying (Medfield)
Military Aircraft
Monokote 1 & 2
Old Buzzard Goes Flying
R/C Helicopters
R/C Info and Tips
R/C Ornithopter Research Project (45 min)
R/C Soaring from the Ground Up
R/C Video Magazine, Vol. 1
R/C Video Magazine, Vol. 2
R/C Video Magazine, Vol. 3
R/C Video Magazine, Vol. 4
R/C Video Magazine, Vol. 5
R/C Video Magazine, Vol. 6 & 7
R/C Video Magazine, Vol. 7
R/C Video Magazine, Vol. 8
R/C Video Magazine, Vol. 9 & 10
R/C Video Magazine, Vol. 12 & 13
Scale Aircraft Documentation
The Light Stuff (Daedalus Project)
Wring It Out, Vol. 2 (40 min)

Books:

1993 Don Edberg Complete Source Book
AMA – Sound and Model Aeronautics
Aviation Heritage Magazine – B2 Flying Wing
Completely Cars – Harry Higley
Trainers (R/C Magazine)

UPCOMING EVENTS in 1999



April 16 LINCOLN SUDBURY INDOOR EVENING 6-10 PM LINCOLN SUDBURY HIGH SCHOOL

April 17 Merrimac Valley Aristocrats Indoors contest. Shriner's Auditorium **Wakefield.**

April 21st MEETING AT DIFFERENT SITE! See Front FOR THE LOCATION

May 1 MIT: DuPont Gym 6:00 To 10 PM $5.00 for flyers, free for spectators

May 8 CRRC Cape Cod Slope Soaring

May 14th Lincoln Sudbury Indoor Evening 6-10 PM Lincoln Sudbury High School

May 16 CRRC Spring Fun-fly Ruane Crummett CD

July 2-5 U.S. F3J Sailplane Team selections, Stillwell Woods, Syossett NY F. Bien CD

July 3-4 SSRCC Pattern Contest Dave Elsner CD 781-293-6662 Bridgewater MA

July 17, 18 CRRC 2-Day RES Contest Les Gerhardt, Dick Williamson CDs.

August 14, 15 Sudbury MA 26th CRRC Soar-In Dave Walter and Anker Berg-Sonne CDs

August 22 SSRCC Scale Fly-In Bridgewater MA

October 2 Electric Fun-fly Ken Antonellis CD

October 3 SSRCC Fun Fly Tom Acciavatti CD Bridgewater MA 617-696-1229

October 17 CRRC Annual Auction

January 1 2000 CRRC First Millenium Frozen-Finger Fun-Fly

IS YOUR AIRPLANE GOING TO TAKE A POUNDING?

Neil Kaufman

How much should my airplane weigh? How much power does it need? These are questions that I've been contemplating for a few years as I've begun to either design my own planes or to modify available kits and plans. My approach to these questions has been to collect and analyze data. I think that I'm seeing an interesting and useful relationship begin to emerge. At the 2/99 CRRC meeting, I was fascinated by a beautiful little Gee Bee; from a Dumas kit, I think, and modified to carry RC gear and a Norvel .049. This little Gee Bee has motivated me to write this article and to share my findings.

My database is applicable to gas powered RC models. One of the important properties that we need to deal with is "wing loading". The usual unit of measurement is "ounces per square foot"

but I've found that "pounds per square foot" is more users friendly and easier to interpret.

To obtain the data, we need to weigh the airplanes – I use a $10 food scale – it's accurate enough. Then we have to compute the wing area – usually in square inches. Divide the area, in square inches, by 144 to get square feet. Do not include the portion of the wing that is occluded by the fuselage. Do not accept the kit manufacturer's calculation. I was amazed by how inaccurate they sometimes are.
Finally, you divide the weight, in pounds, by the effective wing area, in square feet,
to get the wing loading which is the heart of our correlation. The data summary is shown in Table I and the correlation in Figure I.

TABLE I

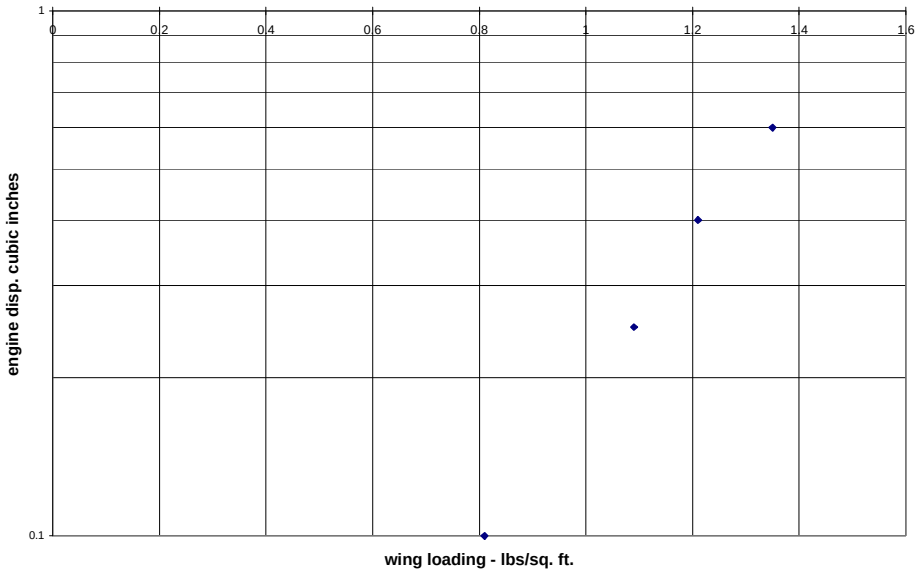
engine size no. of cubic inches data pts.	*average plane weight – lbs.*	*average wing area – sq. ft.*	*average wing loading - lbs./sq. ft.*
.10	1.46	1.80	.81	5
.25	3.37	3.08	1.09	4
.40	5.4	4.51	1.21	9
.60	10.75	7.98	1.35	2

So, now we have a database and a correlation. What do we do with it? The answer is "measure your airplane". If the wing loading is near the average for its size, it will probably fly very well. If the wing loading is on the heavy side it may still fly well but it will be faster than normal on both the take off and landing. The smaller airplanes are MUCH more sensitive. I once built a .10 powered "Mighty Mite" that was tail heavy – I corrected it by adding nose weight. It had a wing loading of .92 vs. the average of .80 for that category. It flew, but was very skittish and not much fun to fly. When I removed the nose weight and corrected the CG by moving the battery forward (a chore in this case), I was rewarded with a much better flying airplane with a .85 wing loading.

Every year, beginners show up at the field with .049 powered airplanes, equipped with standard servos and 500 maH batteries. The instructors can sometimes fly these little bricks (with difficulty) but, sadly, the beginners have no hope of learning to fly with them.

I'd like to close by asking for help in the form of more data. You've probably noticed that my data base is a little skimpy. Help me make it better by sending me weights, wing areas, and anecdotes. I'd love to get more data on the bigger engines, .60's and up, and on the new little micro planes that are starting to appear. I'm going to start bringing a scale and tape measure to the field. I hope that you'll let me measure your bricks.

FIGURE I



CRRC FLIGHT INSTRUCTORS

Below is our list for qualified and willing instructors. Power is flown at the Bill Martin Flying Field in Medfield. Soaring is at Davis Farm, on Rt. 117 in Sudbury and Callahan State Park in Framingham.

POWER

INSTRUCTOR	TOWN	TELEPHONE
Neil Kaufman (Chief)	Sudbury	508-443-9647
Bob Scott	Roslindale	617 323 6600
Dan Ross	Natick	508-655-8396
Larry Copeland	E. Walpole	508-668-0448
Ken Antonellis*	**Natick**	**508-653-4513**
Jon Leehey*	**Wayland**	**508 358 5721**
Ruane Crummett *	**Wayland**	**508-655-2234**
John Nilsson	Clinton	508-368-7136
Anker Berg-Sonne	Stow	508-562-3819
Dave Walter	Hudson	508-562-5400
Fritz Bien	Concord	508-369-1720
Lincoln Ross	Waltham	617-891-0332

SOARING

INSTRUCTOR	TOWN	TELEPHONE
Dick Williamson	Sudbury	978 443-8549
Dave Walter	Hudson	978-562-5400
Bruce Schneider	Hudson	978-562-9900
Lincoln Ross	Waltham	781-891-0332
John Nilsson	Clinton	508-368-7136
Chris Schuch	Stow	508-562-3819
Peter Young	Belmont	617 484 0640
Fritz Bien	Concord	978-369-1720

- ***These instructors will also teach on Wednesday evenings. Please call ahead so that you can set up a time!***