



# EAA Ultralight Chapter 75

North Central Wisconsin Lite Flyers

## Editors Notes



From my window on the world, the only flying things visible are the birds at the feeder. The airport is totally ice and snow covered and to the west, the skiing activities on the mountain are in full swing. By this time last year some of us had our golf game in full swing. Ah, the vagaries of Wisconsin winters. Patience my friends, the ice in front of the hangar doors will soon melt and we can be *certified birdified* once again. Of course there are always a few chapter members who have found excuses to be in sunnier climes, like Russ Post for instance who we understand is currently in Jamaica (no doubt selling Northern Lite snowshoes to the Jamaican bob sled team)! Wouldn't it be nice to have a fold-up, carry-on ultralight to take along? Maybe these back-pack paragliders have the right idea.

Despite the snow and skating rink roads the chapter has remained socially active. On February 17th, forty-three of us attended the very interesting monthly meeting at the Bombardier building on the West edge of Wausau, hosted by Gordy Radtke. Key happenings during the

meeting were provisions made to financially support both the Wisconsin Ultralight Safety Seminar to be held on March 3rd and another safety seminar in Rhinelander on March 10th. Also during the meeting Ron Detert was presented with a

**The ice in front of the hangar doors will soon melt and we can be certified birdified once again!**

well deserved award for being our chapters Videographer. Since Ron couldn't attend our January Christmas party due to his wife's illness, President Krueger gave Ron a present Santa had left for him, a ten-pack of video tapes. We know they will be well used to record our many fly-ins and meetings. Keep your batteries charged Ron, we need you!

Following the formal meeting, Gordy took us on a tour of this Bombardier facility which has now become a high tech training center. No one is better qualified than Gordy to conduct such a tour and we were privy to his vast knowledge of Rotax engines as well as to the latest developments in engines, SeaDoos, SkiDoos and a to-

tally new line of ATVs (MudDoos? Just a thought!)

We even got to see Gordie's Think-Tank cubicle where he writes manuals on the care and feeding of Rotax engines. We told you, this guy wrote the book on Rotax's!

Following the tour, Gordie's special lady, Debbie, treated us to a training table buffet which was delicious. We left the facility with both our brains and bellies full. Thanks Gordy and Debbie for sharing your technical and culinary expertise.

By the time you read this we will be evaluating all of the great information we received at the Safety Seminar and hopefully enjoying the freebies and raffle prizes we hope to win.

In closing, we extend best wishes to Carl Greene for a quick recovery after a freak snowmobile accident in which he broke his pelvis. Tol' you them thangs without wings is dangerous!

My postscript thought is a footnote in the chapter 243 cookbook:

*The right angle to approach any problem is the Try angle.*

Bill Markstrum

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March 2001

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## Early Deadline for next Months Newsletter



Deadline for the March 2001 Newsletter is Friday March 23,

2001. Send your submissions to tvoss@pcpros.net

Cheers!



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This newsletter is a monthly publication of the North Central Wisconsin Lite Flyers and is free to all club members. Items you would like included in the newsletter should be sent to:

Tom Voss  
15203 Short Lane  
Marathon, WI 54448  
tvoss@pcpros.net

Items received by the 5th are considered for that months' publication.

Change of address and membership inquiries should be directed to:

Steve Norris  
(715) 675-2876

Comments, questions, suggestions, etc... can be sent to  
tvoss@pcpros.net

**NCWLF Treasurer Report  
February 2001**



<b>Balance Fwd</b>		<b>\$ 331.96</b>
<b>Deposits</b>		
2001 Calendars	\$ 210.00	
Dues	\$ 24.00	
Donations	\$ 88.00	
	<b>Total</b>	<b>\$ 322.00</b>
<b>Disbursements</b>		
Postage	\$ 68.98	
WULAS - Safety Seminar	\$ 100.00	
Tom Voss - Copy Paper - Newsletter	\$ 20.66	
	<b>Total</b>	<b>\$ 198.64</b>
<b>Ending Balance</b>		<b>\$ 464.32</b>

**EAA ULTRALIGHT CHAPTER 75**

North Central Wisconsin Lite Flyers  
Application Form for Membership and Subscription

Mail Check Payable To:  
NCWLF  
P.O. Box 12  
Schofield, WI 54476

Date \_\_\_\_\_

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

USUA# \_\_\_\_\_ EAA# \_\_\_\_\_

Type of Ultralight you fly \_\_\_\_\_

**Membership Dues Schedule**

- \$ 12 May
- \$ 9 August
- \$ 6 November
- \$ 3 February
- \$ 11 June
- \$ 8 September
- \$ 5 December
- \$ 2 March
- \$ 10 July
- \$ 7 October
- \$ 4 January
- \$ 1 April

*Payment of dues affords me voting privileges, and a subscription to news updates.*

## Extending Battery Life

2 of a 3 part series. Re-printed from *The Aviation Consumer* November 2000  
Submitted by Ron Payzer

### THE ALTERNATOR CONNECTION

As a busy shop, we see a lot of aircraft in for repairs of the battery charging system, either alternator replacement or voltage regulator work. These sorts of chronic failures had been blamed on various factors such as excessive vibration, changes in altitude and infrequent use.

But sulfation may be part of the problem. Since aircraft batteries are used nearly as frequently as car batteries - at least for most owners - could correcting it also solve chronic charging system problems.

It's an intriguing question and one the battery industry has taken notice of. We're told that batteries incorporating this technology - electronic or "smart" batteries - are on the drawing board.

TeledyneGill's VP, Dan Rankin, told us pulse technology has worked in the company initial testing and that more research is underway, probably to implement pulse technology in a battery with a built in de-sulfator of some kind.

Meanwhile, three companies build inexpensive pulse-type battery chargers: Pulse Tech, Solar Tech, and Innovative Energy Systems Inc. Pulse Tech Products Inc. is a Texas based company which claims to be a direct descendant of the original patent holder and has a TI engineer Carl Galey under contract as a consultant.

Innovative Energy Systems is based in Maryland and produces a line of automotive and marine solar products including an automotive/marine/recreational pulse chargers and desulfators. Their line of desulfators come in various models which can be powered by the battery itself, a solar panel, or 11 volt line current. These are easily adaptable to aircraft batteries. They also own several patents and claim to produce units which dial in exactly the pulse frequency of the sulfur molecule, greatly enhancing effectiveness.

Solar Tech, doing business as Can-Pulse Inc., is a smaller Winnipeg Canada based concern which markets under the name of Can-Pulse.

The largest of the three, Pulse Tech, seems better at marketing, having developed a unique line of dual powered (solar or 115v) battery maintainers called Solargizers. Maintainers are meant to be installed for full time use with the vehicles charging system. While these products are billed as "maintainers", all three have brought back dead batteries to normal service.

For the most part these devices are designed to fit into the battery compartments or near batteries when mounted permanently on board. The on-board models typically connect to the battery via a smallish 18 gauge with large lugs designed to go right on

the battery terminals. Depending on the manufacturer, for temporary use, the owner is expected to improvise by replacing the lugs with alligator clips. Most models also have small LCDs showing that they are not only hooked up properly and making connection, but also pulsing.

Depending on the manufacturer, the costs for individual pulse battery cleaner/maintainers run in the \$90 to \$200 range. Several sources offer commercial or full size shop pulse chargers in the \$600 range. While the self-powered (via the ship's battery) units sold as being full time maintainers approving one for installation on anything other than a homebuilt is a problem. Obviously, no FAA approval is needed for temporary desulfator installation, which can be either solar or 110 volt powered.

Think of pulse technology "charging" - we used the word cautiously as typical pulse maintainers are not actually chargers - as sending low powered DC current to battery in a rise time of less than 3 nano-seconds with a defined pulse width. The pulse frequency is not critical to the process. But the rate of rise or sharpness of the sine curve may be. The pulse frequency is between 2 kHz and 20kHz, depending on loading and power supply voltage used. In theory, individual sulfur molecules are freed from crystal formations and are

### Club Apparel



Don't forget to order your club apparel. Show your pride by wearing your very own hat, jacket or shirt with the NCWLF Logo. Satin jackets are available in sizes SM to 3XL. Black, Navy Blue, Royal Blue, Red. Embroidered logo and name. Around \$60. Polo Shirts about \$22. Order from Steve Krueger 715-536-8828.



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## Next NCWLF Meeting

Saturday March 17 1:30 pm. at the Stevens Point Airport. If you are driving take Exit 6 off I39 in Stevens Point. If you are flying the Unicom is 122.7. St Patrick's Day so wear your green.

See you there!



## Good Luck

Good Luck to Chapter 75 members Jim Shnowske and Bill Reed on their Cross Country trip to Sun-N-Fun 2001. Kit Fox's Away!!

## Northwood's Safety Seminar

Anyone interested in car pooling to the Northwood's Safety Seminar in Rhinelander Saturday March 10 call Steve Krueger 715-536-8828.

## Extending Battery Life

*(Continued from page 3)*

now ready to be charged and returned to solution to form an active electrolyte. The pulse process requires very low energy input to the battery, primarily because each molecule is being individually energized enough to dissolve and liquefy the sulfur crystals encasing the lead plates, not charging the battery.

According to the manufacturers, this low energy also means that the pulsing

action will never damage the battery itself, no matter how long its subjected to it, hence the device could be- and for best results should be- connected indefinitely. Pulse

technology works with any size and any voltage lead/acid battery. This includes not only common lead/acid but also valve regulated lead/acid batteries including the aviation ger cell or sealed technology G25/35 batteries.

### FIELD REPORTS

The military is a big user of pulse charging technology and some government agencies are also employing it for vehicles kept in long term storage. One senior Army officer we spoke with told us of one study which 240 vehicles, including Patriot missile launchers, had been stored outdoors for some nine months. Upon starting these for deployment and

training, as many as 80 percent of the batteries failed to perform. Yet with Solar-gizers in use, the failure rate after the same storage period dropped to 20 percent with fewer requiring new batteries.

Although we were able to bring a battery back from the dead, worth noting is that these products aren't intended for that purpose but for long term battery maintenance. If you want to try battery rescue on your own, get an old motorcycle battery with a clear case. You can see the desulfation as it occurs. (If it occurs as it did for us.)

... Continued Next Month

## More Battery Stuff

As ultralighters we all use a radio or a camera and all seem to know some things about rechargeable batteries, but are unsure about other things about rechargeable. The following is a bit of information I came across that might answer some of those questions. I hope you will find the following info helpful, as I did.

**NiCD** Nickel Cadmium batteries, probably the most common and most robust rechargeable, good for on average 700 charge and discharge cycles. NiCD batteries suffer badly from memory effect (described below) which means they must be full discharged before charging and are normally only good as "backup batteries"

**NiMH** Nickel Metal Hydride batteries, probably the most

popular rechargeable battery amongst digital camera owners, offer about 40% more capacity than NiCD plus they don't suffer from memory effect, can be charged whenever. However they're only good for about 500 charge and discharge cycles.

**LiON** Lithium Ion batteries, normally "the choice" of proprietary battery packs, such as those used by Sony's "InfoLithium" batteries. Lithium Ion batteries offer about twice the capacity of a similarly sized NiMH battery, however they require their own special charger and can be expensive (you can't as yet buy AA LiON batteries). They're good for about 500 charge and discharge cycles.

**Memory Effect** the accumulation of gas bubbles on bat-

tery cell plates of a battery that has only been partially discharged before recharging, a bubble reduces the plate area within the battery and thus capacity. NiCD batteries are well known for this problem.

**Reconditioning** some chargers feature a discharge / recondition button which simply discharges the battery before charging it, even more sophisticated charges will actually negative pulse the battery to remove any built up gas bubbles.

**Discharge** most rechargeable batteries loose capacity when stored (about 2% per day), specifically NiMH can loose as much as 5% of their charge per day when stored. Tony Borchardt

## NCWLF Calendar of Events

### **March 10, 2001 Northwood's Safety Seminar**

Rhineland, WI Petersen Health Care of Wisconsin Staff Development Center 7:00 pm.  
Jack Chmiel 715-282-5585

### **March 17, 2001 Chapter 75 Meeting**

Location to be determined

### **April 4-7, 2001 Bensen Days**

Wauchula, FL Contact Richard Oxnam 219 N. River Road Alva, FL 33920 941-728-3774  
rotornut007@yahoo.com

### **April 8-14, 2001 Sun-N-Fun**

Lakeland, FL Linder Airport Susan Highley 863-644-2431 [www.sun-n-fun.org](http://www.sun-n-fun.org)

### **April 21, 2001 Chapter 75 Meeting**

Tomahawk, WI Dean Turners

### **May 19, 2001 Chapter 75 Meeting**

Spencer, WI John Verfuert's

### **May 25-28, 2001 Midwest Regional Fly-in**

Mentone, IN Joe Mahr Greater Midwest Rotorcraft Club 630-325-0505 <http://pra18.8m.com>

### **June 16, 2001 EAA Pioneer Day & Chapter 75 Meeting**

Oshkosh, WI June 17 rain date

### **June 22-24, 2001 Stevens Point Fly-in**

Stevens Point, WI Airport Scott & Sarah Mcqueen 715-344-7356 <http://webpages.charter.net/jenny/ste/index.html>

### **July 18-22, 2001 PRA Annual Convention**

Mentone, IN Pam or Erica at HQ 219-353-7227 [prahq@aol.com](mailto:prahq@aol.com)

### **July 21, 2001 Chapter 75 Meeting**

Location to be determined

### **July 21-22, 2001 Jakel Barnstormer Fly-In**

Abbotsford, WI Contact Jack LaSee (715)223-4540

### **July 25-31, 2001 EAA Airventure 2001**

Oshkosh, WI (920) 426-4800 [www.airventure.org](http://www.airventure.org)

### **August 5, 2001 Merrill Airport Day**

Merrill, WI

### **August 12, 2001 Musky Day Fly In**

Boulder Junction, WI With Darko's World Famous BBQ Chicken. Contact Bob Payzer (715) 385-2979.

### **August 17-19, 2001 Wautoma State Fly In & Chapter 75 Meeting**

Wautoma, WI Lake Of The Woods Campground with Chapter 75 Meeting on the 18.

### **September 15-16, 2001 6th Annual Blume-Voss Fall Fly / Camp-Out**

Little Chicago, WI Joint Chapter 75 and EAA Chapter 243 Meeting

### **October 20, 2001 Dick Lees Polish Luau & Chapter 75 Meeting**

Tomahawk, WI

### **November 10, 2001 Chapter 75 Meeting**

Location to be determined

### **December 8, 2001 Chapter 75 Meeting with EAA 640 & 243**

Merrill, WI Merrill Airport

*Calendar of Events is updated monthly.*

*Contact Tom Voss [tvoss@pcpros.net](mailto:tvoss@pcpros.net) to list events in subsequent newsletters*

## Get NCWLF Newsletters On-Line

Hey - Want to see the newsletter in color? See it the way it is meant to be seen? Sign up for e-mail delivery of the chapter newsletter and all this can be yours. Send me ([tvoss@pcpros.net](mailto:tvoss@pcpros.net)) your e-mail address and let me know you want edelivery. You will be the first to be notified when the newsletter is hot off the matrix. You can even print your very own copy. Remember - past newsletters are available day or night at <http://www.pcpros.net/~tvoss/>

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