

1st Q 2008

Schedule
Fri. 1/11, 2/1,
2/22, 3/14
St. James Church 7:30
New members 6:30

Board Meeting
Wed. 1/8, 1/29,
2/19, 3/11
7:30 pm
Pegasus

Officers

President: George Fox
Vice Pres: Ron Wojcik
Secretary: Gail Scaglione
Treasurer: Ray Barren

Board

Chuck Schummer Bob Rodgers
Bob Waldraff Orv Chatwood



Christmas Party Well Attended

With business quickly out of the way, the meeting of Dec 14th was adjourned. Immediately the aroma of hot pizza filled the room.

The Christmas Party of 2007 was under way.

Our traditional spread of pizza and holiday desserts was arrayed in superb holiday style.

Anxious and hungry members loaded up plates and took seats at the tables.

The annual Christmas party is an opportunity for all of our members to get to know each other and to recall all the great times that were enjoyed over the past year.

Our annual radio raffle was won by George Fox. At every meeting during the year, each member drops a ticket into the bucket for this raffle.

This drawing was instituted to encourage attendance at our meetings.



Members enjoy good food

The more meetings attended the better your chances and of course, one must be in attendance to win it.

As everyone enjoyed the festive atmosphere, talk inevitably turned to the coming year and the projects, planes and events to come.

Everyone had a great time.

2008 Election Results

Exhibiting a smooth transition of leadership posts, our December meeting slid into history with a single vote.

George Fox moved into the president's post and Ray Barren assumed the Treasurers position.

Ron Wojick took over as vice-president and Gail Scaglione was retained as secretary.

Jim Devlin will stay on as editor.

Chuck Schummer was newly elected to the board joining Bob Rodgers,



2007 Officers and Board Members
Photo by George Fox.

Bob Waldraff and Orv Chatwood.

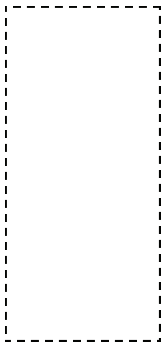
Our 2007 officers must be commended for the excellent service they rendered during the past year.



The Flying Knights
c/o 5761 Diana Lane
Lake View, NY 14085



The Flying Knights of Hamburg, NY
Academy of Model Aeronautics - A Chartered Radio Control Flying Club
www.theflyingknights.com



2008 dues

Membership dues **must** be received before **Jan. 18, 2008** or you will be dropped from the roster. Extension by request only. (Call 699-4716). Please use the form below to renew your membership by mail. Remember, flying privileges at the Nike Site and the North Collins fields are restricted to club members only! Return form along with your **payment** and a copy of your **2008 AMA card** to Ray Barren, 7330 Kent Road, Little Valley, NY 14775. or in person at our regular meeting. You must present your current AMA card or a copy of same. Please make sure that your email address is current, legible and correct.

2008 Dues Renewal Form

Please print legibly:

Name: _____

Address: _____

City: _____ State _____ Zip: _____

Phone: _____ A.M.A. # _____

Email: (If you have one.): _____

Nike Field Update

Contributed by Bill Hauth

So far I have no real news to report since the last newsletter. As most of you know, I've been looking for vacant land around the area for a new flying site.

There's been a few properties that were close to what we need,

But as you all can figure the price tag on them is, "in my opinion beyond our means."

The best solution is to try first to work with our local government to obtain use of park properties as the current Nike site is.

We are working with the Town of Hamburg to find a new site but have been at a standstill due to the elections this past fall. Basically we're in a lame duck period until the new officials take office this coming year. I ask that all members keep their ears and eyes open for possible flying sites.

This is a tough request, but ask yourself how much would you be willing to spend to be able to fly.

I'm not here to raise the dues but, as a membership, we have to look at the worst case and that's purchasing at least 100 acres at around \$350,000.

That's a worst case but, even if we end up at a county park it will take a huge amount of work to make it flyable.

The reason I'm saying all this is, if we don't have an idea of what's doable and we may miss out on an opportunity.

Think about this scenario...

"I just found 37 acres that backs up to a 200 acre land fill. The asking price is \$112,000, do I jump on it?"

I need to put a bid in next week, there are 2 other buyers."

Again, the club needs to think this type of thing over.

Have a good building season.

2008 Building Project



Ultimate Biplane

The Ultimate Biplane! This great classic is the subject of Bill Hauth's annual building program.

Many who gathered to make Cherokee's last year are again meeting each Tuesday or Wednesday evening during the winter months to build this great model, the Ultimate Biplane.

This years project will be built from a kit. Stop by at Bill's Place get all the details or email him at: toolmkr@adelphia.net.

KNIGHT'S SWAP SHEET

WORLD MODELS---"INTRUDER 90"
PATTERN ARF---PRECISION MANUVERS AND SPORT FLYING ---NO BAD FLYING HABITS. 60 FLIGHTS, NO MISHAPS

Equipped with:

JR622 6- ch computer radio

OS.91 4 cycle engine

Complete ready to fly — ~~\$350.00~~ \$299.00

Plane with engine / servos - ~~\$275.00~~ \$259.00

Plane and engine only — ~~\$195.00~~ \$179.00

Call

Jerry Piscitello

649-7947

New
Prices

Wing span ---63", Wing area---690 sq in
Length w/spinner--58",
Weight inc engine---7.5 lbs.



Completed Models-
Ready for engine and radio.

Engines - Planes
Many new in box.

Call Elmer Gross

at 896-1183

Knights-Take 20%
off asking prices!

If you have something for sale, or you are looking for something special, put your request in "The Swap Sheet".

Free to all club members.

Disclaimer: This feature is presented as a service to the members of our club. All transactions are between the buyer and the seller only. Neither the Knights, its officers nor any entities will be held accountable for any dispute. Do not call Knights or Editor to execute sales.

Continued from P-5

The result is that the sterling engine is very efficient.

The Stirling engine does what all engines do. They simply convert heat energy into motion.

The motion then does work. It might move our car, fly our plane, generate electricity, heat or cool our houses or any of a thousand other jobs around our planet.

Make Plans for Toledo
 This year's Toledo event will take place on...
April 4th - 6th.

Don't miss this Great Chinese Auction Meeting of Feb. 1st.
Benefits our NC Field Fund.
A great opportunity to unload your cra—uh, unneeded items.

UB Chapter of AIAA to Design Unique Plane

Two of our newest members bring with them a very interesting project.

Tom Leach and Andrew Hutchinson are students at UB, participating in the design and construction of a very specialized model aircraft.

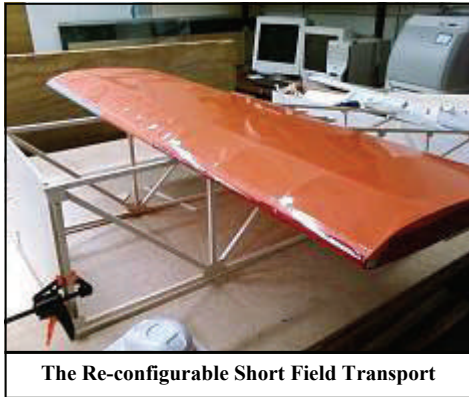
It will be entered in the annual Cessna Aircraft Company/Raytheon Missile Systems - Student Design/Build/Fly Competition.

This A.M.A. sanctioned contest is to be held on April 18-20 2008 at the Cessna Facility in Wichita, Kansas.

The event is held each year and provides a real-world aircraft design experience for engineering students by giving them the opportunity to validate their analytic studies.

There is a cash prize of \$2500 for the model that finishes in first place.

This is not an easy task. A detailed report must be submitted.



The Re-configurable Short Field Transport

Two flights are required, the first without a payload.

These are UAV's (Unmanned Aeronautical Vehicles) that are designed to meet certain criteria with regard to payload, propulsion and flight.

This year's vehicle is a Reconfigurable Short Field Transport.

The entry is under construction and flight testing will take place in January at the Nike Site.

More information can be found on the AIAA website, www.aiaadbf.org

2007 Fall Auction

This years auction featured quite an array of great RC great array of good looking airframes. There were engines and radio systems as well.

At noon, the customers took their places in anticipation of a high spirited event.

Auctioneer, Billy Hauth, kept things moving at a quick pace.



Taking care of business

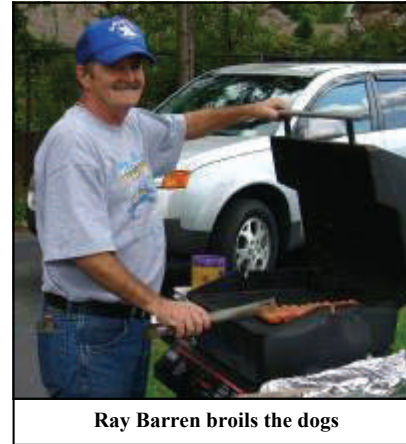
There were a few buybacks, as there often is at these events, but in general, both buyers and sellers struck a deal.

It is not known how many people came from out of town to attend the auction. A number of people came from clubs in the nearby area.

The auction proceeds benefit our club by supplementing our annual income.

Our club has several major costs throughout the year, such as mowing at the North Collins field, taxes on the field and sharing the cost of the facilities at the Nike Field.

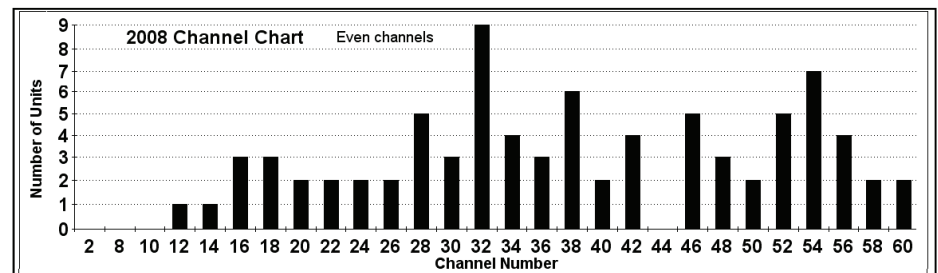
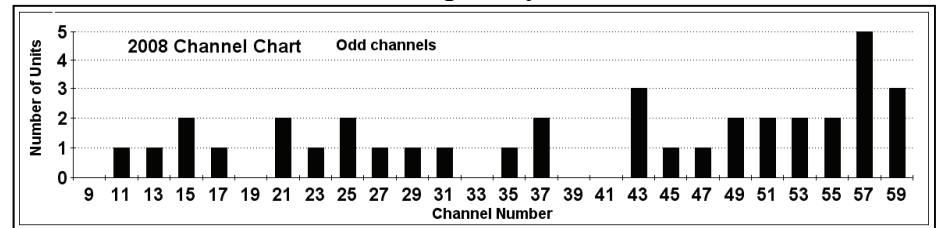
The auction helps out by providing another means of helping to keep our dues at a reasonable level.



Ray Barren broils the dogs

Doughnuts, coffee, pizza and of course, char-broiled hot dogs made for a decent lunch while the bidding wars took place.

2008 Frequency chart



An Old Engine Returns

At a recent meeting in October, member Orv Chatwood demonstrated a unique contraption.

Not many had ever seen or even heard about this remarkable invention.

The device was a Stirling Engine.

So, what's a Stirling engine and how does it differ from the engines that we use every day?

The engine that we, as modelers, are most familiar with, is the 2-cycle gas engine.

We also can claim to have knowledge of the 4-cycle engine that a number of us use to provide the power to fly our planes.

And, of course, a common 4-cycle gas engine lives in every automobile.

The diesel engine, too, is very similar to the 2 and 4 cycle gas engines.

The Stirling engine

The Stirling engine is quite different. It is actually older than the gas engines tracing its roots back to the early 1800's.

It was invented in 1816 by the Rev. Dr. Robert Stirling as a safer alternative to the steam engines of his day.

Because high strength steel had not yet been developed, steam engines often blew up, seriously burning the operators.

When mass production of quality steel came about, the steam engine replaced the Stirling engine which then faded into obscurity.

The Stirling engine is much more efficient than gas engines. In this day of green power and efficiency why do we not see it used more.

Power is not the reason for it's lack of popularity. It could stack up with the best of the automotive engines.



Orv applies the heat

It is used in submarines and some stationary engines where a lot of power and durability are required.

External Combustion

The biggest difference is that it is an **external** combustion engine while the gas engines are **internal** combustion and there lies the main reason why this "green" machine is not in more common use.

You will have noticed that Orv applied a torch (lot's of heat) to the unit that he demonstrated. That's where the combustion occurred.

In an ordinary gas engine, the fuel is injected into the cylinder. A spark, or other means of ignition is applied to the fuel, which then "explodes".

This explosion forces the piston downward, where the crankshaft converts the linear motion into rotary motion to provide power to the wheels of a car or the propeller of an airplane.

The biggest advantage of the internal combustion engine is the fact that the power is instantaneous.

As soon as you apply the fuel, power can be applied to the load.

Not so, with the Stirling engine, (or the steam engine for that matter).

You first have to ignite the fuel, which then burns until the operating temperature is reached. After the operating temperature is reached, the working fluid can be applied to turn the crank.

There is nothing wrong with external combustion. Railroads used it successfully for over a century.

But, how would you like to wait 20 or 30 minutes until the engine is ready before you could drive your car.

No wonder the Stirling Engine faded into history.

But there are applications where the wait doesn't matter. In these situations, the smooth, silent, efficient Stirling Engine could really shine.

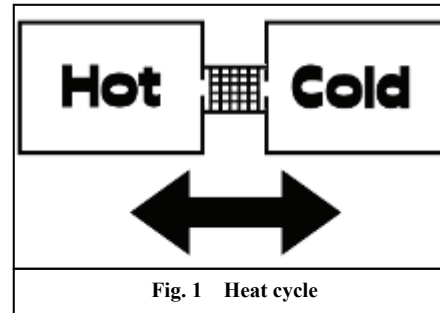


Fig. 1 Heat cycle

Since there are no explosions, there is no noise or vibration. Just the smooth easy transfer of power to the load.

So the real obstacle comes down to one of convenience.

The regenerator

So, how does the Stirling engine work?

The key element is the regenerator.



Orv's Stirling engine.

This is a device that sits between the hot and the cold reservoirs of the engine as shown in Fig. 1.

The regenerator is a device that stores heat as the working fluid passes between the chambers.

It is a cyclic device. On the first part of the cycle the hot gas flows through the regenerator from the heater to the cooler.

The hot gas transfers heat to the regenerator matrix. Here heat is stored. The gas becomes cold.

During the second part of the cycle the cold gas flows in the reverse direction, absorbing the heat that was previously stored in the matrix.

Heat to motion

In the Stirling engine the gas never leaves the chambers. It simply moves between the compression and the expansion chamber.

Since combustion takes place outside the cylinder, almost anything can be burned, from solar energy to garbage.

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