



# Silver Lining

[www.hollycloudhoppers.org](http://www.hollycloudhoppers.org)

Winter 2005



**Be safe, have fun and don't have too many rules!**

## From The Editor

By Scott Rhoades

December 16<sup>th</sup> was a somber moment for the *HCH*. As many of you know long time member Don Campbell passed away. I knew Don long before either of us ever considered getting involved with R/C airplanes, going all the way back to 1970. You see I grew up just a few doors down from the Campbell household. To say I “knew” Don since that time wouldn’t be totally accurate. Those early years it was just a little more that we knew OF each other. To me, he was Pam and Jackie’s dad. To him, I was one of the many little snots terrorizing neighborhood that would occasionally try to make friends with his humungous and ferocious dog, Teddy.

Many years later, because of our common interest in R/C airplanes and affiliation in the *HCH*, I got to really know Don. We had several pleasant chats on the phone, at Don’s house or even at the field after the sun had set and our vehicles were the only ones remaining in the parking lot. To say Don’s contribution to the club will be missed is a vast understatement. He took care of little things that many of us don’t even consider. Don’s amiable personality will be missed too; he would appreciate the lighthearted statement from his successor to position of safety officer... “I do not plan on demonstrating my position by sticking a hand in a spinning prop”. The Don I came to know would also be very delighted that his memorial will be held at the flying field. He would also enjoy the humor, having a quick retort or two for a suggested theme: that we all wear straw hats, fly 40 sized planes with oversized engines and huge balloon tires.

Writing about Don for this newsletter started very shortly after his passing. Only recently did I take on the task of paring it down to several sentences. The editing process involved numerous moments of pondering by leaning back in my desk chair and staring in the direction of all my R/C gear. I should explain that a recent move has my computer and all of my R/C gear temporarily exiled to a remote corner of an unfinished basement. With my thoughts of Don and the close proximity of nearly two decades of R/C stuff, I had what I guess is an epiphany; realizing how much of an impact these simple airplanes have had on my life. It became almost overwhelming when the thought train kept rolling, distinguishing those aspects of my life where aeromodeling is the sole root. Things such as past employment, where I live and spin off interests are just a few examples of the several pages I could connect to R/C and the *HCH*. Some of you may understand what I’m talking about, while others may think I’m just a

little too fanatical about R/C for it to have such an impact on my life. How far my involvement goes in the actual sport is not that big of a factor, and it’s far from fanatical by the way. Even though the root is the planes, the long extending branches are the people that share the interest. Thank you to Don and others I call friends, that extend the enjoyment of this sport far beyond balsa and Monokote.

As usual, the annual HCH meeting went well. With good harmony, club officers were selected for the next year and club operations were tweaked ever so slightly to make the club just a wee bit better than the previous year, at least we hope. You will notice that for the first time meeting minutes are not published in the newsletter, since the minutes along with club financials are accessible through the club web page in the “members” section it just seemed redundant to print them here too. For those that receive the newsletter in paper form, you will find your minutes on the separate sheet sent with this newsletter, which also has the 2004 club financial report on the opposite side. Those that couldn’t attend the meeting missed a meet and greet with AMA District VII vice president, Bill Oberdieck. Thanks to Mr. Oberdieck for coming out to our humble little

*(Continued on page 5)*

## 2005 Events

- † **Toledo R/C Exposition** - April 1,2,3  
[www.toledoshow.com](http://www.toledoshow.com)
- † **Field Prep Party** - April 16<sup>th</sup> 10:00 am  
(Alternate rain date) - April 17<sup>th</sup> 12:00 am
- † **Crossroads Village** - June 4<sup>th</sup> 11:00 am
- † **Fun Fly** - June 18<sup>th</sup> 10:00 am
- † **Open House** - August 7<sup>th</sup> 12:00 pm
- † **Don Campbell Memorial** August 8<sup>th</sup>
- † **Last Bash Potluck** - Sept. 24<sup>th</sup> 4:00 pm
- † **Chili Fly-In** - Jan 1<sup>st</sup> (2006) 11:00 am

## Fuel Facts

By Don Nix

*This is the Fourth article in a series of five written by Don Nix, founder and former owner of Powermaster fuel. Previous articles can be found in the newsletter archives on the HCH web site. Starting with the spring 2004 issue.*

### 2-Stroke vs. 4-Stroke Fuels - Is there really a difference?

Well, what do *you* think? Is there really a difference, or is this merely a big hype by the fuel manufacturers to sell more products? Let's see a show of hands.....ah, yes...about evenly divided. Well, let's explore the *facts*.

**Fact:** Most 4-stroke model fuels contain less oil than comparable 2-stroke fuels.

The most common response to this is, "But 4-stroke engines have more moving parts....they should need *more* oil, not *less!*" Well, that sounds reasonable, but it doesn't stand up under close examination. The number of moving parts has nothing to do with it. What is important? Think about it.

**Fact:** With rare exceptions, 4-stroke engines run at substantially slower rpm than a comparable 2-stroke engine...most in the under-10,000 rpm range vs. 12,000, 13,000 or more for a typical 2-stroke of the same size. They are engineered to deliver maximum power at slower rpm, with bigger props. What does this have to do with it? One of the main factors used in determining the proper oil content of fuel is heat. To use the well-worn term, it doesn't take a rocket scientist to figure out that the more slowly an engine turns, the less heat it generates from friction. If you don't believe that, rub your palms together slowly, then as fast as you can. So....lower rpm = less heat = less need for oil.

**Fact:** 4-stroke engines only fire every other stroke, vs. every stroke by a 2-stroke engine. Firing, or combustion, burns fuel, which creates heat. Logically, it may be deduced that if there is fire in the chamber only every other stroke, the engine has time to cool off a bit between combustion cycles. Let's take that a little further: Using a hypothetical 4-stroke engine turning 10,000 rpm = 5,000 combustion cycles per minute, vs. a hypothetical 2-stroker turning 13,000 rpm...with the same number of combustion cycles per minute....the gap widens. The 2-stroker has *160% more combustion cycles* than the 4-stroker. Even though this is partially offset by the fact that at least some 4-strokers have a higher exhaust gas temperature, the message is clear: 4-strokers remain cooler, and need less oil.

**Fact:** Oil doesn't burn (or shouldn't) - methanol does. Using a little logic, we arrive at the conclusion that a properly made 4-stroke fuel will deliver better performance than a 2-stroke fuel in the same engine.

*Why? Remember...the 4-stroker is only firing every other stroke. This results in the plug element wanting to cool down between strokes, resulting in a "colder" plug. Excess or unnecessary oil, constantly dousing the element, is going to make it more difficult to achieve a slow, smooth idle. Those who contend that, "Well, using too much oil can't hurt anything" are wrong. In addition to causing undue friction in the engine, keeping the metal parts from properly mating, etc., too much oil in 4-stroke fuel is constantly trying to cool a plug element that is already having problems. Sort of like pouring a bucket of cold water on a poor guy who is already shivering.*

Again, since oil doesn't burn, it's doing nothing to help us develop power...it simply lubricates and goes right out the exhaust and all over everything. *However*, suppose we *don't* put unnecessary oil in the fuel, and replace it with methanol, which *does* burn. Well, what do you know...greater top end power! Hey, I think we're on to something here! Remove unnecessary oil from 4-stroke fuel, and we get a "twofer" - two benefits for the price of one....a slower, more reliable idle plus greater top end power!

Conclusion: For reasons that should be clear above, a properly blended 4-stroke fuel should deliver better all-around performance in a 4-stroke engine than a regular 2-stroke fuel in the same engine. While it's not going to actually harm anything to run 2-stroke fuel in a 4-stroke engine, *never, ever* run 4-stroke fuel in a 2-stroke engine. It's not going to have enough oil. Now, for those of you will say that you have done it with no problems, I'll agree....if you have a real good ear and keep the needle valve "fat" (rich), it will probably work just fine...but the official word is DON'T! It reduces your margin of error unacceptably.

*Finally: Because engine manufacturers have been burned in recent years by some fuel makers' attempt to lower the cost of their products by using either too little oil or a cheap grade, most manufacturers today are recommending that you run a 2-stroke fuel only in their 4-stroke engines, or will specify what would seem to be an abnormally high oil content (and it probably is). Who could blame them? Since they know they have no control over the oil used in someone else's fuel, they're just trying to cover their fannies. So would I.*

Note: I believe it's commonly known that the manufacturers of YS engines...among the most powerful 4-stroke engines available....mandate that only fuels containing oil contents in the normal 2-stroke range be used. Their engines are unique, and the manufacturer's recommendations should be followed, although, as with anything, there are exceptions.

Next Installment: **Storing fuel for maximum shelf life**

*This article is reprinted with the consent of Mr. Nix for use in the HCH Silver Lining Newsletter.*

My flight box has seen several tools / equipment go in and out of flavor over the years. However, there is one notable item that has remained constant nearly from the very beginning, a laminated preflight checklist for routine flights and maiden flights. This was given to me by my instructor and mentor, Jeff Lambert. I cannot explain enough how much of a valuable tool these two lists have been. I'll admit the routine preflight gets used only occasionally but on the other hand the maiden preflight checklist gets used before every maiden flight. The routine preflight checklist does prove priceless when I've allowed myself to be distracted during set up. Taking a couple minutes to read and think about various items on the list has caught forgotten checks that could have resulted in a lost airplane. The review also helps center my attention to the task at hand... insuring the safety of myself, others and that my model comes back in one piece.

With Jeff providing a few needed updates I've reprinted both list below. I've laid them out so folding this in half will place them back to back. If you don't have similar list, I highly recommend taking this, having it laminated, (which can be done at any UPS Store AKA Mailboxes Etc. for roughly \$1.50) and then making it a well used tool in your flight box ✂ too! *Scott Rhoades*

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## ROUTINE PREFLIGHT CHECKLIST

### Internal (Before attaching wing)

1. Check that servo mount, servos, and servo arms are secure.
2. Check that pushrods are secure.
3. Check that receiver and battery are secure.
4. Check for loose items/wires that could foul servo arms/pushrods.

### Wing

1. Check for breaks, warps, cracks, etc.
2. Check aileron pushrods, linkage, clevises and hinges prior to securing wing.

### Engine Area

1. Check engine mount, engine, muffler, prop nut and/or spinner.
2. Check prop for nicks, cracks, etc.
3. Check nose steering mechanism (if equipped).
4. Check that cowl is secure (if equipped).

### Tail Section

1. Check vertical fin, rudder, hinges and rudder clevis for security.
2. Check tail wheel (if equipped).
3. Check horizontal stabilizer, elevator, hinges and elevator clevis for security.

### Range Check/Fight Control Check

1. When frequency pin is available, attach to antenna and range check aircraft with antenna collapsed.
2. For computer transmitters, be sure correct model has been selected
3. Check that flight controls move in the proper direction.
4. Check transmitter for correct rates.
5. Check that flight control surfaces are in proper trim
6. If using buddy box connect transmitters and repeat steps 3, 4, and 5 for slave Tx
7. Tx antenna fully extended after successful check.



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## MAIDEN PREFLIGHT CHECKLIST

### Internal (Remove wing if attached)

1. Check that servo mount, servos, and servo arms are secure.
2. Check that pushrods are secure.
3. Check that receiver and battery are secure.
4. Check for loose items/wires that could foul servo arms/pushrods.

### Wing

1. Check for breaks, warps, cracks, etc
2. Insure center section is adequately reinforced.
  1. Check aileron pushrods, linkage, hinges and clevises
  2. Brief new pilots on adequacy of rubber bands.
  3. After wing is in place, check for proper incidence and alignment, as best you can.

### Engine Area

1. Check that the firewall area is fuel proofed.
2. Check that engine mount, engine, muffler, prop nut and/or spinner are secure.
3. Check prop for nicks, cracks, etc.
4. Check nose steering mechanism (if equipped).
5. Check that cowl is secure (if equipped).

### Tail Section

1. Check vertical fin, rudder, hinges and rudder clevis' for security.
2. Check tail wheel (if equipped)
3. Check horizontal stabilizer, elevator, hinges and elevator clevis' for security.

### Balance

1. Balance aircraft with fuel tank empty.
2. Show new pilots proper balance point and balance technique.
3. Explain danger of a tail-heavy aircraft.

### Range Check/Starting Engine

1. Insure batteries have been adequately charged.
2. \* When frequency pin is available, attach to antenna and range check aircraft with antenna collapsed.
3. For computer transmitters, be sure correct model has been selected
4. Check transmitter for correct rates.
5. Check that flight controls move in the proper direction.
6. Check for any servo and linkage binding while moving flight controls.
7. Check that flight control surfaces are in proper trim.
8. Fuel aircraft
9. \* Start engine
10. \* Tune engine (AWAY FROM PIT AREA).

\* Explain How/ Why to new pilots.

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## Land Development Near the HCH Field

By Mike Wizynajtys

Over the past winter it has become very apparent that we will be getting some new neighbors at more than one location near the intersection of Grange Hall and Mackey Rd. Club president, Ed Kincer, asked if I could research what type of neighbors we could soon expect. On January 18<sup>th</sup> I called the Holly Twp. Building Department and spoke with Laura. Explaining our situation, I inquired about current and possible future development in the area and here is what I learned:

The north side of Grange Hall, at the old Stuckey's location also known at one time as Dottie's Pet Supply and St. Julian Wine store, will be developed into a truck stop with restaurant and gas station. The developer of the soon to be truck stop also owns the property immediately across Grange Hall on the SW corner of the Mackey Rd. intersection. Many of you may remember that just less than a couple years ago a house that stood on that property then seemed to disappear over night . This was the site originally intended for the truck stop. Even though the same developer still owns this land, no plans have been submitted to the township. However, I'm sure he has something in mind, even if to sell to another developer.

Now, over to our side of Mackey Rd. and still south of Grange Hall. According to Laura, that land is currently owned by Rob Rankin. The proposed development is for a small medical equipment remanufacturing facility and warehouse.

Personally, I'm happy with what I've discovered. I don't anticipate these businesses having issues with our activity, as long as we don't crash planes into their building . With I-75 and increased truck traffic coming to the truck stop, noise we create should be a non-issue at any of these facilities. The proposed medical warehouse to the north of us will not be directly adjacent to our property,. There are still several hundred feet of state land between us. Just to play it safe, I feel it will be in our best interest not to fly too far to the north of the field. We still need to do what we can to be good neighbors and hopefully, keep our site for many years to come. †

*Editors note: A truck stop at the corner is surely going to increase traffic in the area, therefore, further increasing the frustration of trying to turn left from Mackey onto Grange Hall. Hopefully, before too long the state will find it necessary to install a stoplight. In the meantime, please exercise extreme caution at this intersection. You may find it worth the extra drive, like a few members, to go south on Mackey to make your way to E. Holly Rd.*

**Thank you to Holly VFW post 5587**  
for once again allowing the club to use their hall for our annual meeting.

### 2005 HCH Club Officers

<b>President</b>	Jim Shipman	14459 Ripley Rd.	Linden	MI 48451	810-735-9113	Shipman830@cs.com
<b>Vice President</b>	Chuck Beach	430 Grange Hall	Ortonville	MI 48462	248-627-4844	
<b>Secretary / Treasurer</b>	Larry Pittman	11406 Majorca Pl.	Fenton	MI 48530	810-750-0047	larrypit@chartermi.net
<b>Safety Officer</b>	Frank Robinson	9441 Whitelake Rd.	Fenton	MI 48430	810-629-3963	lrobinf@aol.com
<b>Newsletter Editor</b>	Scott Rhoades	12361 Duffield Rd.	Gaines	MI 48436	810-923-3799	

(Continued from page 1)

club and giving many of us our first live encounter with an official from the AMA.

As I review the February meeting minutes to begin my own shoptalk of club news, I see Larry Pittman did an excellent job paraphrasing the entire 2-hour meeting. Since his minutes are pretty much self-explanatory, I'm only going to expand on just a couple subjects regarding what is new and coming up for the 2005 season. First and foremost the membership cap that was eliminated last year has been reinstated and set at 85 members. With the fast growing popularity of park flyers no one knows when or if those folks will graduate, looking for clubs to join so they can fly bigger, faster planes. You know what its like to get hooked on this sport, don't ya? So, Don't let your membership lapse because you might find a waiting list to get back in.

With the newsletter incorporating electronic distribution last year we saw a huge decrease in cost to deliver club news to the membership, compared to the previous year. However, I'm still not happy. I believe the club's financial responsibility for the newsletter could easily be zero. If you don't currently receive the newsletter electronically but have the means, one way or another, please get an e-mail address to Larry Pittman. It will be many years before the newsletter can be 100% paperless, but until that day comes anybody that can line up "advertisers" to offset the remaining printing and mailing cost please send them my way.

Club events and dates are fairly similar to last years, with a couple exceptions. First and foremost the Campbell family wishes to hold Don's memorial at one of his favorite locales, the club field. Tentatively this has been scheduled for August 8<sup>th</sup> the day immediately following the Open House. The next couple newsletters will have more info.

This spring's field prep party, scheduled for April 16<sup>th</sup> at 10am, has a few items on the agenda to take care of this year. It was unanimously agreed that some rearranging needs to be done, moving a few pit stations so they're not directly behind any of the pilot stations. We will also be adding, at most, 4 new starting benches to the pit area. The last I heard these benches will arrive Saturday as precut pieces and competitive teams will be formed to assemble them. Team scores will be judged purely on craftsmanship and not time. Also, don't forget the ever-popular tailgate swap meet that runs concurrently with this event.

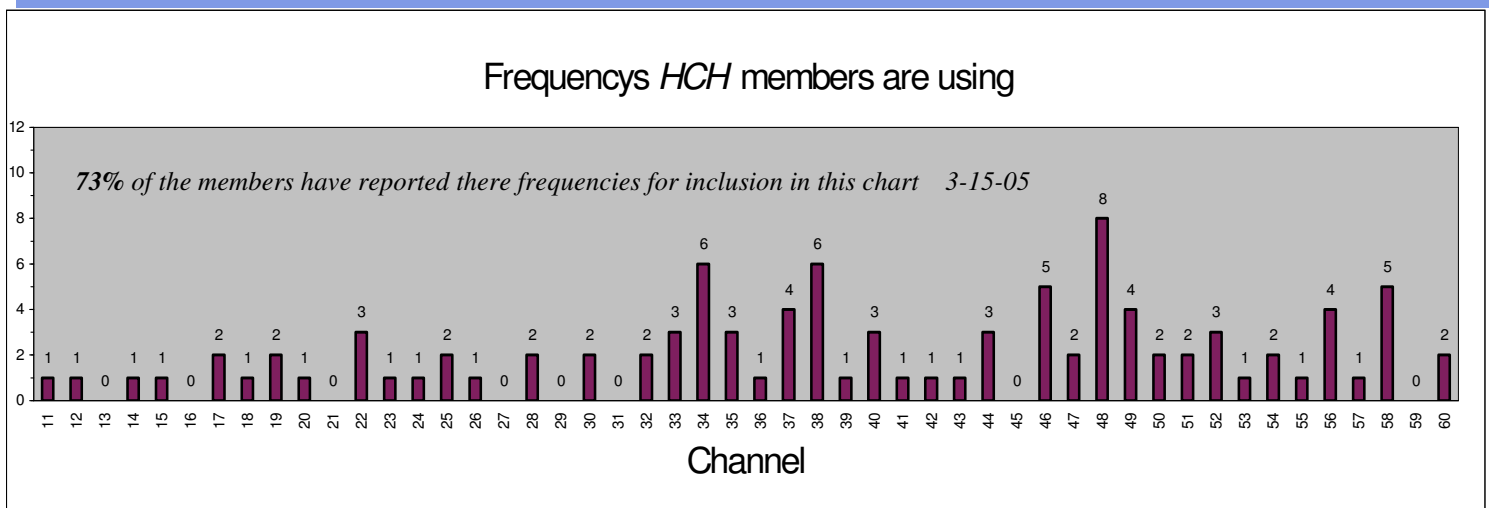
We've been invited back to Crossroads Village for a third year; however, there will be a few changes for this year. First, we will only be there for one day, Saturday, which will sound good to many members that wished to participate before but couldn't. Second is the date. Prior years they had us come mid July. This year they changed the event, which we will coordinate with, that puts us at June 4<sup>th</sup>. Crossroads officials tell us that attendance will be 3-4 times larger than what we've experienced before. Lots of kids with many questions to answer. Should be a lot of fun!

Merchandise with embroidered club logos are always available to order from Al and Amy March @ Black Horse Enterprises and prices haven't yet changed from last year. With polo shirts at \$20, sweatshirts at \$25, hooded SS at \$32, and caps starting at \$12, now is a good time to get that apparel to show club affiliation at Crossroads Village and other events. Order forms will be available at the flying field on the bulletin board or you can call me, Scott Rhoades, at 810-923-3799

A final note: The club's web page has a new address [www.hollycloudhoppers.org](http://www.hollycloudhoppers.org)

Take care for now and we'll see you at the flying field. ✈

## Frequency Distribution



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## ***Radio Control Flying Club***

***AMA Charter club #3117***

***Flying Field located on Mackey Rd. 1/4 mile  
South of Grange Hall near I-75 Holly, MI  
Visitors always welcome!***

***GPS location N42 48.596 W83 34.342***

**HCH Member**