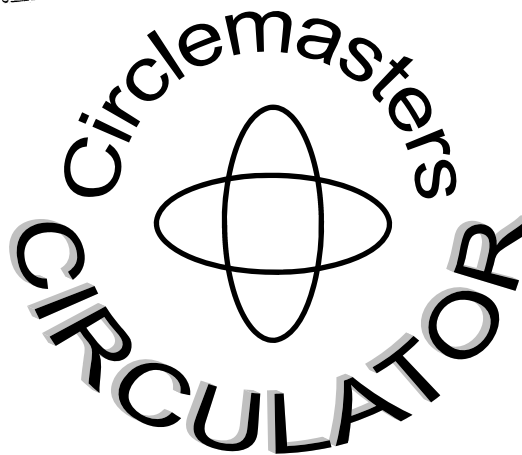
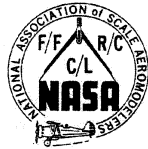


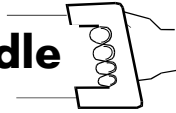
Circulator
Howard Olson, Editor
321 10th Street South
Wisconsin Rapids WI 54494



Newsletter of the Circlemasters Flying Club
Milwaukee Wisconsin
Academy of Model Aeronautics Chartered Club # 662

July 2010 Volume 8 issue 7

At The Handle



If you would like to contribute material, please submit to the address on the cover or contact me at (715) 697-8458 I may be reached via e-mail at clmodman@wctc.net

Ramblings from your editor

Hello Circlemasters, its just what you were hoping for, another issue of the *Circulator*. This month we have some great stuff for you. I trust everyone had a good time at the contest. As you know, I had to miss it because of family obligations. Wayne however was on the ball and sent some really super duper pictures for us to check out. That's a god thing too since the rest of you slackers didn't send much. (Pete is excluded from the above insulting remark, he sent something too.) Pete's submission will be in next month's issue as I want to move it one notch closer to the building season.

Today was June 27th and it was the first opportunity I had to fly this year. How sad is that? Anyway, I dragged the autogiro and my pit crew / wife out to the tech college where I fly and gave it a ... whirl. Wow that was good, get it? Whirl, like the blades on an autogiro, or maybe like some nut spinning around while a model airplane flies around him? I am a real wordsmith. Anyway, all three of us came home in one piece so it must have been fun.

Last weekend Erik and I took a trip down to the Bong Recreation Area near Burlington to see how the other dinosaurs of the model airplane world do their thing. The Bong Eagles had their annual old timer contest happening. You have to be careful when you go to one of these deals. When you see how amazing a rubber powered free flight model is in flight, it gives you ideas. Kinda like the ones you get when some slob leaves the swimsuit issue of *Sports Illustrated* laying around at work and it accidently flops open to pages with pictures of a twenty year old sweetie in half a bathing suit. Ok maybe those aren't exactly the same kind of ideas, but the point is, both will lead you astray. Those Bong Eagles guys aren't much help either, as soon as they find out you are a model airplane nut, they circle like sharks with blood in the water. "Hey, doesn't this look like fun?" "I have some plans I'll send ya if you want to build one." "You can knock one of these jobs out in one weekend if you get down to business building it." Absolutely shameless. We had fun watching the show they put on and they are a great bunch of people. Erik helped out by finding a radio tracking transmitter that broke loose from a model and landed in tall grass. This thing is about the size of a Tylenol capsule with a foot long wire antennae about the same gauge as a strand of hair.

That's all for this month's witty banter so sit back and enjoy the newsletter. See you at the meeting.

Howard



First annual meeting of the Circlemasters Men's gymnastics team. Just kidding fellas. Thanks to Pete, Gene and Buzz for judging stunt at the 2010 contest.

CIRCLEMASTERS FLYING CLUB MEETING MINUTES FOR JUNE 2010

The monthly meeting of the Circlemasters Flying Club was held at the Sussex Village Park Flying Field on the very nice and warm Saturday of June 5, 2010. It was fine flying weather!

*

MEMBERS PRESENT: Wayne Schmidt, Ralph Kohn, Pete Mick, Mike Strand, Don Adriano, John Schram, Gene O'Keefe, Len Dopke, Gene Schiederer, Jason Nettesheim, Buzz Parika, & Dan Tetzlaff. Potential new member Dennis Biggie and his yellow Chevelle were also there.

The meeting was brought to order at 1:04 PM by Pres. Jason N. who began by asking the members if they had read received the newsletter and had read the minutes of the May meeting which was published in the club newsletter. All who were present did receive the newsletter and had read it from cover to cover. When queried, regarding the minutes it seemed that there were no corrections or changes required. Therefore the minutes were approved as published; by the membership. (Inspired by an Agatha Christie novel)

The treasurer's report was presented by club Treasurer, Ralph Kohn. Ralph reported on the financial status of the club including all recent transactions. A motion to accept this report was made by Dan and seconded by John. Following a long and difficult to hear explanation regarding the clubs bank accounts it was voted to have Ralph consolidate all assets into the club checking account thereby avoiding additional service fees. A motion was made and passed unanimously.

REPORTS AND ANNOUNCEMENTS:

John Shram reported that a member of the Bong Eagles of which John is a member, offered to donate seven (7) older control line models to the club. John asked if the members would accept these models and it was decided that they could be put to a number of good uses. Don A. Volunteered to store them and transport them!

OLD BUSINESS:

Contest director Pete discussed the status of preparations for the club contest. Pete outlined duties and responsibilities, start times, testing of models, food, registration, judging, etc. Pete said that the pull test is particularly important and should be done as discussed and according to the tables provided.

NEW BUSINESS:

Don began a discussion regarding membership participation at the club sponsored events like the contest, The Steam Show, Lisbon Show, etc. Pete added that until a few weeks ago there were only six confirmed volunteers for the contest, clearly not enough. Since then four more members came forward to volunteer. The bottom line is that there needs to be more participation at these events as well as at the monthly meetings.

UP COMING EVENTS:

The next meeting will be held on July 3 at the Sussex rd Flying Field @ 1:00 PM.

A complete list of remaining club events for 2010 will be available July 3.

Since there was no further business Pete called for a motion to adjourn the meeting. A motion was made by Pete and was seconded by Gene S. The meeting was adjourned at 1:39 PM.

SHOW AND TELL:

None

Submitted by:

Wayne M. Schmidt, Secretary

THE ATOGIRO

AND ME

Written by: Howard Olson

This story begins last year at Airventure in Oshkosh. I was going to renew my Vintage Aircraft Association membership down by the antiques and classics when I spotted the newly restored Pitcarin autogiro hat was on display. Wow was it cool. Painted up all red and black with gold accents. Then, an idea came over me. Wouldn't it be great to have an autogiro at the Sussex Steam Show. There's at least three whole weeks between Oshkosh and the Sussex show. No problem! So, I got back to Circlemasters outpost North in Wisconsin Rapids and got to work on the computer designing up an autogiro. First, I dug up the January 1974 issue of Model Airplane News to take a look at Otto the autogiro, possibly the best known control line ship of the type ever designed. In the grand tradition of not reinventing the wheel, I borrowed Otto's head and rotor design, then drew up a new fuselage and tail that shaved off considerable weight as compared to the original. That didn't take long. The design is a pretty straight forward profile. So, some balsa, ply and basswood went under the axe, or in this case laser, and it was building time! I got the fuselage ready in no time. Then the blades were formed. The blades are carved from 2 X 16 inch pieces of 3/8 balsa. Getting the blades relatively symmetrical was the only challenge here, that took some work, in the end they weighed nearly identical so I figured they must be pretty close. The blades were covered with .75 oz. fiberglass and West Systems resin to bolster their strength, which turned out to be a good idea. The head design for Otto had no real bearing on the plans. That just wouldn't fit with my philosophy of making even the simplest things overly complicated. A bearing was machined out of Delrin plastic. I used Delrin because it machines easily, but also because its pretty slippery stuff, so it would allow for free spinning of the rotor head. In a few days, the whole mess was together, the day we left for Sussex, the paint was even almost dry. For power, I used a Webra .35 engine that I found on ebay. The Webra is a light, but powerful machine that I used in my earliest carrier endeavors, so I was familiar with its function. Off to Sussex we go, Yay!!! The first attempts at flying the autogiro were less than spectacular, unless you are one of those guys who go to races hoping for a good crash. The flying instructions in the Otto article were tried first, let it build up speed on the ground and rise when the rotor gets moving. Ha! This thing accelerated like a fuel dragster when released and shot off the ground in about three feet! Unfortunately, it also rolled right in and recontacted the ground in no time. I'm glad I tried it before people showed up to watch. The next attempt was a little better. The Webra blew up when restarted. Worst engine failure I have ever experienced. The piston ring was fused to the cylinder liner and broken into a bunch of segments, the top of the piston was wrecked beyond belief, what a mess. Jim Kreuger helped by donating a Webra .32 that he had in his collection so we could try it again the next day. Jim's engine is a custom stunt timed unit that would seem to be perfect for an application like the autogiro. I fitted the carb from the ill fated .35 and the new engine dropped right in. Back to the field. Once again, before anyone shows up. Fire it up at a looowww throttle setting and increase power until it starts to move. Hey! Whaddayaknow, it flies! At least for a lap, then the wind breathes on it and it rolls into the circle, followed by the inevitable crash. Not so good. The fuselage cracked which allowed the rotors to whack a pretty good chunk out of the vertical stabs. The aluminum gear splayed out like a cartoon character's legs after falling off of a skyscraper and the rotor tips were banged up. Take it home and try again. Its obvious this thing needs all the help it can get staying out on the lines. To increase outward yaw, a line slider was used and now adjusted all the way back. More extreme wedges were put under the motor mounts. Fix up the damage, bend the gear back into shape.

Next summer. Let's try the autogiro again! Great idea. This time, things do work out better, the giro rises off the ground and flies so smooth that you could almost forget what you are doing while flying. It will however, still get your pulse elevated in some attitudes. If you get the nose high on the upwind side of the circle, get ready to jump back or its coming in on you. The throttle wasn't adjusted to idle down far enough initially. That lead to a pretty scary moment landing because this bird really needs to be landed with some power on to allow for control. Not being able to idle down made landing with power impossible, the plane wouldn't slow down enough. Here I lucked out and ran out of fuel about a foot from the ground, so it flared and set down nicely. A little more tweaking, and this crate should be a fun sport flying machine.

Here is what I learned along the way that might help others who are thinking about a project like this one: Plenty of out-thrust. If your engine is not mounted 90 degrees to the direction of flight, there's still room for more. Just kidding here, but out-thrust is your friend. Makes me wonder why control line engines were not always designed with counter clockwise prop rotation. That would make things so much easier. Engine throttling. You don't need a screamer of an engine on an autogiro. What you need is reliable idling and acceleration. I didn't use over half throttle on any flight so far and it still ends up faster than desired at times. Outboard weight. I am seriously contemplating adding an outrigger to the outboard side of the fuselage that matches the one for the leadout guide on the inboard side. That way some weight could be added that just might keep a few more hairs on my head from turning prematurely gray when rounding the upwind side of the circle. Wire landing gear. My autogiro has sheet aluminum landing gear that is actually Windy Urtnowski profile stunt gear that I borrowed from another project. Bad idea. The autogiro may pancake in on you and the stunt gear just isn't up to this kind of abuse. My pricey gold anodized stunt gear looks like it was forged with a hammer and anvil at this point. So there you have it. My experience with going down the dark path of autogiros. Try one yourself, getting it to work is a worthwhile challenge.



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