



The Flightline



Volume 40, Issue 2

Newsletter of the Propstoppers RC Club

AMA 1042

February 2010

President's Message



It seems like every one who flew at the Brookhaven gym had a great time.

So I went to see Harry at the gym to see if he had any additional days for us. He had the third sat open in Feb. and nothing in March. The club picks up the tab for all indoor flying including the \$1.00 for new junior flyers. Chuck Kime has done a great job at running this event as well as all the events at the fields.

Dave Bevan was going to start a small digging job at the gate to drain the water from the drive once the weather breaks he could use some help give him a call (610) 566-9152.

Don't forget the new hours of the meeting 6:00 to 8:00 due to library cut backs

This is the month for Show & Tells so please bring them in.

See you at the meeting

Dick Seiwell

Agenda for February 9th Meeting

At the Middletown Library;

Doors open 6:00 pm, Meeting 6:30pm,

Library closes by 8:00 NEW HOURS

1. Membership Report
2. Finance Report
3. Summer Meet and Picnic Plans
4. Show and Tell

INSIDE THIS ISSUE

- 1 *President's Message*
- 1 *Monthly Meeting Minutes*
- 1 *February Meeting Agenda*
- 2 *Calendar*
- 3 *January, a BIG Indoor Flying Month*
- 5 *Model Helicopters 101 – an Overview*
- 8 *Indoor Meet Schedules*

Minutes of the Propstoppers Model Airplane Club January 12th, 2010 at the Middletown library

Call to Order took place at 6:45 p.m. by Vice-President Dave Bevan
Roll-call by membership chair Ray Wopatek showed 18 members and 4 guests present

Minutes of the December meeting were approved as printed in the newsletter

The treasurer's report was deferred in the absence of the Treasurer

Old Business:

The indoor fly at the Tinicum School last Friday evening had a good turnout of about 14 flyers and many spectators. President Seiwell hoped that the upcoming fly at the Brookhaven gym would be just as popular. President Seiwell gave a status report on the Christian Academy field. The field is still in good shape.

New Business:

The president noted that the meeting time had changed due to cutbacks in the library hours.

He told us that he looked into the possibility of river stone placement at the wet entrance area to the Christian Academy field. For now he recommended that we try other measures during the spring field day. The club approved a motion to fund the indoor flying at both the Tinicum and Brookhaven flying sites.

Show and Tell:

John Moloko showed a new Hobbico Cessna 172 with 42 in. wingspan foam ARF.



Calendar of Events

Club Meetings

Monthly Meetings
Second Tuesday of the month.
Middletown Library
Doors open at 6:00 , meeting at 6:30 pm.

9th February

Tuesday Breakfast Meeting
Tom Jones Restaurant on Edgemont
Avenue in Brookhaven.
9 till 10 am. Just show up.
Flying after at Chester Park 10 am.

Indoor Flying

At the Tincum School Gym.
6:30 – 9:30 PM.
February 5, 2010
March 5, 2010

At Brookhaven Boro. Gymnasium
27th February 6 till 9 pm

Regular Club Flying

At Christian Academy; Electric Only
Monday through Friday after school till dusk
Saturday 10 am till dusk
Sunday, after Church; 12 pm till dusk

Special Club Flying

Saturday mornings 10 am
Thursday evenings in the Summer
Tuesday mornings 10 am weather permitting
after breakfast at Chester Park.

Check our Yahoo Group for announcements;
<http://groups.yahoo.com/group/propstoppers/>

Beginners

Beginners using due caution and respecting club
rules may fly GWS Slow Stick or similar models
without instructors.
The club also provides the AMA Introductory Pilot
Program for beginners without AMA insurance.

Propstoppers RC Club of
Delaware County, Pennsylvania.
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Mike Black showed an older Blue Arrow profile P 51 ARF with a brushless motor.



Mike Black with his P-51 Foamy

Jeff Frazier showed his T Rex Helicopter 450 Sports edition and pointed out the manual. He showed how the helicopter is set up and trimmed so that the blades are neutral at mid stick. He did this by applying a fly bar lock to the blades while he adjusted the settings.



Jeff Frazier explains the rotor mechanism with his helicopter

Adjournment took place at 7:45 p.m.

Richard Bartkowski, Secretary

January, a BIG Indoor Flying Month

By the time this is printed I will have been to 5 (that's FIVE!) indoor events.

Started with the Propstoppers at Tincum School on the 8th. Nice group of pilots and spectators. I think Parkzone has taken over where Air Hogs left off. Almost all the pilots had some Parkzone model. Vapor, Ember, Sukhoi, Cessena, and more.

It seemed like everyone was flying slow or fast planes at the same time, so it wasn't necessary to break things down to 2 flying periods. Lots of flying, and some crashing. Joe Moloko managed to put his Ember behind one of the boards on the wall. We got one of the custodians to come out. He got a big ladder out of the closet. We had a hammer to loosen the board, not necessary. There was enough room to reach in and get it. Anything for excitement Joe?

There were several kids flying. One had a Flight Streak copy. I gave him a few pointers and he was really excited when he got a flight around the room. I think we had 12/15 pilots, and about 12 guests. All in all, a good night.

On the 14th I took a trip to Hockessin, Del. Newt Bollinger and a group from the Silent Knights have an Indoor at the Hockessin Police Athletic League Gym/Hall on Rte. 41 every Thursday from 11am to 1pm. It is a large hall but they have limited the planes to Rubber power, less than 1 oz.

Lots of room, some nice flights, and nice planes. While there, who showed up but Dave Bevan. It was near quitting time, I made a wrong turn, but Newt, Dave, and I had a good chat about rubber flying. If you ever have a Thursday afternoon off, stop in. See the newspaper report on the next page.

The next stop was a special. Dave Harding arranged for the use of the Brookhaven Borough Hall before he left for California, and the South West Regionals Contest, in Eloy, AZ. So, on Sat. the 16th, from 6 to 9 a lot of people showed up. The hall is large, and excellent for flying. High ceilings, B-ball nets cranked up high, AND for Joe Moloko's benefit, padded walls. Sorry Joe, had to do it.

There were about 18 pilots, and most had multiple planes. I think there was another function going on in the building. Every so often, a head would look in the door. Then, an adult would appear with several kids in tow. This along with club members and spectators made for a good crowd. See the cover picture



We finished off the night with a Heli Demo by Steve Boyajian. He was flying a Heli that was larger than we normally allow but, knowing his experience, and safety consciousness, we moved everyone back to the stands. Very exciting. The crowd, especially the kids, thanked Steve with a huge round of applause. Even the Custodian really was amazed, and entertained. Everyone, as they left, mentioned what a great time they had, and hoped we could do it again.



Heli Master Steve Boyajian stunned the spectators and flyers too with his masterful performance

On the 20th, I went to Mt. Laurel, NJ to fly indoor with the South Jersey Silent Flyers. (3rd Wed each month). They fly in the gym at the Fellowship Baptist Church. See their website for directions.

As usual, about 20/25 flyers. To create a little excitement, someone produced some pylons about 10 feet high. We had Vapor pylon races. Lots of fun. Lots of tangles, no major damage. Then we had spot landings. Every circles up near the ceiling. On signal, everyone cuts power and glides to the circle in the middle of the floor. At times they looked like dragonflies, flying united. I think there is a joke there somewhere. SJSF flies a larger variety of models so they fly in segments of 20 min. Lots of IFO's, and some 3-D foamies. They fly 7 till 10. It's about 40/45 min. from the Blue rt. and rt95.

My last indoor will be at Hockessin again. New Castle County approached Newt Bollinger and asked if he would arrange a flying demo for the public.

He set it up for Thursday, Jan.28 11:30 to 1:00. If you're available, I'm sure you would enjoy the time there.

Now, a special treat; President Dick Seiwel went back to the Brookhaven Borough Hall and requested another night. Harry Shagman, the custodian, went over the schedule. AAAAAANND--**Feb. 27th 6 to 9 pm.** So, I must thank everyone for their conduct, flying skills, and kindness to the kids and spectators. This hall is very busy and we are lucky to get this time.

Special thanks to Dave Harding and Dick Siewell.

Chuck Kime



Dave Bevan working his usual magic with juniors

6A

cover story

WWW.COMMUNITY.PUB.COM // JAN. 24, 2010

HOBBY

Club harkens back to Golden Age of Flight



By Adam Zewe
azewe@communitypub.com

The canary yellow airplane glides in a smooth circle, picking up speed as it gently dips its nose and begins its descent.

But there's no runway in sight.

The plane, a model powered solely by a lone rubber band, is coming in to land on the floor of the gymnasium inside the Hockessin Police Athletic League.

It's an example of indoor freeflight model airplane flying, a pastime made popular in the 1930s during the Golden Age of Flight and resurrected today by a group of Hockessin enthusiasts.

They call it freeflight because the pilot has no control over the plane once it takes off, explained Newt Bollinger of Little Falls Village.

Each airplane, painstakingly built from balsa wood and tissue paper, is powered by a propeller that is attached to a tightly coiled rubber band that unwinds to spin the propeller and move the plane, he said.

But a pilot must prepare the plane to fly a certain way before it takes off in a process called trimming, explained Hockessin resident Eric Teder.

Trimming involves twisting, turning or bending the plane's wings, tail and rudder so that it flies in a circle once it's released in the air, he said.

"It's really all experimentation," Teder said. "A lot of people in this are engineering types who have a lot of fun trying to solve problems."

Trim a plane the wrong way and it'll crash into the ground shortly after takeoff or soar too high into the air so it stalls, he said.

But he said there is another element to freeflying that makes the hobby challenging - the motor.

Instead of being powered by a pair of double A batteries, these planes fly by rubber band, so making sure that band is the proper length and width is vital to an airplane's flying time, he said.

Pilots use a device that resembles a miniature spaghetti maker to grind rubber strips into thinner pieces, Teder said. The number of winds determines how long the plane will fly, he said - unless it smacks into the wall mid-flight.

For an average one-minute flight inside the gym, the band must be wound 1,500 to 1,800 times, Bollinger said. But he uses a special tool with a crank that

IF YOU GO

Indoor Freeflight Demonstration

WHAT Expert flyers will show and explain freeflight model airplanes

WHEN Thursday, Jan. 28 from 11:30 a.m. to 1 p.m.

WHERE Hockessin Police Athletic League, 7259 Lancaster Pike, Hockessin

FOR MORE INFORMATION call 302-239-8861

counts the number of winds, instead of twisting it each time with his fingers.

"The guys who fly for an hour are real scientists about it," Teder said.

There's also science involved in building the planes, he said. They must be extremely light to fly, Teder said, and some of the planes they use weigh less than 4 grams (there are 28 grams in an ounce).

To build it light, each piece of balsa wood must be cut thin and a builder must use as little glue as possible, he said.

"When you're trying to build an airplane that weighs a gram and a half, glue is heavy," he said.

However, the challenge of building light planes also makes freeflying a cheap hobby.

Bollinger said. An average plane uses less than a dollar's worth of materials.

It takes a love of aerodynamics, an understanding of physics and a fair amount of patience to enjoy freeflight as a hobby, Bollinger said.

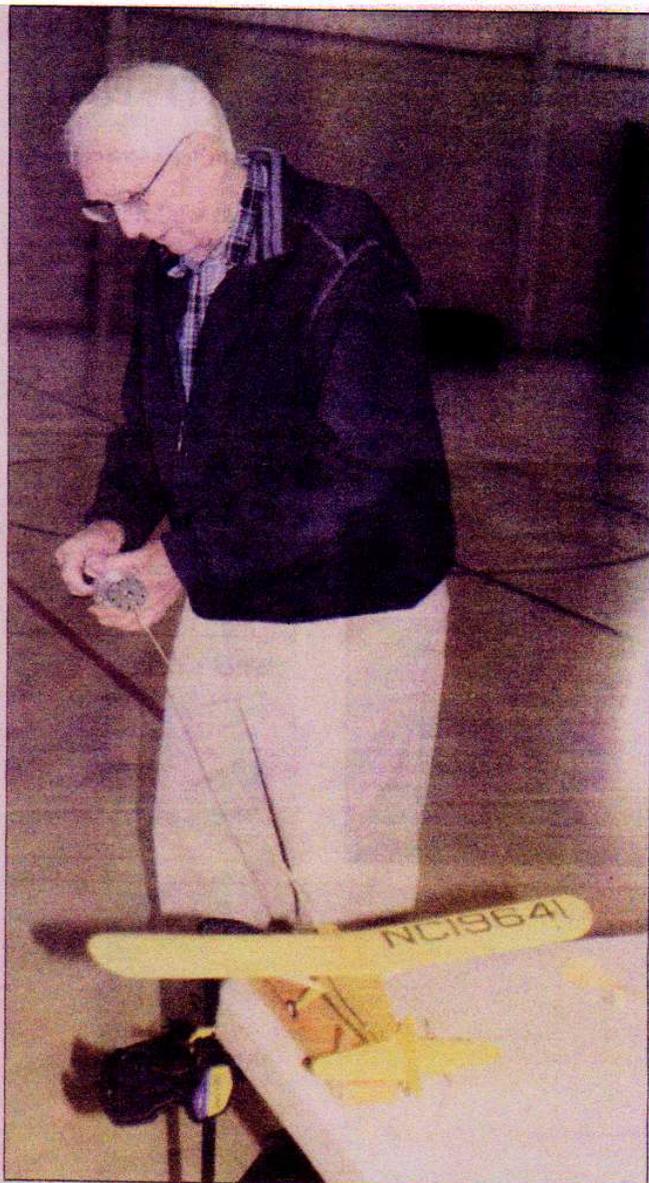
He was first interested in the hobby as a child in the 1930s when he built planes out of sticks and tissue paper, but without much success, he said.

He picked the hobby up again 60 years later while living in Florida.

For Teder, flight has always been an interest - from the time he built plastic airplane models as a child to today, when he is an international pilot for Continental Airlines.

And though flying a quarter-ounce freeflight plane is starkly different from piloting a 646,000-pound Boeing 777, seeing the model circling the ceiling is just as rewarding, he said.

"There's something magical about a rubber band model flying in a circle with no other input," Teder said. "There's something old world about it."



TOP PLANE: A freeflight model plane soars near the rafters of the gym. **ABOVE:** Newt Bollinger, of Little Falls Village, winds a rubber band that will power his yellow freeflight model. **LEFT:** For a flight inside the gym, a plane's motor is typically wound 1,500 to 1,800 times. ADAM ZEWE PHOTOS

Model Helicopters 101 – an Overview

I was bitten by the helicopter bug last summer, when I thought it would be neat to try and get a small micro fixed pitch helicopter to fly. I thought I had nothing to lose since the heli was a gift, and nobody else had managed to get it to work (it turned out to be a bad receiver crystal). Seven helicopters later, I think I need to find a twelve step program. Be warned, all those considering model helicopters as an addition to their RC hobby – they are addictive! I can still recall my wife, Loretta, doing her robot impression from Lost in Space – “Danger Will Robinson!” as I was giving Jeff Frazier an overview of the hobby!

Basic Types

There are several different basic types of helicopters that you will encounter in the RC world. Each has their own advantages and disadvantages, and is targeted to different segments of the market:

Coaxial



These are the little guys that you will most likely find buzzing around a living room. The heli is suspended by two rotors rotating in opposite directions. This results in a helicopter that is inherently stable, and easily flown by novices. Altitude is controlled by varying the speed of both blades. A tail rotor and gyroscope are not needed, since yaw is controlled by varying the speed of the blades relative to one another. They make a great gift for kids, and are a good way to practice basic orientations.

Fixed Pitch



Often the next step from coaxial helicopters, a fixed pitch helicopter has a single set of main blades that are at a fixed angle of attack accompanied by a fly bar with two smaller paddles. The paddles receive the bulk of the cyclic (elevator and aileron to airplane folks) controls and there is a mixing

mechanism that allows the flybar to control the tilt of the main rotor disk. The altitude is changed by varying the speed of the main rotor. This can be a challenge since lowering the head speed to descend also results in reduced control on cyclic.



One of the main advantages of fixed vs. collective pitch system is that the mechanics of the head are considerably simpler, reducing the cost of the helicopter, and making the system more tolerant of the abuse that a beginner machine typically encounters.

Since there is only one main rotor, a tail rotor is necessary to counteract the torque of the main rotor. Yaw control is achieved by varying the speed or pitch of the tail rotor.

Smaller helicopters often have tail rotors that are directly driven by a motor mounted on the tail. Yaw is controlled by speeding up or slowing down the motor.

Larger helicopters typically have tails driven by a belt or shaft powered by the main rotor. Yaw is controlled by varying the pitch of the blades which are always spinning at a fixed multiple of the main rotors. A belt or shaft driven tail is generally preferred because there is often a lag associated with speeding up or slowing down a tail motor, whereas the belt or shaft driven tail is always spinning at the same speed relative to the main rotor.

Collective Pitch



This is the most popular class of the helicopters that you will find at a flying field. Like a fixed pitch helicopter, the helicopter is suspended by a single set of blades and a flybar. The difference is that the pitch of the blades is allowed to change in response to collective commands from the pilot. This allows the rotor head to spin at a constant rate while altitude is controlled by varying the pitch. The pitch is also allowed to go negative which is how the helicopter can fly inverted. Yaw and cyclic controls are similar to that found in a fixed pitch machine.



Sizes

As I was getting started in this hobby, one of the most confusing aspects to me was all of the different ways of describing a helicopter's size. Depending on the manufacturer, the size can be described by blade size, electric motor size, flying weight, and nitro motor size. It's enough to make your head spin! Here's a table summarizing the basic sizes along with some popular models in each size category:

| Class | Nitro Motor Size | Electric Motor Size (typical) | Blade Length ~ mm / inches | Flying Weight ~ oz | Examples |
|--------------------------|------------------|-------------------------------|----------------------------|--------------------|--|
| Nano | NA | Varies | < 100 / 4 | < 6 | Blade MSR, Blade MCX, Novus CP, Walkera 4G6 |
| Sub-Micro | NA | Varies | < 250 / 10 | | Honey Bee Fixed Pitch, Blade CP, Gaii 100, Falcon 40, Walkera 4# |
| 250 size electric | NA | 150 Watt | 205 / 8 | 12 | Trex 250, Gaii 200, HK250, Exi 250 |
| 450 Size | NA | 450 (400 Watt) | 325 / 13 | 27 | Trex 450, Blade 400, Axe 400, HK450, Exi 450, |
| 500 Electric / 30 Nitro | .30 | 500 (1,200 Watt) | 425 / 17 | 60 | Trex 500, JR Vibe 500E, HK500, Exi 500 |
| 600 Electric/50-60 Nitro | .50 - .60 | 1,600 Watts | 600 / 23 | 116 | Trex 600, JR Vibe 50, Raptor 50, Raptor 60 |
| 700 Electric/90 Nitro | .90 | 4,200 Watts | 700 / 27 | 160 | Trex 700, Aurora 90, Rapor 90 |

What to Fly

I'm often asked at flying events what is the best helicopter to start with. The answer is simple: a simulator! While I heartily recommend a simulator as the best way to start for airplanes as well, it's a requirement for helicopters. You should learn basic maneuvers such as hovering in all orientations, and basic circuits on a simulator before moving onto a real heli. It will save dollars, sanity, and potentially a trip to the emergency room. A good simulator will pay for itself in broken parts and heli down time very quickly. It is also a great tool to have on hand once you've started flying the real thing: to allow you to try maneuvers that you aren't ready to do at the flying field, or get some stick time in when the weather won't cooperate. There are two main players in the simulator market: RealFlight by Great Planes, and Phoenix (currently marked by Horizon Hobby in the US). I have been a RealFlight user for the last year and half, and it has worked well for me. I have also heard good things about Phoenix. Depending on who you ask, they will give you a number of arguments as to which is better. At the end of the day they are both good products and are well supported. Either will save you money in the long run. At the current time, there are more RealFlight users in the Propstoppers, so getting tips and tricks from fellow members will be more likely with RealFlight.

Once you have spent time on the simulator, and can hover in all orientations, and perform basic circuits such as figure eights, the next step is to get your first helicopter. The rule of thumb is to get the largest helicopter that you can afford to crash. Crashes occur with helicopters more often than airplanes, because they are less tolerant of the slightest mistake – a simple tap of the blades into the grass can easily destroy your blades and parts of the rotor head. The advantage of the larger helicopter is that they are inherently more stable and easier to see. The downside is that as the size goes up, parts get more expensive, as do the battery packs required to power these beasts. You also need to factor in your flying location. Even if you can afford to crash a 90 sized nitro, it does you no good to buy one if the nearest field that can support it is an hour away. You want to get a bird that will maximize your time on the sticks. With this in mind, I have the following recommendations based on where you will be doing most of your flying:

Location: Indoors

The best part of flying indoors is that you can fly any time regardless of the weather. The downside is that your choices in helicopter are limited. If your goal is indoor flight only, any of the coaxial helicopters will suite your needs. If you plan on working up to an outdoor collective pitch helicopter, I recommend the Blade MSR. You can go through battery after battery practicing you orientations and flying circuits in your living room without fear of causing significant damage to people, furniture, or the heli itself. These little guys are big hits at the indoor flying events as well and can buzz around a gym with flare. They can also handle some light outdoor flying as well provided the wind isn't too strong.

Location: Back Yard

A small back yard makes a great place to practice given the properly sized helicopter. Large fixed-pitch helis such as the Honey Bee King or small collective-pitch machines such as the new Blade SR or Axe CP are good candidates. One word of caution: helicopters scaled for a back yard are often priced to be competitive in the toy market, and component quality often suffers. More than one person has been turned away from this hobby after buying a cheap fixed pitch heli, and finding it uncontrollable or difficult to repair. Hopefully, the new Blade SR will change some of this. What I've seen about it in terms of specs and flight abilities look promising, and I look forward to hearing impartial reviews

once it's in mid February. Even if you have ample space to practice, there is no substitute for getting some time in at the flying field. You will be able to pick up lots of advice and training tips from your fellow club members.

Location: Local Park

As you get more space to work with, your choices start expanded. The most common size for this type of space is the ubiquitous 450. There are lots of models to choose from, including the Trex 450 (and the many clones that are out there), Blade 400, Helimax Axe 400, MA Furion 450. The 450 offers a nice blend of stability, portability, and economy. Parts are generally cheaper than those for the larger helis, and because they are so popular, many local hobby stores will stock them. A 450 is also a class that you won't outgrow anytime soon. Once you've mastered the basics, you can move on to aerobatics and 3D flight.

Location: Flying Field

Once you get to the flying field, the only limiting factors are your wallet, and whether or not the flying field allows nitro (The Christian Academy field is limited to electric flight). Nitro birds go up to a 90 size motor swinging 700 mm blades. Electrics typically max out at 600mm, but there are a few 700 sized machines starting to appear. A great size for our field is the 500 – it has more stability than the 450 and is easier to see, but it won't dent your wallet as much as a 600. Once you get into the 450 and above machines, a newcomer should always have their heli checked out by an experienced pilot to make sure the mechanics are set up properly. You should also be able to demonstrate basic helicopter skills such as hovering in all orientations, and basic circuits such as circles and figure 8s in an isolated area of the field before flying over the main field, or near the pits. These machines can cause serious injuries if a blade hits a human.

RTF vs Kit

While some helicopters are only available in preassembled Ready To Fly or Bind And Fly configurations (especially in the sub-micro and coax classes), I highly recommend getting a kit that you must build yourself. With any heli, it is only a matter of time before you must make repairs. If you build it yourself, you know every inch of the machine, and repairs are much easier. Another advantage of building it yourself is that you can tune the machine to your skill level and flying style as you build it. There are many great resources out there to provide guidance with building.

Resources

There are some great resources out there to help you get started:

Online

I find the online resource to be the most valuable. It is the best way to stay up to date on the latest models and technology, and hear about a wide range of flying and training techniques.

Helifreak.com – my personal favorite has forums dedicated to each of the major brands out there, and it is the home of "Finless Bob" who has made some outstanding online videos to help you learn every aspect of building and tuning a helicopter. He has some generic videos for things like setting up ECCPM as well as build videos focusing on specific models.

Runryder.com -- another popular online site.

Helituning.com offers a lot of technical details on gyro setup, etc. They have a lot of focus on the popular Align Trex models (in fact they used to be trextuning.com), but are trying to open up to a more general audience.

Radd's School of Rotary Flight (<http://www.dream-models.com/eco/flying-index.html>) is a popular method to learn how to fly. It walks you step by step from getting the heli off the ground for the first time to basic hovering and circuits.

Books

While there are a few books out there such as *The Basics of RC Helis* by Paul Tradelius, they are generally out of date when it comes to the technology involved. Important modern devices such as heading-hold gyros and virtual flybars are rarely mentioned.

Magazines

There are a few magazines that focus on Helis. These include:

RC Heli – probably the most popular in the US

<http://www.rchelimag.com>

Rotary Model was the first in the US. <http://www.rotory.com>

Rotor World is a good read, but is based in the UK, so a lot of the vendor adds are for UK based operations.

<http://www.rotorworld.co.uk/>

Videos

The main published DVD series on helis is the "Ray's" series (<http://www.rayshelitech.com/>). I find them to be rather expensive, and they often suffer from the same limitations that books do – by the time they are written, filmed, and published, they are out of date. I recommend the "Finless Bob" tech videos on Helifreak instead – they are free, and generally more up to date.

Fellow Club Members, there are several members in the club that are actively flying helis. Don't be afraid to ask questions! At any meeting or fun fly there is usually somebody there that will be happy to answer any questions you may have.

Mike Williams



In England they say "horses for courses" but it would apply here too

Dave Harding – Editor
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Propstoppers R.C. M.A.C



New meeting hours; 6:00 to 8:00 meeting at 6:30, Middletown Library

Tinicum School Indoors
6:30 – 9:30 PM.
February 5, 2010
March 5, 2010
Look forward to seeing you there!
Mike Black

*Brookhaven Boro. Gym
Indoor Again*

*Saturday February 27th
6 pm till 9 pm*

Membership Renewal For 2010

Membership renewal for 2010 is now available. You can renew by mail or at the club meeting in February
Bring cash or check and your 2010 AMA card.
Dues are \$60.

Ray Wopatek
1004 Green Lane
Secane, PA. 9018
Please enclose a **copy** of your current A. M. A. Membership card,
And Please, Please enclose a **Stamped self-addressed envelope.**
Ray Wopatek Membership Chairman