



The Bilge Pump

The Official Log of the Northwest R/C Ship Modelers

April, 2013

Seattle Yacht Club in May

Dates of Interest

April

- 1st Skagit Meeting
- 4th Club Meeting
- 7th Fun Float

May

- 1st Seattle Yacht Club
- 2nd Club Meeting
- 5th Float/Springer Event
- 6th Skagit Meeting

This is a great day of sailing and sharing our hobby with individuals who are interested in boats already. The setting is very conducive for launching our boats and as you can see from the pictures, the club goes all out with awnings, chairs and good will. Check out Scott Baumann's outline in the newsletter and follow the map. You are sure to have a good time.



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View From The Bridge – Bob Jacobsen

We just had another great meeting and attendance continues to be excellent. Also we are welcoming new members at a rapid pace! We will get an updated membership list out soon – in the meantime thanks to everyone who has paid up their dues, it really helps to keep things going smoothly.

Allan & Tom did the special presentation on motors at the meeting and the show and tells were just awesome! We also had our 1st really special unannounced door prize drawing and that was really fun. A \$25 Galaxy Hobby gift card went to Norman who was luck because the 1st name drawn was not at the meeting and you MUST be present to win, so remember to come on out and increase your chances.



Coming up soon is our fun float at Seattle Yacht Club in conjunction with opening day (see the flyer elsewhere in this newsletter), and before you know it the regatta will be here so keep on building, painting and cleaning – it will be a fun summer.

At next month's meeting we will ask for special shown and tells of your BEST DISPLAY STAND. So plan ahead now and if you have a special stand for your boat, or technique, materials or ideas that you can pass along get it ready now for the May meeting.

Finally at our last club meeting the question of where to find good motors came up. Here are 4 places that I have found to have good deals on new or surplus motors and lots of other interesting parts:

Mendelson Electronics - www.meci.com

All Electronics - www.allelectronics.com

Surplus Center - www.surpluscenter.com

Marlin P Jones & Assoc. - www.mpja.com

My e-mail is bobandlaurie@nwlinc.net and my cell phone is 206-790-2367. Remember no one drowns when a model boat sinks so have fun out there.

Bob

April Meeting Minutes by Lee Stewart

The meeting was called to order by Bob Jacobsen, our President, at 7:02 PM. The first order of the evening was the introduction of our two newest members. Both joined before the meeting started.

William Horton has been involved in modeling for a number of years, beginning with aircraft and lately he has been doing boats. He lives in Stanwood.

Bruce Olson has recently retired from selling specialty woods in the Seattle area. He lives in Ballard and has begun to make fiberglass hulls which he would like to sell. (206) 491-4496 if you are interested. The price is right.

We welcome you gentlemen, (that will be the last time you will be called that) we hope you enjoy our group.

Bob brought up our next function which will occur before our next meeting, The Seattle Yacht Club float on May 1st. This is the opening of the Seattle yachting season for 2013 and we sail in fresh water at one of the club's docks. The hours are 9:00 AM to 3:00 PM and we ask that pleasure boats are the bulk of the display. The attendees love to see our miniatures of their larger craft. It is a fun outing; get there early for the best parking!

The next topic of the evening was a request for volunteers to begin talking about the June Regatta. Bob gave a description of the activity of the Regatta for the benefit of our newer members who have not attended one as yet.

Allan Wing presented a thorough discussion on the two major electrical items in our models, motors and speed controls. He had three handouts, which are to be found later in the newsletter, which made what he had to say easier to follow. He also had several demonstrations which showed the current and voltage of various motors under different loads. He was assisted in the demos by Tom Stevens. An avid discussion about motors, what brand to buy, how large and where to find them, ensued. Bob said he would put a list of suppliers in the newsletter.



Bob is proposing that the coffee klatch, which meets a Galaxy Hobby each Thursday morning, move its location each third Thursday of the month to the pond at Bellevue to add an additional float to the summer schedule. This will be discussed more on Thursday morning.

We went into recess before the **SHOW & TELL**.

After the recess, A member who has been “on recess” started the **SHOW & TELL**. **Tim Justice** gave us a tour of his six foot, scratch built navy tug. It has full lighting, bow thrusters and is powered by a 24V antenna rotor motor. Nice job Tim and we are glad to have you in the “active” roster.



The next up was one of our new members, Bruce Olson. He displayed the fiberglass hulls he was manufacturing and told us about their construction. These hulls were about 24” in length and 6” in beam and were available in different colors. His price for this particular hull is \$40.00. He then showed us a barrel-backed **Chris Craft** runabout he made several years ago which he is about to refurbish.



Next up was **Frank Smith** showing engine, paddlewheels and boiler for demonstrated the running of the compressor. Frank’s talent shows wants to convince more members of steam. (He doesn’t have to convince



us his scratch built steam a ship called the **Beaver**. He engine with air from a through in every turn. He the club to become involved in this writer)

Bob then took the floor to talk about a six foot model of the battleship **Alabama**. This is a partially built “kit” which is going to need a great amount of TLC. Bob purchased it from a fellow who walked into Galaxy to see if he could sell it. Bob let him cool his heels for a few weeks and then got “his” price. One of the “special” features of the ship is one of the large banks of guns is operational and actually fires 22-caliber shells. The paint job Bob has in mind for it will duplicate the World War II covering it had.



Tom Stevens brought in another of the many ships he has purchased from other and then modified.

Robert Osmond took us back in his and our lives to a couple of his early plastic models which were on the opposite end of the size spectrum which he normally displays. Each was about six inches in length, but fully R/C controlled with what was available at the time. This made for quite a challenge since most items were not small.



As a final happening for the evening Bob had a drawing for two bottles of glue, won by Doug Wilson and new member Bruce Olson. Then a \$25.00 gift card was won by Norm Hiatt. The meeting was adjourned at 9:06 PM.





An early NW Shipmodeler's Fun Float - courtesy of Wayne Martin



THE HARDY SOULS WHO ATTENDED THE APRIL FUN FLOAT AT BELLEVUE

The Motors that Make Our Boats Go

By Allan Wing

In the past few years many of us have been looking for motors to make our Polo Springers run faster and longer on a single battery charge. As a result, we have looked at many motors. Along with this I have received many questions about motors. So I figured that a look inside a basic motor and an explanation of how it works would be helpful. To do this I took apart a basic 540 can motor. It is called a can motor because the motor case is a pressed can. Examples of this motor are a Johnson 540 or the popular Graupner Speed 600, that powers most of our Springers.

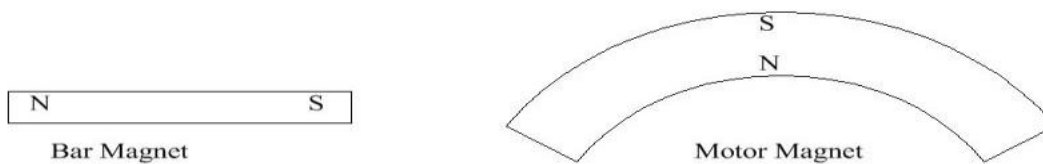
Figure 1 is a picture of the motor after it has been taken apart. The motor consists of 3 basic parts, the armature, the end plate and the can. The armature is the round piece that turns inside the motor. In these can motors the armature has 3 poles, each wound with a coil of wire and a commutator (*Figure 2* shows a close up of the commutator on the end of the armature) that provides connection to the brushes. The end plate holds the bearing for one end of the armature and the brushes that contact the commutator. The final piece is the can, which has the bearing for the other end of the armature and the magnets.



The motor operates by sending electric current through the windings and creating an electromagnet of one of the 3 poles. This causes the pole to be either attracted to or repelled from the magnets in the can. A magnet has two ends, they are labeled either North or South. This comes from the fact that if you take a bar magnet and suspend it from a string, one end will point north and the other south. So the convention is that

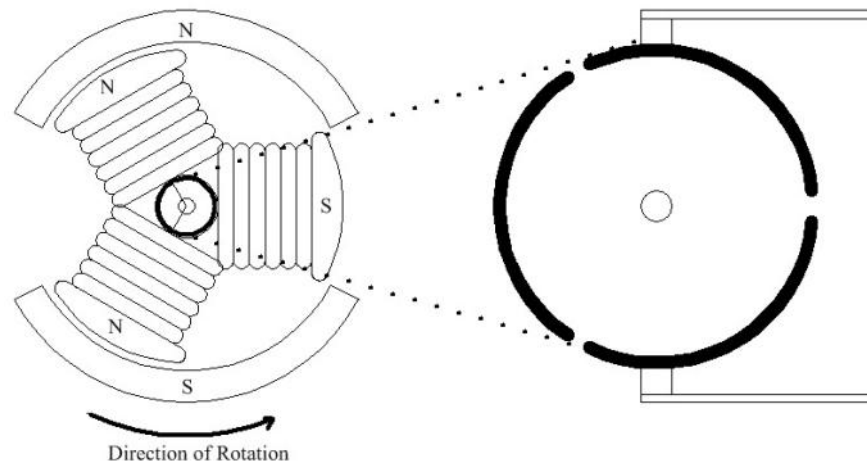
motors cont'd

one end is north seeking and the other is south seeking. When two magnets come next to each other, two north or two south ends will repel and a north and south end will attract. The magnets in the can motor are constructed so that the inside of the magnet is one end and the outside is the other end. (See *Figure 3*). The ability to make magnets with this shape greatly improved permanent magnet DC motors. The magnets are positioned inside the can so that one magnet has a north side of the magnet facing inward and the other has the south side of the magnet facing outward.



The operation of the motor is shown in *Figure 4*. The brushes carry current to the commutator. The result is for the poles of the motor with the north/south ends as shown. The pole marked S is pulled up toward the top magnet that has the north side facing inward. The other motor poles receive current that make them North. The upper pole is repelled from the top magnet and the lower pole is attracted to the bottom magnet. As the armature turns, the brushes contact other areas of the commutator and the current in the poles of the armature are changed to keep the attraction and repulsion forces going. This results in the armature rotating.

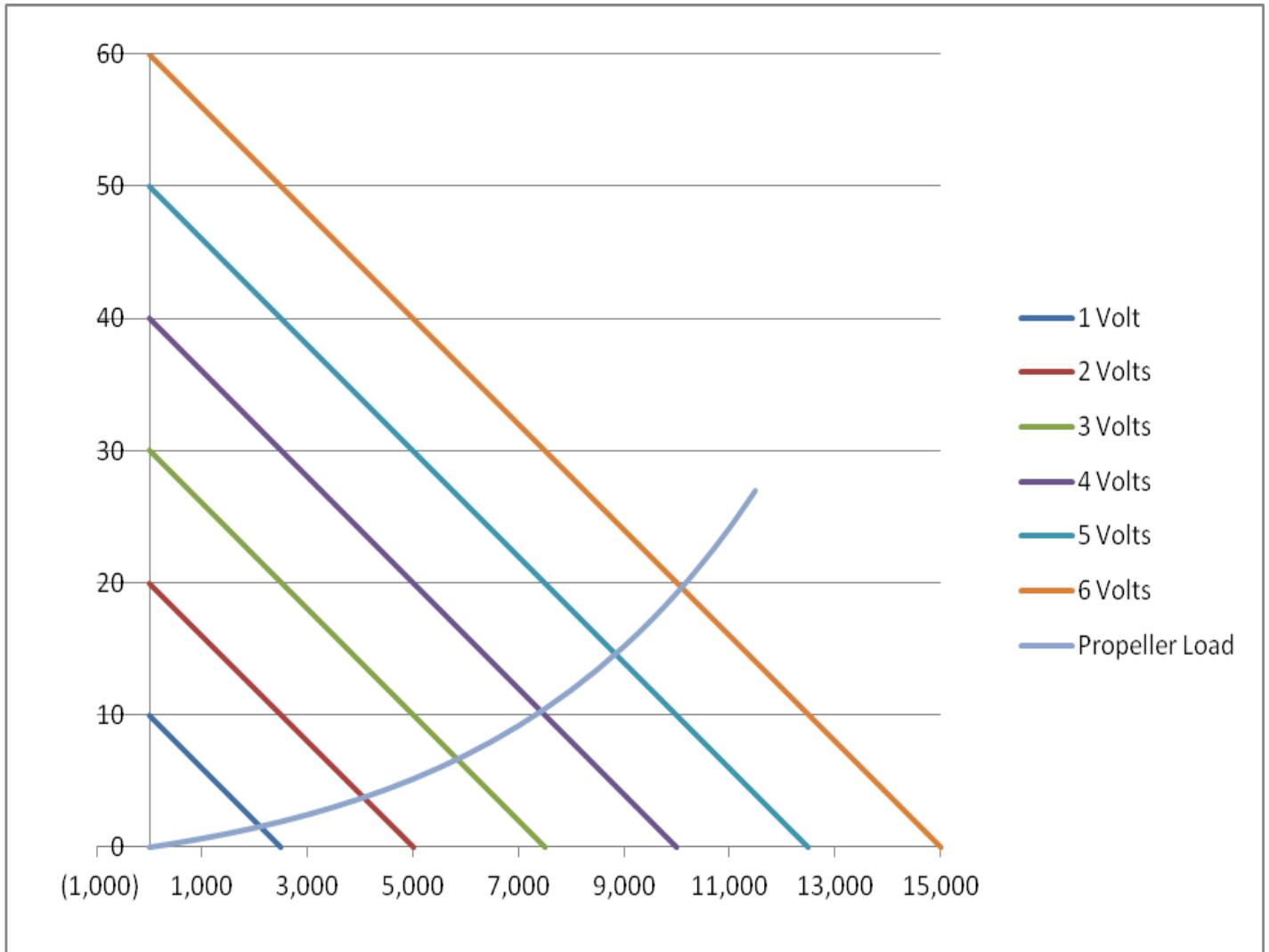
motors cont'd



The direction of rotation is determined by the polarity of the voltage applied, reversing the voltage will reverse the direction of rotation. The speed of rotation is determined by the voltage applied.

The speed of the motor is determined primarily by two factors, the applied voltage and the number of wire turns on the armature. Motor speed is proportional to the applied voltage. That means that a motor will turn twice as fast with 6 volts applied as it turns with 3 volts applied. The second factor is the number of turns of wire on the armature. As the armature turns in the magnetic field created by the fixed magnets it creates an internal voltage much like a generator. As the armature spins faster the voltage rises until it approaches the applied battery voltage. The more turns on the armature the faster that voltage rises hence the sooner the internal voltage approaches the battery voltage. This results in a motor with a slower top speed. With more turns the motor draws less current and creates more torque. With less turns the motor will turn faster but it will have less torque and draw more current under load.

motors cont'd



NW RC Ship Modelers – 2013 Schedule – Updated 4/8/2013

January 3 rd	Club Meeting Galaxy Hobby – 7:00pm
January 6 th	Fun Float – Bellevue Pond – 11:00am
February 7 th	Club Meeting Galaxy Hobby – 7:00pm
February 8 th – 10 th	Fun Float at NW Hobby Expo – Monroe
March 7 th	Club Meeting - Galaxy Hobby – 7:00pm
March 10 th	Fun Float – Bellevue Pond – 11:00am
April 4 th	Club Meeting - Galaxy Hobby – 7:00pm
April 6 th	Fun Float – Bellevue Pond – 9:30am
May 1 st	Opening Day of Boating – Seattle Yacht Club
May 2 nd	Club Meeting – Galaxy Hobby – 7:00pm
May 5 th	Springer Event & Fun Float – Bellevue Pond – 10:00am
June 6 th	Club Meeting – Galaxy Hobby – 7:00pm
June 8 th	NW REGATTA – Bellevue Pond – 8:00am
July 13 th	Fun Float – Bellevue Pond – 9:30am
July 27 th	Tidewater Cup
August 1 st	Club Meeting – Galaxy Hobby – 7:00pm
August 3 rd	Fun Float – Bellevue Pond – 9:30am
August 10 th	Crawdad Festival
August 17 th	Foss Cup
September 5 th	Club Meeting & Night Float– Bellevue Pond – 7:00pm
September 15 th	Springer Event & Fun Float – Lake Goodwin
September	Fishermans Festival
October 3 rd	Club Meeting - Galaxy Hobby – 7:00pm
October 5 th	Fun Float – Bellevue Pond – 9:30am
November 7 th	Club Meeting – Galaxy Hobby – 7:0pm
November 10 th	Fun Float – Bellevue Pond – 11:00m
December 5 th	Annual Awards Banquet – TBD – 6:30

A Biographical Sketch by Ron Bray

TIM JUSTICE

Tim was born in Seattle and raised in Tonasket after the age of five. Upon graduating from high school he spent four years in the navy, mostly aboard an aircraft carrier, the USS Valley Forge, LPH-8 as a quartermaster doing navigational duties. While in the navy, Tim attended Long Beach Community College studying architectural drafting.

Following his stint in the navy he worked for General Telephone for a year and then went to work at Varec Inc., in Compton, Calif. as an electronics technician and was advanced to design draftsman doing control design work for the petrochemical industry. While working at Varec, Tim studied computer design and digital switching techniques.

He moved back to Washington State in his early twenties and had several jobs in Wenatchee before working for Central Washington Hospital for 18 years as a hospital engineer/biomedical equipment technician at that hospital. He also taught basic electronics at Wenatchee Valley College.

Tim moved to Everett where he worked as the supervisor of biomedical services at Everett General Hospital for three years. He and a partner then started Northwest Biomedical Associates, Inc., doing service and repair of medical equipment until his retirement in February, 2012

When Tim moved to Everett he lived on his 25 ft. boat. He then bought a five acre plot of un-cleared land on Camano Island. He installed a culvert for road access, cleared trees, built a shop, designed a house, got married, redesigned the house, and then built the house.

While living in Wenatchee, Tim had designed a model of a 41 foot sloop for which he made a plug, mold, and cast a hull made of fiberglass. About twenty years ago, Tim saw the model boats on display at the Anacortes Waterfront Festival and became interested in model boating. He asked some of the employees at Harbor Marine, in Everett, if they knew of any tug boat people in the area. He was told that they knew a fellow by the name of Floyd Waite who was a shipwright that worked right next door. Floyd lived aboard a 128 foot Miki tug, the ***Dominion***, and was very gracious to share not only his tug boat knowledge but to allow any and all measurements, photos and other information, to get a model started. Upon further research, Tim met Tom Stevens who directed him to Ray Nelson, who gave Tim a very faded set of lines and offsets.

Tim constructed a walnut half-hull off of which he produced a very accurate set of lines and offsets. Floyd had that half-hull mounted in the *Dominion* until its sale several years ago.

The model of the *Dominion* is scratch built, including all of the fittings, at 1/16 scale, which makes it eight feet long. This scale was picked for several reasons, it made all of the conversions easy to convert on an architectural scale at \leq inch equal to one foot. Also, being this was his first major model, this scale made the details easier to duplicate and lots of fun to make.

Tim is presently doing the final touches on a Navy YTB which is built on the same scale as the Miki. He is now planning on making a much smaller model, probably of a run about; a boat that can ride in a car seat instead of a full sized pickup.

Upon an invite from Tom Stevens, Tim joined our club some 20 years ago. He was responsible for arranging our presence at the Seattle Boat Show when it was at the old King Dome in the locker room some years ago.

He got a lot of his boat design knowledge from his ex father-in-law, who was a marine architect. He shared a lot of technical knowledge with Tim and also shared stories of meeting John Wayne when the Wild Goose was turned from a MSO into a yacht. He also designed boats for those of fame such as Ward Bond of Wagon Train and Harry See, the founder of See's Candy.

Tim's other interests include landscaping, gardening, gem faceting, wire wrapped jewelry, and his favorite, wood intarsia which is cutting, shaping and forming various species of wood (for color and grain) to make elaborate forms of art, usually birds, fish or butterflies. His wife also loves gardening and is an accomplished artist in stained glass, fused glass and mosaics. When they built their house they added a garage sized room which is called the "project room" where fun stuff happens.

Tim is indeed a man of many talents and surely will contribute considerably to our knowledge in modeling endeavors. It is good to have him back.



Seattle Yacht Club Fun Float Letter of Instruction (LOI)

We have made the Seattle Yacht Club's official schedule of Opening Day Week activities! Those of you who attended last year know what a good time we had.

1. Date: Wednesday, May 1st
2. Time: 9 am through 3 pm
3. The day's purpose is twofold, to enjoy ourselves in a different setting, and to entertain SYC members who are around the club area, preparing their boats for Opening Day.
4. They will have canopies set up, along with tables and chairs. I have a feeling the Yacht Club has these set up for other purposes as well during the week.
5. There will probably be beverages and snacks for sale in a dockside shop until 10:30 am.
6. Restrooms are in the main clubhouse on the ground floor, accessed from the south entry.
7. In keeping with the yacht club theme, club members are encouraged to display and run all of the yacht models they have. In addition, bring the most interesting models of other nautical craft that you have.
8. If possible, we will have AC electrical power available for chargers.
9. Lunch will be available at cost in the dining room. Bring your credit card.
10. Let's go and have fun!

Seattle Yacht Club main station is located on Portage Bay at 1807 East Hamlin Street, Seattle WA, 98112, just north of the 520 bridge across Lake Washington and south of the University of Washington

Guests arriving via Highway 520 (either East or West bound), exit at Mountlake Blvd. and head north. Turn left on East Hamlin at the traffic light which is the first left past 520. For those exiting from 520 westbound, make an immediate left off Mountlake to East Hamlin; if you cross the Mountlake Bridge you've gone too far. The club is in a residential neighborhood, on the left about a block from the light.

(Continued)



Scott Baumann





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Robert Osmond

Treasurer

Ed Maurer

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www.galaxyhobby.com

Membership and Renewal Form

Dues are \$25.00 per year

Make checks payable to:

North West R/C Ship Modelers

Mail to: Ed Maurer, 22309 54th Ave. W., Mountlake Terrace, WA 98043

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