



Some 2011 Regatta Entries



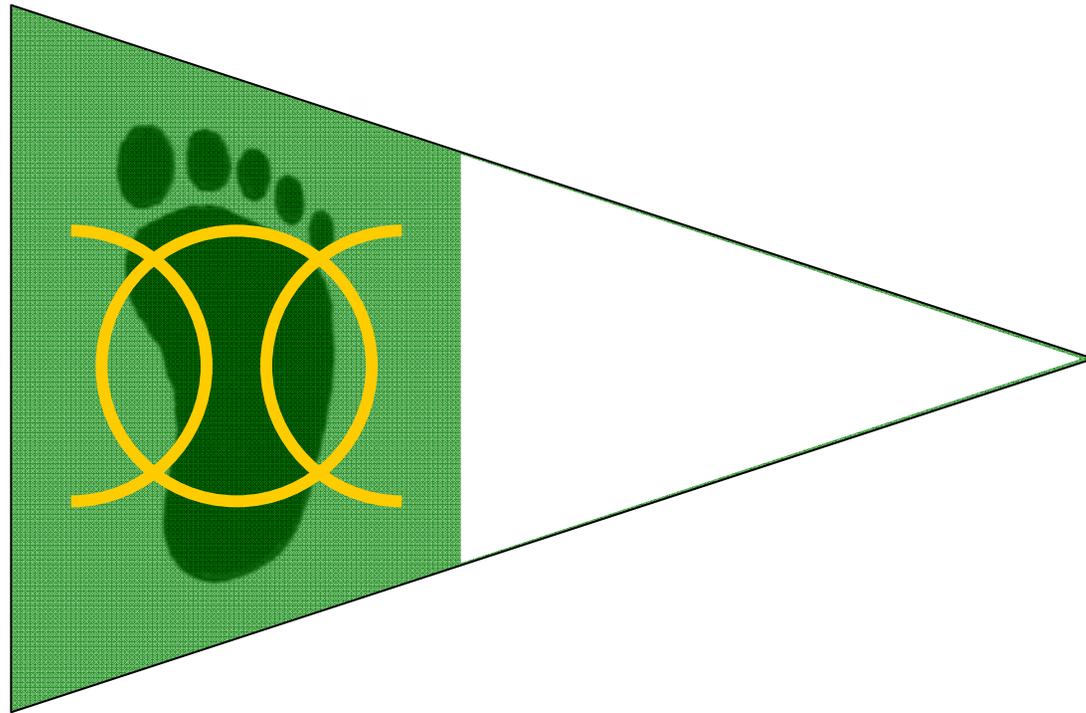
In the Box sideways
with cranked mast

SNAME Footy Yacht Squadron

Design-Build Competition and Regatta 2012



SNAME Footy Yacht Squadron Burgee



Introduction

- As part of its mission as a professional technical society, the Society of Naval Architects and marine Engineers, SNAME has promoted a series of design (and build) competitions over the years. These competitions have been primarily focused on student members and grade and middle school students. Some current SNAME programs are:
 - The Annual Meeting Student Design-Build Competition
 - Dr. James A. Lisnyk Ship Design Competition
 - SNAME/MARAD Commercial Ship Design Competition
 - International Student Offshore Design Competition
 - SeaPerch Program
- The new initiative described in this presentation is intended to allow members to have some creative fun in the short term, but also to serve as a platform for development of a further SNAME outreach program to middle and high schools as a means of instilling interest in the oceans of the world and how naval architects, ocean and marine engineers contribute to society. This effort would be in concert with the current Sea-Perch Program and the two programs should reinforce each other



Serious Side of the Concept

- Most formal educational in naval architecture, marine and ocean engineering focuses heavily on engineering science and analysis, and significantly less on design synthesis
- The Footy Design Competition is designed to give budding designers a chance to design build and operate a real vessel quickly and cheaply and to be able to feed back lessons learned from all phase of the project in a finite time for the modification or development of the next generation design.
- At full scale this usually take years (or decades) in some case instead of hours or days in the case of using scaled down craft.
- Teaching design to naval architects, marine and ocean engineers is challenging and it is believed that this Footy design, build and race competition may provide a useful tool in the teaching of design processes, feed-back, construction trade-offs and operational performance and enhancements



Background

- In addition, for the past few years SNAME has held a very popular sailing regatta as part of its Annual Meeting. This event will continue at the SNAME 2012 Annual Meeting in Providence, RI on October 17-19, 2012.
- In a continuing effort to provide creative stimulus to our members and to offer an opportunity to SNAME's whole membership have some of the fun, the Society will organize a new event which will feature both a design-build competition and a regatta –
 - *The SNAME Footy Design-Build Competition and Regatta 2012.*



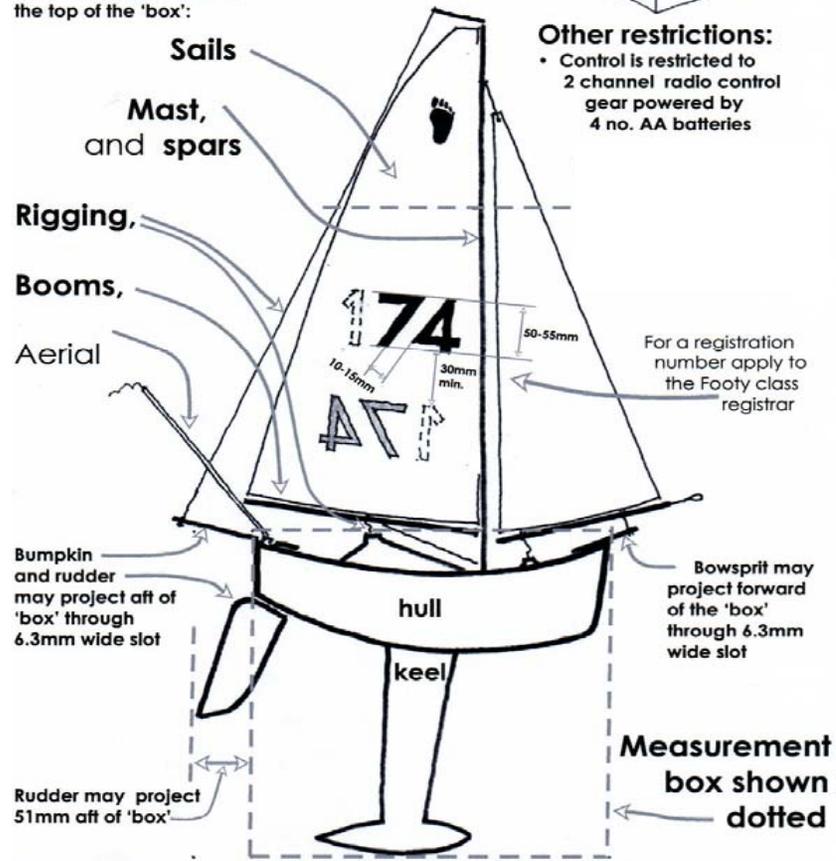
What is a Footy?

Footy class - rules summary

An open class - anything not prohibited or restricted is permitted

Primary measurement rule

The boat shall fit into an open topped rectangular box 305 long x 305 high x 153mm wide with the following exceptions, which may project above the top of the 'box':



For defined detail refer to the Footy Class Rules

- A Footy is a small radio controlled sail boat
- Footies are development class, rather than one-design boats, which allows variation in boat design within rule limits.
- Footies are a recognized class by the American Model Yachting Association, AMYA, who administer the class rules <http://www.theamya.org/>
- Basic rule is that hull/keel must fit in a box 12in. long x 12in. deep x 6in. wide.
- Rig type, sail area etc are unlimited



The 2012 SNAME Design-Build Competition

- For the 2012 Annual Meeting of SNAME, members are invited to build a Footy boat in accordance with the Class Rules.
- Rules and other information are available at <http://footy.rcsailing.net/index.php>
- Contestants will bring their Footies to the SNAME 2012 Annual Meeting (Footies are quite portable) and the boats will be judged in the design-build competition
- Awards will be made in several categories



The 2012 SNAME Footy Regatta



- In addition to the Design-Build Competition, there will also be a Footy Regatta where “thumb sailors” will race their boats.
- In addition to those who have entered the design-build competition, this Regatta is open to any attendee at the SNAME Annual Meeting using existing Footy boats on loan from local Footy Model Yacht Squadrons

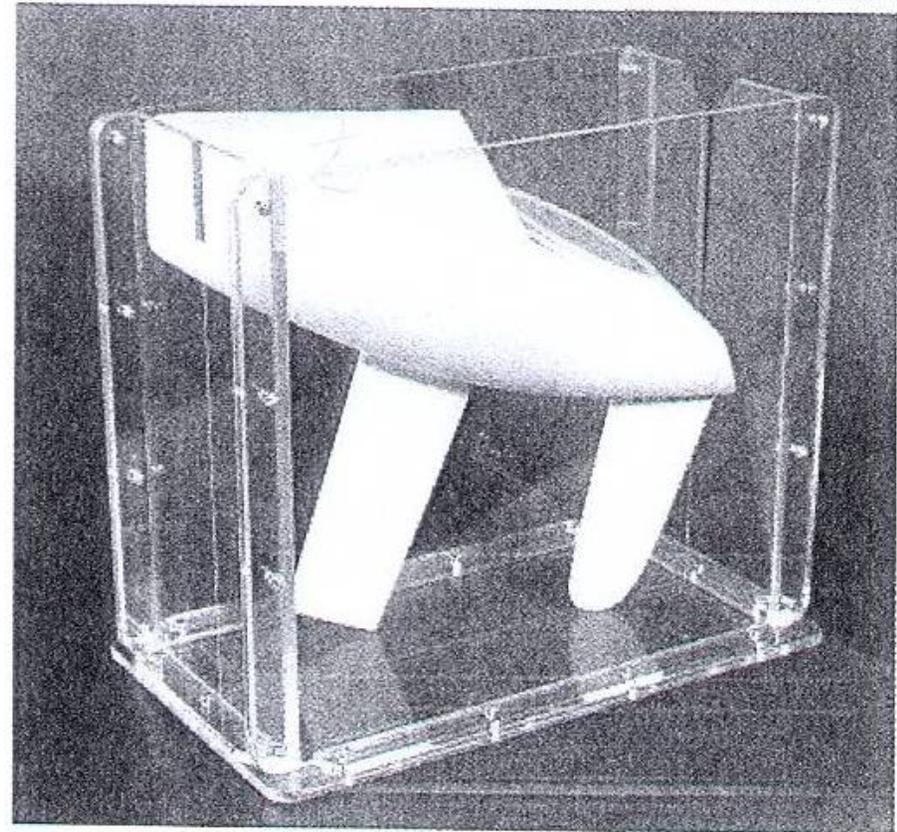


Footies



Creative Design – Think Inside the Box

- The Footie Rule Box allows some creative experimental naval architecture, e.g.
 - Does extra length from “diagonal” length count for more than reduced righting moment from shorter keel?



Brujo placed diagonally and on an angle in the measurement box. Photo by Ruby Levesque.



Footy Design-Build

- Footies can be built from plans, kits or created from scratch
- Footies have been built from milk cartons and 2 liter pop bottles
- The following pages give some information on plans, kits and sources for supplies



Resources

- Several companies make Footy kits and entrants can build one as designed or creatively modify as they see fit – as long as it fits in the box!
- Entrants can also start from scratch and build their Footy boats in as creative a way as they can.
- The following slide show some of the available kits and a list of resources for construction materials, model fittings and rigging supplies and radio control systems
- Recycled materials are encouraged, e.g. plastic bag sail material, chop-stick for booms, coffee stir-sticks for battens etc



Scale Sailing Kits

Kittiwake – ScaleSailing.com

Note – one of the most complete kits, easy to build and good sailer



Victor Models

https://secure.victor-model.com/V-12_A

Note: Also a good simple kit



Heron Composites Kits

www.freewebs.com/heroncomposites



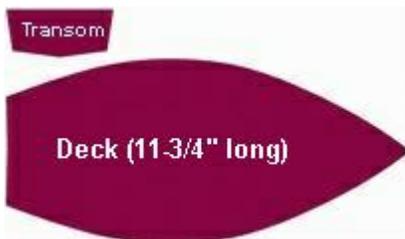
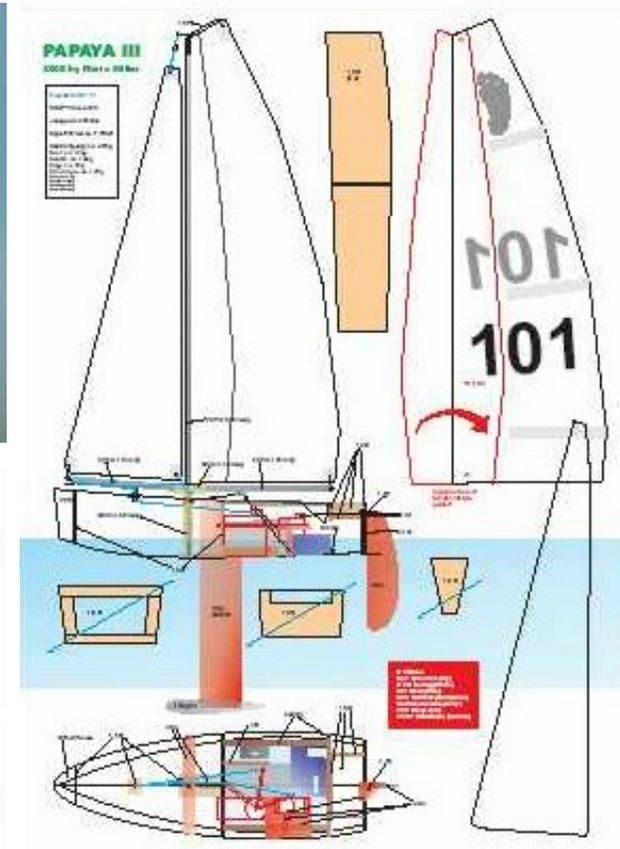
Micro Yachts Kit

microyachts.com



FOOTY PLANS

<http://footy.rcsailing.net/plans.php>



Suggested Basic RC, Servos and Battery Box

- **Radio Control**

- [Turborix 2.4Ghz 6 Ch Digital Programmable Radio Gear](#)
- <http://www.r2hobbies.com/eng/products.php?cat=308>
- Price ~\$40.00

- HobbyKing 2.4Ghz 4Ch [Tx](#) & [Rx](#) V2
- <http://www.hobbyking.com/>
- Price ~\$24.00

- **Servos**

- Rudder - 1 required
 - Hitec HS-55 Sub-Micro Servo Torque ~15 oz in. available at
 - <http://www3.towerhobbies.com/cgi-bin/wti0001p?&I=LXTX42>
 - Price ~\$10.00

- Sail - 1 required
 - Blue Bird BMS-380MAX Micro Sail Servo~ 60 oz in. available at
 - http://www.hobbycity.com/hobbyking/store/uh_viewItem.asp?idProduct=8760
 - Price ~\$28.00

- **Battery Box**

- Battery Box with switch
- <http://www.scalesailing.com/product.htm>
- Price ~\$6.00



Sourcing for Footy Radio Controls, Servos and Construction Materials and Fitting

- Aircraft ply and other building materials
 - www.aircraftspruce.com
 - www.hobbylobby.com
- Radio Controls, Servos etc
 - www.horizonrc.com
 - www.towerhobbies.com
- Model Yacht and misc fittings - jewelry clips, ear ring hooks, light chain, etc which can be adapted to boat use
 - www.worthmarine.com
 - www.michaels.com
- Carbon Fiber tubes and rods for masts, spars etc & sail cloth and special fittings
 - www.kitebuilder.com
- Lines, clips, small screw eyes etc
 - www.jannsnecraft.com



Special Note - Radio Frequency

- In terms of radios for the SNAME Footy regatta we are institute **a rule that only 2.4 GHz systems should be allowed.**
- A desirable feature of the 2.4 GHz system is that one does not have to worry about cross talk another frequency. The transmitter will "bind" itself to the receiver and cannot be disturbed by some other transmitter.
- The older radio systems operate on AM frequencies of 27MHz or FM frequencies also in the MHz range and they are fixed to specific channels . If one happens to have the same channel as somebody else you could not sail at the same time. In addition the channels are divided to model airplane channels and surface channels. You are not allowed to operate a model sail boat on a model aircraft channel since you may cause a crash of the aircraft with devastating consequences.
- 2.4 GHz radio systems can be purchased for as little as \$25.

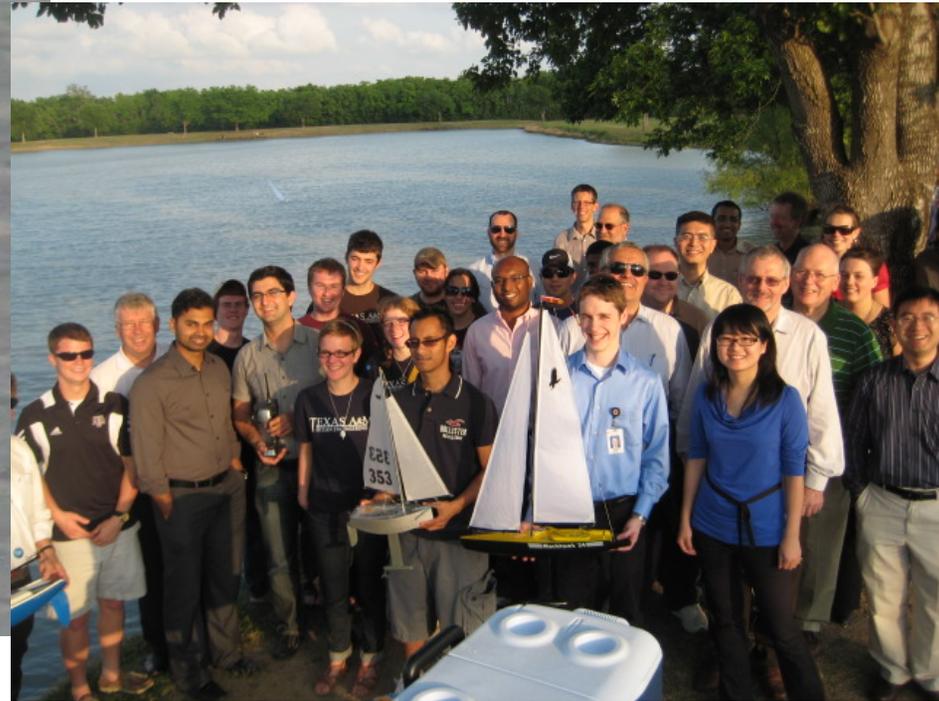


Registering Your Footy (and getting a sail number issued)

- One last task is to register your Footy and get a sail number issued which you will display on the mainsail in accordance with the Footy Rules
- To obtain a number simply contact Footy Class Secretary
 - Bill Hagerup, Footy Class Secretary
 - billhagerup@hotmail.com



Recent SNAME Texas Section event with Footys and other r/c boats



*Start thinking about your
Footy Design right now
and come and join us in
Providence, RI in October
2012*



Footy Sailors



Footy Race at ConocoPhillips Official R/C Sailing Squadron Pond

*For further information and to
register your entry contact:*

Peter Noble at

peter noble40@gmail.com

