



RABOESCH FABRICATED Props are available in multiple sizes, blade configurations & styles including typical blades authentically shaped for pre 1940's ships; typical blades authentically shaped for post 1940's ships; large surface area props for high propulsion at low revs; 'skewed' blades designed for faster ships where low vibration is a requirement; capped blades specifically for use in kort nozzles and thrusters.

Such a wide range of designs ensures that Raboesch have a prop to suit virtually all applications including, small steam boats, auxiliary engine sail boats, cargo ships, port tugboats, pleasure yachts, motor sailors, fishing boats, steam ships, work ships, tender boats, frigates, patrol boats, cruise ships, container ships, luxury yachts, police boats, pilot boats, torpedo boats, ferries, aircraft carriers and submarines.

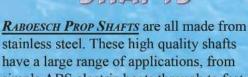
CALDERCRAFT BRASS Props were designed using the latest CAD surface modelling software. After exhaustive computer modelling of a wide range of designs three test designs were decided upon. These designs were then produced and 'real world' tested on a range of model boats to precisely determine which gave the best performance, for both forward and reverse propulsion. Metal dies were then cut to produce the wax models used in the investment casting process. Investment casting faithfully reproduces the cavity in the metal mould resulting in a final product so accurate that balancing of the propeller is not required for most scale boat applications. The alloy used has also been carefully considered resulting in a rich brass colour with the strength of mild steel. Caldercraft brass propellers are currently available in left and right hand, 3 blade from 30mm to 75mm, 5mm increments, M4 threaded.

stainless steel. These high quality shafts have a large range of applications, from

simple ABS electric boats through to fast electric and glow engines.

FINE LINE PROP SHAFTS are the all new shafts from Caldercraft, featuring 6mm diameter stainless steel stuffing tubes fitted with long brass bushings at each end to help support the shaft and ensure smooth running. The shafts are 4mm diameter stainless steel, threaded M4 at each end and fitted with brass Fine Line nuts and washers. Available from 4" to 20".









THE ORIGINAL AEROKITS SEA COMMANDER this beautiful 34" cabin cruiser now completely re-designed to take advantage of modern materials and manufacturing techniques!

Model supplied complete with all required timber; CNC

manufactured pre-cut and pre-profiled components; all windows, glazed and framed; integral engine mount; removable radio mounting platform; 12" M4 stainless steel propshaft; coupling unit, including inserts; hull matched 12V 750 Speed (18,800 rpm) Caldercraft Electric Motor; hull & engine matched 45mm 2 bladed prop; brass rudder; comprehensive instruction manual, including part identification sheets; 2 large scale plan sheets.

Model shown photographed complete with the optional Sea Commander fitting set.





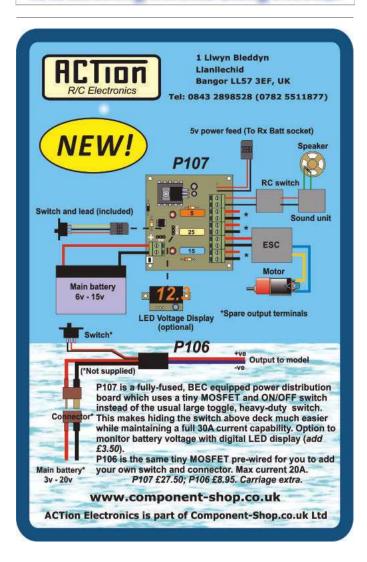






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COMPASS 360

General items, what's on, comment and MYA News

RANGE FINDER

Dave Wooley's Worldwide Review of Warships and Warship Modelling includes Part Two of a report on the highly successful 2014 National Model Warship Weekend, and he continues with his Deans Marine HMS Skirmisher project.



FLOTSAM & JETSAM

John Parker looks at 'Batteries for Big Boats'

BOILER ROOM

Richard Simpson discusses Oscillators versus Valve Steam



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DEANS MARINE SEPTEMBER 2014 OPEN DAYS

Colin Bishop visits the factory



his issue, the first for 2015, has a full Kit Review by John Elliott of the Deans Marine Royal Navy 25ft Motor Boat, a model that is a nice practical size for radio control operation and providing plenty of scope for being configured to represent one carried by a particular warship. In addition, John Blackwell has restored and updated a 50 year old Fairey Huntsman to give many more years of useful service using brushless electric motor propulsion. Tony Dalton has built a modified version of S.S. Noggsund from the popular Glynn Guest plan, and called it Bjorn D.

We have reports from the International Model Boat Show held in November 2014, this always being a popular UK three day event, as well as from the Blackpool Model Boat Show and the Deans Marine 2014 Open Days in September.

Model Boats magazine sells worldwide and it is always nice to see the models of our overseas readers and this month we include those of Steve Martin from Canada. His models are outstanding and in a class of their own, so it is a pleasure to share them with you.

There are the usual regulars in this issue including Range Finder, Flotsam and Jetsam, Boiler Room and BMPRS News, as well as club news from Southend MPBS, Sheffield SMS and the Bournville Submarine Day, so something for everyone we hope.

The magazine designer Steve Stoner, Colin Bishop who looks after the website and myself, wish you all the best for 2015 and thank you once again for your support for this magazine, now into its 65th year of publication.

Paul Freshney - Editor

Compass 360

Model Boats notice board for your news

Editorial Contact - Paul Freshney

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Wilton Model Engineering and Hobbies Exhibition

This will be held on **21st & 22nd March 2015** at the Michael
Herbert Hall, South Street, Wilton,
SP2 0JS, from 10am to 5pm
both days. Free parking and light
refreshments, entrance fee £4,
and accompanied children, £2.
Trade stands associated with
the hobby will be present and
the event includes live steam,
locomotives, traction and road
locos, marine modelling, horse
drawn vehicles and fairground
equipment. This year the theme of
the show is steam ploughing.

Further information from P.J. Parrish, tel: 01980 610346.

Model Boat Convention 2015

Competition for young model boat builders

The theme of this event being held for the 26th time at Haydock Park on Saturday 29th & Sunday **30th August 2015,** is 'Glynn Guest Models'. Glynn will also be the Guest of Honour for this event and the organising committee have decided that there will be an additional competition for youngsters up to the age of 16 building a model from one of his plans. Full entry information for them is now on the Model Boat Convention website, together with how to obtain the UTE plan (February 2013 MB), free of charge, from which the model should be built.

This is an opportunity for young enthusiasts to demonstrate their skills with a design that is easily adaptable, and of course a wood pack for the hull is also available from MyHobbyStore. Entries must be via the Model Boat Convention, website:

www.modelboatconvention.co.uk

Mutual Model Boat Society Heywood

Grand Modellers Bring & Buy Sale This is on Sunday 29th March 2015, doors open at 9am and selling starts at 9.30am. The venue is: Crimble Croft Community Centre, Aspinal Street, Heywood, Manchester, OL10 4HL. This is a well known and popular event for selling or purchasing modelling supplies and there are always lots of bargains to be had and a great range of snacks and drinks, all at sensible prices. Admission price is £1 including the raffle. To reserve a Seller's Table please contact Kevan Winward, tel: 01706 868616 or mob: 07803 975089.

London Model Engineering Exhibition

This event takes place whilst this magazine is on sale, but is well worth attending if you have the opportunity. It is at Alexandra Palace, Alexandra Palace Way, London, N22 7AY from Friday 16th to Sunday 18th January 2015. The exhibition opens from 1000hrs to 1700hrs each day with the exception of the Sunday, when it closes at 1630hrs. For further information please see the website: www.londonmodelengineering.co.uk.

Letters

Nowadays, 99% of written correspondence is via email. and questions of a general modelling nature can usually be easily resolved by using the Model Boats Website Forum or other online facilities. I do however appreciate that some readers may not have access to the internet for a variety of reasons, so am happy to still receive letters with Model Boats magazine model related queries, but if the sender expects a reply, then do please enclose a stamped selfaddressed envelope.

Welcome to 2015

This is the first issue for 2015 and Colin Bishop who looks after the website and its unique magazine forum, Steve Stoner the magazine designer, and myself, wish all our readers the best of good fortune in 2015 and your continuing enjoyment of this great hobby of ours.

We have an additional Model Boats Special prepared and edited by Colin due later this year with Vic Smeed, his models and plans, being a major theme within it, plus of course there is the regular Model Boats Winter Special Edition as usual in November

I always welcome contributions from readers, be they just a few words and pictures about their latest model, or a more in depth article perhaps detailing its construction from start to finish. Likewise contributions about forthcoming club events are always included in the magazine, as are event reports and this is a very good way of generating extra publicity for clubs, who only have to send them to me for publication. It is surprising how many readers do not use forums or the internet for information about the hobby and rely solely on magazines to keep them up to date.

I thank you for your continuing support and incidentally for the number crunchers, this January issue is the 99th I have edited. Once again and in conclusion, I wish you all well for 2015.

Paul Freshney - Editor

MODEL BOATS ONLINE!

Model Boats Magazine is now only a click away! You can find us online at...

<u>www.modelboats.co.uk</u>

Website content includes:

- A Gallery which features photo albums of models, including some under construction by Model Boats readers and being updated as they progress.
- A Forum that has sections for:Beginners, General, R/C and Accessories, Static, Kits, Scratch build, Steam, Vintage, Events and Chat.
- A Features area that has sections for: Build Features, Kit and Product Reviews, Hints, Tips and Technical, Show and Regatta Reports and General Interest Articles on Model Boating.
- A Link to www.myhobbystore.com which has over 3000 plans available and numerous modelling items, books and kits. These can all be purchased online.

2014 BOTTLE Boat Championship

Roger Stollery reports

his was a marvellous radio sailing event held on the 31st August at Waldringfield SC with 24 competitors as well as supporters and spectators lining the banks of the River Deben.

Racing

Seventeen races were run in ideal conditions with warm and sunny weather and a NNW wind blowing 4 to 10mph against the tide, parallel to the shore in front of the clubhouse. These conditions allowed some spectacular offwind planes by these swing-rig powered designs. It also gave the opportunity to use the strong tide in the middle of the river for easy beating on the 120 metre sausage course.

The morning's racing

Previous champion, Rob Vice, sailed furthest out into the middle of the river in Race 1 to get the best of the tide and was first at the windward mark and lead from thereon from another previous champion, Bernard Kufluk. In Race 2 it was a 'Vice Squad' benefit with Rob winning again, closely followed by his son C. J. Vice, but Bernard was not to be outdone and came back to win Race 3. The wind got up in Race 4 and the BOTTLE boats were flying downwind and a number of skippers suffered gear failure, but

by midday Rob Vice, Alan Viney and Bernard were the top three on the leaderboard.

BBQ

Seventy four competitors, their families and new club members enjoyed this during the lunch break, thanks to the efforts of Jo' McArdle together with Mick and Margaret Lake.

The afternoon's racing

With all the broken gear mended and batteries replaced, there were less breakdowns in the afternoon and the pace of racing speeded up. Rob continued to dominate by winning Race 7 and 9, but let Bernard win Race 8 and the following races had a variety of winners. Bernard won the final

17th race, but C. J. Vice could only finish fifth and so lost his overall third place on count back.

Prize giving

David Copp, the Wallingford SC Commodore, presented the prizes and thanked competitors for putting on a great spectacle and the race team for organising the event. PRO Roger Stollery thanked all members of the race and the BBQ teams individually. Rob Vice, the winner, thanked Roger for masterminding the event and also for the design concept of the class, which is very low cost, enabling youngsters to take part.



C.J. Vice (right) receiving the Junior Trophy.

Results - top 10 only

1st:Rob Vice2nd:Graham Viney3rd:Bernard Kufluk4th:C. J. Vice5th:Alan Viney6th:Tim Norris7th:Noel Fraser8th:Mike Pert9th:Peter Jackson10th:John Fish





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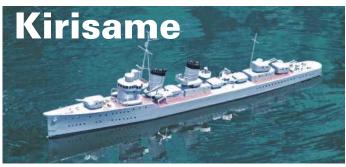
Boats Next issue

The Model Boats February 2015 issue is on sale on the 23rd January 2015

This issue will include a Free Plan designed by Glynn Guest for Kirisame, a stand-off scale model based on the Imperial Japanese Navy's Special Type destroyers of WW2. There will also be articles on a Jetex powered boat project by Dr. Marcus Rooks and USS Melvin by Victor Croasdale, as well as all the usual regulars and more.







See more about what's in Model Boats magazine month-to-month in forthcoming issues and see some of the articles you may have missed from past issues and subscription offers on our website: www.modelboats.co.uk

We have a great range of subscription packages that you can choose from, including our new Print + Digital package which give subscribers 13 issues a year with 6 free plans, 13 digital editions to download and keep PLUS access to an Online Archive dating all the way back to January 2007.

Don't forget! The February 2015 issue will be published on 23rd January 2015 price £4.50 - don't miss it! Order your copy now! Or better still why not make it your first copy in a year's subscription to *Model Boats* magazine? See our subscription offer on Page 50 in this issue...

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John Elliott reviews the Deans Marine kit

his kit represents the 25ft motor boat that used to be regularly carried by the larger Royal Navy warships. There were wide variations in its detail, some for example having three windows and some having four. The paint finish varied from varnished teak to a multitude of colour schemes with the deck planked, stained or covered in Corticene. Competition existed between warships to improve 'their' motor boat and I understand captains sometimes had allowances to amend the colour scheme so it was distinctive for 'their' ship. Therefore there is some scope for the kit purchaser to enhance and/or alter the model to represent a particular craft.

The hull is of good quality, but needs a light sanding and cleaning to remove any release agent and provide a good 'key' for the paints later.

The kit

It is to 1:12 scale and measures 690mm in length by 210mm beam driven by a single propeller. The kit contents include a nicely made GRP hull with the clinker planks moulded on the exterior. The main deck and all other major construction parts are on laser cut plastic sheets. The fittings are supplied in a partitioned tray and consist mainly of white metal castings, a resin cast dummy engine and a brass propshaft with oiling tube. Vac-formed mouldings for a 380 type of motor mount are included, as well as additional dummy engine parts. Metal rod, wood strip and dowel, along with vinyl window frames, a printed foredeck, badges and flag are all included. A comprehensive instruction book contains building

tips, what glues to use etc. and a full-size plan completes the kit contents, **Photo 1**.

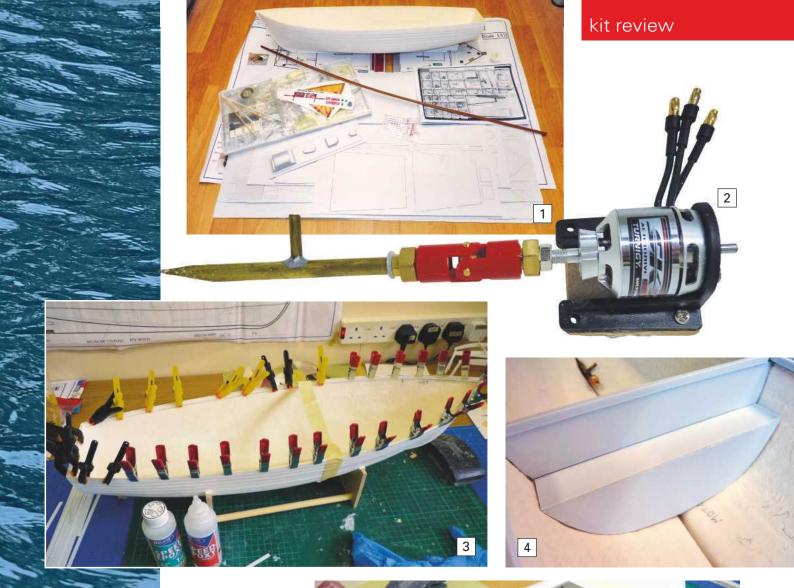
Getting started

The kit supplied was a 'first release' version, so a few anomalies and queries were to be expected and a read through the building instructions prior to doing anything is no bad thing. The laser cut styrene parts can be easily dry-fitted together, particularly for the cabins at this stage, to get a feel for the model. A number of questions subsequently arose together with a few minor problems with some parts. These were relayed back to Ron Dean who in fact already had them under amendment, so future kits have had these minor problems rectified.

The first step is to build a stand and paper templates are provided to cut the shaped end frames from thin plywood, these being held apart with two pieces of dowel. Material for this is not supplied in the kit. This is not uncommon with model boat kits and is perhaps something that should automatically be included by all manufacturers, as you can't get that far without a stand!

The hull is of good quality, but needs a light sanding and cleaning to remove any release agent and provide a good 'key' for the paints later.

A hole was drilled for the propshaft which was dry-fit inserted and the position of the motor and its coupling checked. I did not use the included vac-formed motor mount as I wanted to try a brushless motor, these becoming increasingly



popular due to their efficiency and as the mystery surrounding them disappears, **Photo 2.**

With this all okay and in alignment, the propshaft and motor were removed and put to one side for gluing in place later, whilst the deck edge stringer supports were now fitted and glued in position, **Photo 3.** So, as you will appreciate, I deviated from the instruction sequence a little, the reason becoming clearer later, and the next task was to fit the two internal bulkheads. Rather than use the given measurements in the instructions, the one piece deck was placed in-situ, using this to accurately mark the bulkhead positions. By doing this you know everything will be in alignment, although as it so happened, the recommended measurements were near enough spot-on, but this was a safer way of achieving the same result.

I thought the drawing was incorrect with the rear stepped bulkhead too far aft, but after talking to Ron Dean, the space above the lower part was designed to perhaps house a sound unit, but nevertheless this bulkhead was brought very slightly forward to allow additional volume to put the battery under it, roughly amidships in the hull, just in front of the motor and accessible from the rear cockpit.. Some extra scrap styrene was used to further support the main deck, **Photo 4** (looking aft). Over-engineering perhaps, but there is plenty of scrap styrene on the carrier sheets for the precut parts, so why not make use of it?

The forward bulkhead is conventional and can be seen in **Photo 5**, forward of the central cockpit area. A point to consider is that the forward cabin's



back face mates vertically to the forward bulkhead and therefore it must sit level with the top of the deck and cut-outs will have to be made for the side decks to locate within it all. On the Deans Marine prototype, the forward bulkhead and the rear of the cabin were all one piece which explains the differences in the kit, the arrangements as they are now being far more practical.

The easiest way, to make sure everything fits is to actually assemble the two cabins over the deck, but not be glued to it. By just taping the main deck in position over the hull, they can then be easily

Photo 1. Kit contents.

Photo 2. The propshaft, motor and its coupling.

Photo 3. Deck edge stringers being glued in position.

Photo 4. The entire stepped rear bulkhead in place.

Photo 5. The forward cabin's rear lower bulkhead.



Photo 6. The cabins being constructed without their roofs. Tamiya masking tape is very useful for holding everything together before applying the liquid polystyrene glue.

Photo 7. The method of locating the cabin units to the bulkheads with slots and tabs.

Photo 8. The mini servo mounted on its new tray. Note extended tiller arm.





built on it, **Photo 6.** A bit of over-engineering here can also be done by adding extra fillets of scrap styrene within the internal corners of the joints to give the cabin units some extra rigidity.

The forward cabin sits on top of the deck, so location tabs were added to the rear of it with corresponding slots for them on the inside forward face of the bulkhead, created from strips of styrene, and hopefully the picture will make this clear, **Photo 7.** Note, all of this was done before its roof was glued in place.

The same principles were used for the rear cabin with tabs on its front panel and the rear end clipped in place with rib extensions. On the forward cabin rear bulkhead are flush door etchings. To be honest it looks much better to make a pair of doors, either from painted styrene, or proper wood(!), that can then fit over the etched marks.

Earlier, the basic preparatory work had been done and as it was now clear the bulkheads would not interfere with anything

Running gear

Earlier, the basic preparatory work had been done and as it was now clear the bulkheads would not interfere with anything, the propshaft and motor mount were glued in place. Everything was aligned, including the wood wedge for the motor mount which was taped in place, so could not move. Two part epoxy was applied liberally around the propshaft tube and its hull joint. You will see from the pictures that the propshaft oiling tube is angled close to the hull bottom to enable clearance for

the cockpit floor. It was later joined to a silicone tube into which grease can be injected. The motor mount was also glued in position using epoxy. The included cast white metal propeller was replaced with a brass version, available from Deans Marine as an alternative 'extra'.

The transom mounted rudder is quite straightforward to make and all its measurements are included in the instructions. It hangs on pintles with a skeg support, but its 'hidden' tiller connecting arm was a little short so that was extended with a threaded servo rod connector, but I understand that the current kits now have a longer threaded arm. This linkage passes through a slot in the transom to connect to the servo, for which there is not a lot of space when hidden behind the aft cockpit's rear seat on the starboard side, **Photo 8.** A tray is provided, but don't cut it until

you know your servo will fit in the space allowed. Guess who ignored that simple instruction? Yes, me, so a new servo tray was made, accommodating a small mini servo. After that 'cut in haste and relent at ease' moment, everything was dry-fitted and checked before being permanently fixed in place.

Internal hull simulated planking

This was the principle reason I deviated from the instruction sequence. The instructions suggest coating the inside hull 'seeable' areas with car body

kit review

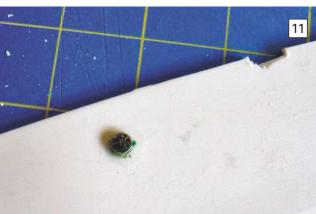
Photo 9. The simulated internal planking aft of the second bulkhead.

Photo 10. A Neodymium magnet placed on a blob of filler.

Photo 11. A Neodymium magnet glued (with superglue) on the underside of cockpit floor.

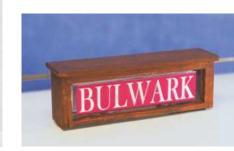






BELOW: The illuminated name on the lightbox was feature of these service craft.

BOTTOM: A brass propeller was substituted for the kit supplied white metal version.



filler, sanding smooth, painting and then drawing lines to represent the planks, followed by vinyl strips for the ribs. This seemed to me to mean a fair bit of filling and rubbing-down, so decided to approach the conundrum with a different plan. 10mm wide strips were cut from 0.5mm styrene sheet and glued to the hull's interior, starting from the deck edge, overlapping slightly and down to where they could not be seen. The ribs were cut from scrap 2mm thick styrene, then glued over the planks at about 5cm width intervals and the result? It looks better in my humble opinion and rather less work than filling and sanding, **Photo 9** (here still awaiting ribs).

Magnets?

The rear removable cockpit floor was tested for fit and fitted as per the instructions on a bed of filler, but with a slight modification. Some tiny, but powerful Neodymium magnets were installed in the hull on blobs of filler, **Photo 10**, and six corresponding ones glued to the underside of the floor, **Photo 11**, this now being firmly located yet easily removed should access be required. A similar method was used to hold the forward cabin door in place with four magnets glued to the door and then matching units superglued in place on the bulkhead's inner face. All this provides a secure placement, but one that is easily broken by sliding the door (or floor) slightly to one side.



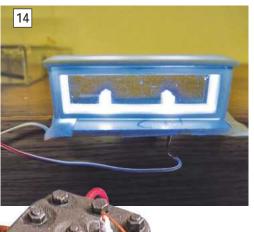


Photo 12. The modified wood planked foredeck under construction, also showing the provided kit vinyl veneer version.

Photo 13. The Perspex block drilled for the LED's, together with its frame.

Photo 14. Testing the LED's.

Photo 15. The completed Thornycroft engine.





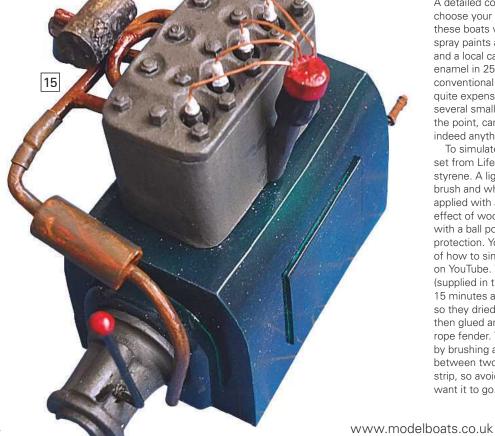
The hull's interior was painted white and only then was the deck glued in place. As a precaution, some mini-bulkheads were fitted within the forward cabin position to deflect any water away from where the electronics were going to be installed.

A printed vinyl planked foredeck is provided which fits perfectly and looks fine, but there is no substitute for real wood, so from the spares box, lime and mahogany planking was glued over the styrene main deck, this being a personal preference, **Photo 12**.

Painting

A detailed colour chart is included, but you can choose your own scheme as was the case with these boats when in service. Halfords car aerosol spray paints are fine, but relatively expensive now and a local car paint supplier can mix matching enamel in 250ml quantities for around £8 for conventional airbrush application. This may seem quite expensive, but much cheaper than buying several small 14ml tins of model paint and more to the point, can be supplied in gloss, satin or matt, or indeed anything in between.

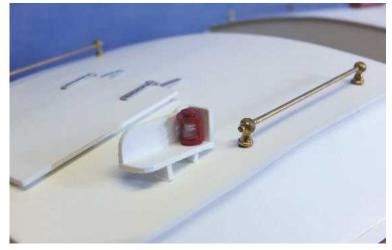
To simulate wood a 'Weathered Wood' paint set from Lifecolor was used on some of the white styrene. A light beige base coat was applied by brush and when dry followed with a darker brown applied with an old toothbrush to give the grain effect of wood. Planks were drawn on afterwards with a ball point pen and then varnished for protection. You will find some video demonstrations of how to simulate wood on plastic via a search on YouTube. The external wooden rubbing strips (supplied in the kit) were soaked in hot water for 15 minutes and then taped to the hull overnight so they dried shaped to its curves. They were then glued and pinned to the hull followed by the rope fender. This fender is best glued in place by brushing a small amount of contact adhesive between two taped lines on the wooden rubbing strip, so avoiding the glue going where you don't want it to go.





BELOW: Working navigation lights are an option for the model builder.





Lights?

This model cries out for lighting, having an illuminated BULWARK nameplate lightbox on the top of the cabin and navigation lights as a minimum. The port and starboard lights are easy, with a small red and green LED installed within them. For the lightbox, this was made from a block of 6mm clear Perspex drilled vertically with two holes to accept clear LED's, **Photo 13.** A frame was constructed around this with the supplied vinyl nameplates later applied to the sides. **Photo 14** shows it illuminated,

Photo 16. The imitation engine sits nicely over the brushless motor. Note also the painted planking using the Lifecolor paint kit.

Photo 17. The waste parts from the laser cut cabin side panels were used as templates for windows.

but minus the nameplates. Brass strip was cut and glued to the tabs and slots locating the cabin units to provide connections for the LED's, somewhat more practical than trailing wires or plugs when removing the superstructure.

Thornycroft dummy engine

This is a finely detailed model, within a model, that fits over the electric drive motor, **Photo 15.** I had to modify its base piece side panels so that it would fit over the brushless motor, but that was easy and no great model building exercise, **Photo 16.**

Model data

Kit manufacturer: Deans Marine, website: www.deansmarine.co.uk.
Glue: Deluxe Materials, website: www.deluxematerials.com
Weathered wood: LifeColor, The Airbrush Company Ltd, www.airbrushes.com

Rudder servo: Turnigy S331S. **Brushless motor:** Turnigy SK3-280-920KV.

Brushless esc: Turnigy TrackStar 25 Amp Brushless Car forwards and reverse.

Programming card: Turnigy TrackStar (Optional)

Battery: Component Shop, website: www.componentshop.co.uk
Paints: Leonard Brooks (Harold Wood), website: www.brookspaints.com
Magnets: 3mm x 1mm Neodymium from Power Magnet Store on eBay
The motor, esc, programming card & rudder servo cost less than £30 from Hobbyking.

Windows and other fittings

These were cut from the clear plastic provided, using the laser cut scrap blanks from the cabin side panels as masters to draw around and use as a guide when cutting and filing to size,

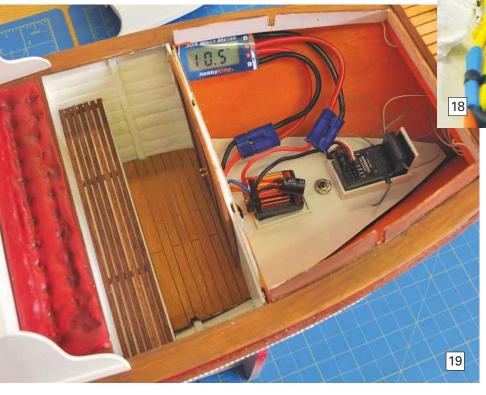
Photo 17. These clipped in nicely and were secured with 'Glue & Glaze' from Deluxe Materials. The overlay aluminium coloured vinyl frames need some care in fitting, but full instructions are supplied. Where needed, fittings such as the bollards were pinned in place as well as glued, to give them extra strength.

kit review

Photo 18. The 9.6v 4300mAh battery is installed in a 2×4 configuration and sits within the stepped aft main bulkhead, just in front of the brushless motor.

Photo 19. There is plenty of room for the receiver, esc and battery monitoring device.

Photo 20.The completed model.



Radio control and battery installation

The main drive battery, in this case a 9.6v 4300mAh sub-C pack in a 2×4 cell configuration, sits in front of the motor just within the aft stepped bulkhead, **Photo 18.** The control equipment all sits within the forward cabin as in **Photo 19,** which also shows the onboard power consumption device and that just about completes the model, **Photo 20.**

On the water

About 400 grams (approx. 14 ounces) of ballast was required to bring the model down to the painted waterline. It was a bright calm afternoon when the Editor and myself took the Deans Marine Royal Navy 25ft Motor Boat for her first outing





kit review

Photo 21. Looking good on the

Photo 22. A bit too fast, but handy for avoiding other kamikaze models in an emergency at the pond!

at the lake. A little re-ballasting was required to cure a slight list to port, but that was all. After that the throttle was opened and off it went with a realistic and stable appearance on the water, **Photo 21**. It responded to the controls well, turning in a reasonable circle for this type of rudder arrangement. Taking it up to maximum speed this greatly exceeded what would be classed as a 'scale performance', but it held hits own and showed no sign of becoming unstable, **Photo 22**. Reverse was like many single propeller models, okay turning in one direction but rather reluctant too do much in the other.

Over-fast? Well, that was easy enough to resolve by using the electronic controls on the Spektrum DX6i transmitter to reduce the 'throw' on the throttle stick, which has the same effect as reducing the top speed both forwards and reverse, but still leaving the operator with the full range of stick movement and on returning to land, not a drop of water inside the hull either.

The onboard power recording device showed the maximum current drawn at any one time was 4.5 Amps and the motor was barely warm, this indicating its high efficiency as no power was being lost heating-up the motor casing. Once back in the workshop, cycling the battery revealed usage of

1000mA, barely a quarter of its 4300mAH capacity from 35 minutes of operation, thus indicating a possible run time of over 150 minutes from the 9.6v battery.

Conclusion

As this was my first model equipped with a brushless motor I am very pleased with it and am now convinced these motors are a positive way forward for our hobby and used sensibly are perfectly okay for scale boats. In fact the entire powertrain of the motor, speed controller, program card and rudder servo came to around £30 from a certain worldwide online retailer.

I must admit to liking this model a lot. It was not difficult to build, being within the capabilities of most modellers. The instructions are comprehensive and the retail price of £185 means it is excellent value. It is a handy size, with plenty of scope for personalisation - this one bears the name Bulwark after the parent ship, but the design was used on numerous other warships. Some suitable figures are next on the list to make the model more life-like. One point of note is that Ron Dean of Deans Marine has always been most helpful resolving construction queries, something that is a big 'plus' in this modern world.

I must admit to liking this model a lot. It was not difficult to build, being within the capabilities of most modellers





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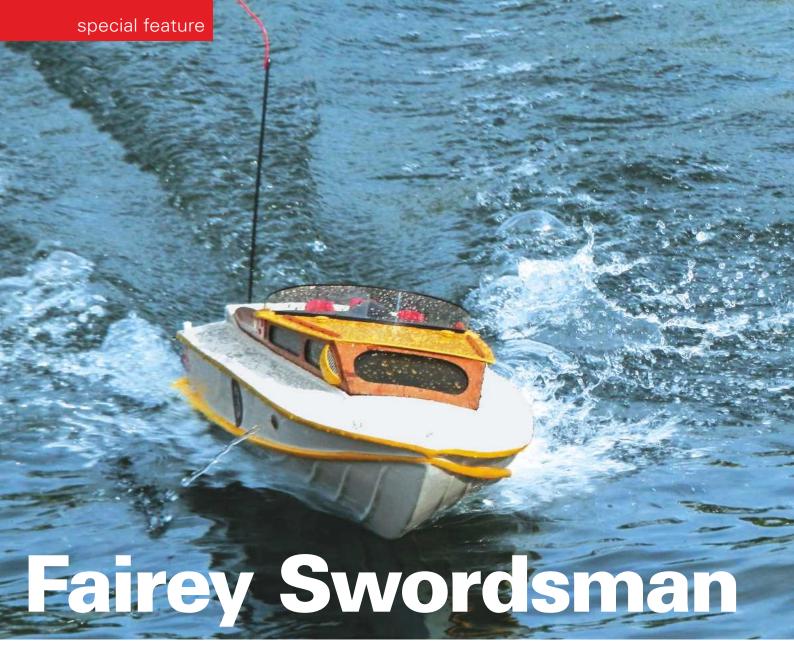


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John Blackwell converts a 50 year old classic model to modern brushless electric drive

hilst sorting out the loft where we all keep items we may need for one day, but never do, I came across my old Fairey Swordsman that had been stored there since the 1980's, Photo 1. The model has a bit of history being originally owned by the late George Brookes, Chairman for many years of the Sheffield Ship Model Society. This Swordsman has a fibreglass hull and a traditionally styled wooden cabin and was originally powered by a 10cc Merco 61 i.c. engine. It was extensively used in multi-race events in the late 1960's & 1970's, winning many club and MPBA national events, but sadly during one race, George accidentally slammed it into the concrete wall surrounding the lake. Disgusted with himself and the boat seeming to be a total write-off (sorry, no photos of this as it was a long time ago) he took

out all the internal workings and duly dumped the wreckage in the nearest litter bin. On seeing this I retrieved it, saying to him: 'There could still be life in it yet'! George replied: 'Be my guest and see what you can make of it'. On returning home all the damaged area was sliced off, thus reducing the depth of the hull sides to approximately two inches at the highest point above the deep vee and tapering to 1.5 inches towards the stern and all that remained of the cabin structure was also discarded.

So basically all that was left was a very much reduced fibreglass hull which still had to be repaired. A new bulkhead was fixed in place together with other frame members to support a new ply deck. A one piece removable slim-line basic cabin was designed and a 10cc Merco 61 was installed. Using Sprengbrook r/c equipment, the somewhat revised boat was raced for some years before being replaced with a John Stidwell Jaguar as in **Photo 2**, powered by a 10cc Ervine

61. In the 1970's to 1990's, John Stidwell had been World Champion and his company, Racing Models, produced a range of highly successful multi-racing hulls and their associated accessories. Sadly John passed away quite recently, but this period was the golden age of British multi-racing with

was the golden age of British multi-racing with events being held seemingly every weekend across the country. Anyway, this revised Swordsman was then 'adjourned' to the domestic loft where it has

61. In the 197 been Wor Racing M highly sur their asso passed awa was the golder events being held s the country. Anywar then 'adjourned' to www.modelboats.co.uk

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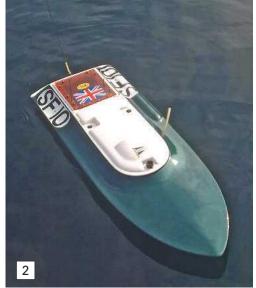
been under wraps since the 1980's.

Now in the second decade of the 21st Century and still not wanting to part with it, despite its aged condition, it was re-admitted to the workshop with a desire to convert the model to electric power, but now just for pleasure sailing. So, this is where the story properly starts.

Stripping!

The model looked okay, but on close inspection the fibreglass hull had a maze of spider's web cracks and many chips out of the moulded spray rails along its underside. The plywood deck was also coming away in places. The one piece cabin was not too bad, but some of the clear acetate windows were damaged and missing, plus the flimsy windscreen was cracked and broken. The cabin design was very minimalist in looks with two functional rear facing air vents, a narrow basic dashboard and cockpit area, **Photo 3**, but this was practical and functional for such a model at that time.

The interior was not in a good state, fuel and oil having soaked into the original wooden engine bearers and of course the engine was missing, **Photo 4.** A complete propshaft was still in place with a coupling and an X50 propeller, plus a fuel tank and all the associated silicone tubing and linkages. The tuned pipe was concealed in a heat shielded tunnel running down the inner length of







The model looked okay, but on close inspection, the fibreglass hull had a maze of spider's web cracks and many chips out of the moulded spray rails along its underside

Fairey Swordsman model details

 Length:
 32 inches (81cm)

 Beam:
 11.5 inches (29.2cm)

 Gross weight:
 6 pounds (2.75kg)

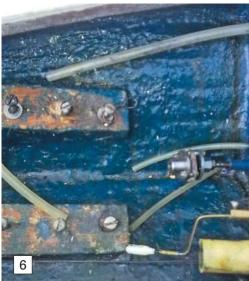
Motor: 2600kv water-cooled brushless electric

Esc: 90 amp water-cooled **Battery:** LiPo 4s-60c 2200Ah

Propeller: X40

Radio: Futaba 40MHz FM

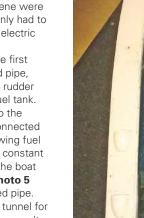




the port side. The rudder post and its associated rudder assembly, the built-in balsawood radio box and a fibreglass compartment down the starboard side housing buoyancy blocks of polystyrene were all still present, and the latter items certainly had to be stripped-out to create a lighter hull for electric propulsion.

All the easy parts and ancillary bits were first to go including the linkages, tubing, tuned pipe, 2BA propshaft (but not the stuffing tube), rudder assembly itself and the chicken hopper fuel tank. This is where a smaller tank is soldered to the underside of the main header tank and connected via internal and external brass tubing allowing fuel always to be in the small tank providing a constant flow to the engine's carburettor, despite the boat being at any angle whilst on the move, **Photo 5** showing this tank and the redundant tuned pipe.

Next to go was the internal heat shield tunnel for the tuned pipe. This had been installed as a result of a mishap in a 1974 multi-race event. Halfway through the race as the boat approached a turn buoy it suddenly kept circling, round and round. On retrieval, it was discovered that the heat from the exposed internal tuned pipe had melted the plastic radio box, jamming the steering servo and control linkages. Hence, the heat shield and air scoops had been installed, together with a balsawood radio box instead of the plastic version. So, all this was removed together with the internal starboard side sealed-in buoyancy blocks, followed by the wooden engine bearers, Photo 6. This last task was hammer and chisel work and resulted in holes in the hull's bottom and considerable damage to the inside of the hull.





In a 1974 multi-race event, halfway through the race as the boat approached a turn buoy it suddenly kept circling, round and round!
On retrieval, it was discovered that the heat from the exposed internal tuned pipe had melted the plastic radio box

Repairs

The engine compartment was relined with lightweight tissue and fibreglass resin, an orange repair patch being seen in **Photo 7**, together with some other smaller patched areas.

Now the inside of the hull was reasonably sound, attention could shift to the exterior, standard car body filler being used to skim over cracks and indentations. Some of the cracks were purposely opened-out, enabling them to be properly filled. Other hairline cracks would hopefully be filled when the hull was later sprayed with a primer-filler.

The external spray rails were repaired with body filler and reshaped, **Photo 8.** The transom required







an internal patch being placed over the hole where the exhaust tail pipe had protruded and also the bolt holes after removing the grab handle. All were subsequently filled and sanded to blend with the external shape of the transom.

Checks were made of the hull's exterior to ensure that the splits and cracks had all been taken care of, especially towards the stern where stabilising anti-roll fins had been added when in its i.c. racing days. These can be seen in **Photo 9**, together with the repaired transom and spray rails. Those stabilising fins had been made of hardwood strips glued to the chine, shaped and then fibreglassed, those were the days! In some places the fibreglass coating was separating and had to be resealed with more of the same. Once satisfied that all the filling, reshaping and patching of the hull had been done as best as possible, the interior was brushed painted with Humbrol No.15 Blue covering all the repair work, **Photo 10**.

A small hole was drilled in the stern deck section

for a rubber grommet to take the push-fit aerial tube (a straw) that passed into a support tube located directly beneath the deck. Polystyrene buoyancy blocks were installed in the open cavity on either side at the rear of the hull, **Photo 11**, retained by vertical balsawood sub-bulkheads. The original buoyancy blocks remained sealed in the bow compartment in front of the engine.

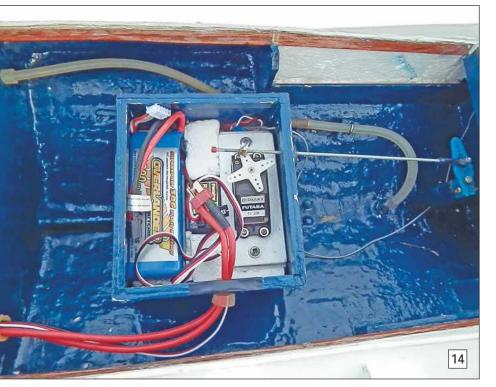
Painting

The somewhat jaded old gloss white exterior of the hull was sanded and given several coats of a spray primer filler, but his was not without problems. The hull has originally been painted in enamel gloss white and in spite of its age, the solvent based primer still attacked (pickled) the old paint in some areas, necessitating further rubbing-down, filling where necessary and more primer. The brass propshaft tube, water scoop and rudder were left as polished brass, and why not?









New motor and electrics

This was to be a 2600kv water-cooled brushless motor controlled by a 90 Amp watercooled esc and a 4s-60c LiPo battery, perhaps not for the faint hearted! A motor mount baseplate 2 x 2.75 inches was cut from 3/16 inch plywood and just large enough to seat the commercial motor mounting bracket. Cutting it any larger and it would have rested too high in the deep vee hull sides making the angle of the motor too steep to align with original propshaft. This baseplate was fixed in place with epoxy adhesive and the resulting hollow beneath, filled and boxed in, so creating a firm and solid mounting. Yet more blue paint merged it all nicely into the hull. The motor mount itself was positioned and its four screw holes marked on to the plywood base. Holes were drilled at these marks and brass 4BA threaded insert sockets forced and glued into them. The motor, on its adjustable mount, could now be easily fixed with four 4BA pan head set screws to the baseplate. A new homemade made brass coupling was turned on a friend's lathe and checks performed to ensure the motor was correctly aligned and that it all spun

freely.

All the electrics (except the esc) were to go into a new purpose-built box that at worst would be splashproof. This box was made from balsawood (again) with its exterior finished in tissue and resin, but having a clear acetate 'see-through' top.

The rudder servo, receiver and battery were installed in the box and the necessary wiring exit holes marked and cut for the esc wiring, the aerial wire and a rudder linkage. **Photo 12.** Each hole had a rubber grommet squeezed in place to prevent wear on their edges. Spare volume in the box was filled with small polystyrene blocks, to prevent anything from possibly moving.

The 90 amp water-cooled esc was fixed to the main forward bulkhead close to the motor, **Photo 13**, and the power supply wires to the esc had to be extended to reach the battery in the aft radio box. The servo to rudder linkage is worth a mention as the rudder end is a conventional ball and socket arrangement, but the servo end has the linkage rod passing through a small vertical socket that can swivel, but which also allows the length of rod to be adjusted, **Photo 14**.

The completed internal arrangement with the silicone tubing connecting the water-scoop, first to the motor, then to the esc and finally back out the starboard side can be seen in **Photo 15.** An inline brass filter was also inserted in the tubing, just after the scoop connection.

New cabin

After a few hand-drawn sketches, an open three seat cockpit design was chosen, all based around the existing cabin unit. A larger windscreen and a new broader dashboard top with a centre instrument pod mounted on it directly above a centre console, all set in a full width curved fascia, was the plan. The seating would stretch the full width of the cabin with access steps on the far right into the cockpit area, together with grab rails and dummy air vents on the cabin top and a functional air scoop at the front of the starboard side window. This last item covering a nasty hole in the clear acetate that could not be removed without major surgery.

Before work started, the varnished wood sides and yellow painted areas were thoroughly sanded. The badly damaged windscreen was removed and making the deeper dashboard top was the first priority, its final depth and shape being determined by a template. A piece of white paper placed on the cabin top under the cardboard windscreen template,











Photo 16, enabled the shape and depth of the new broader dashboard top to be determined. That shape was then traced and cut from a sheet of 3/16 inch balsawood and glued in place up against the edge of the original narrow dashboard, creating the new much wider version. An instrument pod and console were then constructed for their central location. A curved frame was made either side of the console and boxed in with balsawood completing the cockpit fascia, now stretching the full width of the superstructure. This new area was given a few coats of sanding sealer, being rubbed-down between coats, covered with lightweight tissue and clear dope, before being painted satin black.

Using the cardboard template again as a pattern, a 1/32 inch (20/1000) clear acetate windscreen was cut and fixed with superglue around the dashboard. Self-adhesive strips helped to hold it in place whilst small drops of superglue did their business, **Photo 17.** Later a thin black pin-stripe around the edge covered any trace of the superglue at the bottom and at the top nicely finished it all off. Okay,

a proper constructed frame might be better, but this

was good enough for this project and it still looks the part.

The cockpit deck by the fascia was planked with 1/8 x 1/4 inch hardwood strips and varnished. The seats are small balsawood blocks glued together and fashioned to shape, finished with sanding sealer, rubbed down and painted red, as in this last picture. There is a cockpit partition of 1/8 inch balsawood strip following the line across the back of where the seating is, **Photo 18**, here with the seats temporarily removed. The grab handles are of thin brass rod, sleeved with red plastic tubing from electrical wiring and sundry dials etc. were later added to the control panel resulting in what you finally see in **Photo 19**.

The damaged forward part of the starboard cabin window still needed to be resolved. The window had been sandwiched in the original framework construction of the cabin, so the easy thing to do was to conceal the damage behind an air scoop. The jagged hole was tidied up and a scoop made from a plastic desert spoon, cut at an angle to match the rake of the cabin front. **Photo 20** shows how a plastic spoon can be utilised for an air scoop



special feature



or similar, the black one being actually used for the dashboard pod shown earlier.

The new starboard side air scoop had a fine mesh grill fixed within its open end and the whole thing was glued over the damaged window, **Photo 21**. The other missing windows were re-glazed with clear acetate.

The cabin top and air scoop were brushed painted with Humbrol No. 69 Yellow, as was the aft section of the cabin. The plywood sides were varnished, but not before a narrow mahogany finishing strip was added to the curved edges. Dummy air vents and rails were fixed to the forward cabin top and the new grab rails are from 1/8 inch thick hardwood strips, fashioned to shape, stained and varnished. A few other main deck fittings were added, together with twin exhaust ports on the transom.

Finishing-off

The rebuilt Fairey Swordsman was checked on the club pond to see how it now floated, some 30 years after last seeing water, **Photo 22**. After this test and with the hull still in primer, the refurbishment was almost complete, just the hull's painting being required. Three brush coats of brilliant white exterior all weather paint were applied, with a light sanding between coats. Humbrol No. 69 Yellow was used to pick out the deck edge rubbing strips and the chine rail running into the stabilising fins. A few final cosmetics were a No. 3 roundel denoting the third rebuild; a Union flag to the rear of the hull; SF-10 is my club and MPBA registration, now on the transom; lifebelts on the cabin sides and mesh inserts in all the air scoop openings brought the



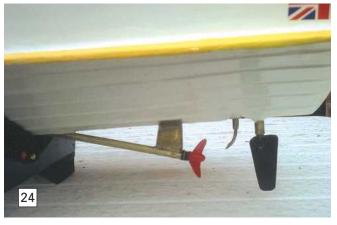
Swordsman's refurbishment to a close and it was off to the pond, **Photo 23.**

On the water and conclusion

Well, the initial turning circle was too big, taking most of the pond's width requiring rudder linkage and servo throw adjustment. An X40 propeller seemed to be best after a bit of fiddling around, **Photo 24.** The combination of an adjusted rudder throw and a smaller propeller, but turning faster, meant better control and a very rapid performance, **Photos 25 and 26.**

So there we are, a 50 year old model brought back to life and perhaps now even faster than with the old 10cc i.c. engine? The point of all this is that old models should perhaps not be discarded as with updating and a bit of tender loving care, they can be brought back into service for further enjoyment.









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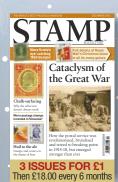














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Range Finder

Dave Wooley with his Worldwide Review of Warships and Warship Modelling



Photo 1. There were warships everywhere in Glasgow Richmond Park for the 2014 National Warship Weekend. elcome once again to our regular sortie into the world of fighting ships and this month we have Part Two (of two) about the very successful 2014 National Model Warship Weekend and continue with the Deans Marine HMS Skirmisher project.

The National Model Warship Weekend - Part Two

In last month's issue the on the water activities were the focus of attention and here we are taking a closer look at some of the many models present over the weekend.

Preparation is the key to a good event, and the Scottish Model Warship Association and Glasgow Richmond MBC used the excellent facilities to good effect. This involved erecting a series of gazebos to ensure that all the models were well protected from the vagaries of the weather, **Photo 1.** Some of the models are quite large in 1:72 scale as you can see with this Oliver Hazard Perry class frigate, HMAS Melbourne, **Photo 2.**

Although capable of being operated, a fine 1:96 scale example of HMS Inflexible had only just been completed by David Hamilton of the Glasgow Richmond MBC and had not been fully tested before the weekend. David is no stranger to Victorian and Edwardian warships, he having

previously presented an equally fine 1:96 scale HMS Lord Nelson. David made the point that the hull of HMS Inflexible is of GRP with much of the upperworks being scratch built, **Photos 3 and 4.**

As a matter of interest HMS Inflexible was considered a good sea boat with excellent manoeuvrability, yet as David's model shows, the battleship was reduced to a so-called 'military rig' as the original 'sailing rig' proved useless. Also, the four huge 16 inch turreted main armament guns were muzzle loaded, with the charges and shells having to be loaded into each barrel below deck within their armoured glacis'. One of the essential components of any such gathering as this is the banter on the merits of new hulls and models and here in **Photo 5**, a group of association members are having such a chat about the merits of GRP hulls

The Three Kings

I have previously mentioned the armed trawler Three Kings FY918. Gary Mills has shown what can be done using a basic kit, modifying it and then adding appropriate extra detail. This model oozes character and not only does it looks superb statically, but it performs well on the water. The notable addition of the acoustic hammer on the bows is one such extra, **Photo 6.** Further detail aft, such as the smoke generators and the way the spare blocks are secured to the rear of the deck housing, are nice touches, **Photo 7.**

HMS Melville

This is a 74 gun Third Rate ship of the line c1825, **Photo 8.** Clearly there is a slight shift in the types of warships now being displayed and this fully functioning sailing ship has been built by Michael Johnston, but Michael Loney was actually showing and demonstrating the model on this day and in **Photo 9** he is showing how the hull splits at the waterline. The detachable drop keel is installed within the hull and can be deployed as required. Within the top half of the hull, and here we are looking upwards into it (bow to stern), there is a

warship scale



Photo 2. No matter how detailed, many of the models on display are built to sail under radio control, this being a fine model of an Australian Oliver Hazard Perry class frigate.

Photo 3. A superbly built HMS Inflexible, fresh off the stocks and built by David Hamilton, a keen modeller of ships of the period.

Photo 4. Super detail on David Hamilton's HMS Inflexible.







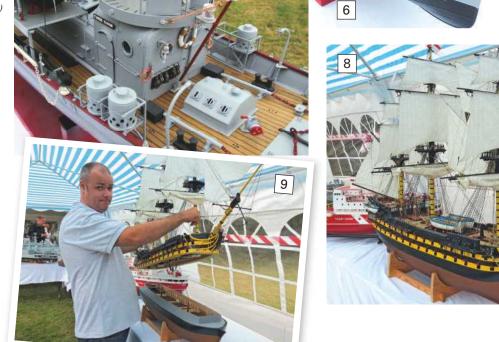
Photo 5. Having a chat about hulls! Steve Pickering (Chylds Hall Model Shipyard) in black pullover is looking on with interest.

Photo 6. A superb model of the armed trawler Three Kings and note the addition of the acoustic hammer on the bow.

Photo 7. The exceptional detail work in Gary Mills' Three Kings.

Photo 8. A fully working model of the 74 gun Third Rate ship of the line, HMS Melville.

Photo 9. The hull of HMS Melville can be separated just above the waterline.



7









Photo 10. The sail winches and sheets for operating the sails are installed on the underside of the top part of HMS Melville's hull.

Photo 11. In the centre of this picture is the 'work in progress' (in red primer) IJN Nisshin built to operate float planes and midget submarines.

Photo 12. David Jack is a prolific builder of coastal warships and here is seen preparing his new LCT 6 model.

Photo 13. Osprey remains a popular model in the Mountfleet range and it oozes character.

system of sail winches and servos to control the sheets, all superbly thought out and built, **Photo 10.**

IJN Nisshin seaplane carrier

One of the great strengths of this event is the variety of models on display, be they large or small, and all are interesting. Each year, Douglas Kinloch of Edinburgh MBC rises to the occasion and 2014 was no exception. His choice of subject was once again from the Imperial Japanese Navy and is the seaplane carrier IJN Nisshin. That navy relied heavily on such vessels with the likes of the Chitose and the Chiyoda, but departed slightly in its priorities with the follow-on types. These included the 10929 ton IJN Mizuho and 11317 ton IJN Nisshin, designed from the keel upwards to carry a complement of twelve midget submarines as well as 24 float planes. There was a complex set of rails positioned on the deck that allowed the float planes to be moved across deck to one of the four catapults. Although this model is still under construction, a general impression can be gained as to the position of the midget submarines and the float planes, **Photo 11** (red hulled model, centre of picture).

LCT 6 No. 1362

David Jack, also from Edinburgh MBC, is a prolific builder of all types of coastal warships and his latest model is this 1:24 scale LCT 6 No. 1362, a landing craft designed to permit stern loading (sort of roll-on, roll-off), and here having a fully functioning bow door to permit the use of radio control model tanks, **Photo 12**.

Armed Trawler Osprey and HMS Arun

Another kit model that caught my eye was the Mountfleet Models armed trawler Osprey built by







Brian Cowell, **Photo 13.** It was the detail work that was noticeable, like the texture and colour of the rigging as well as lots of the pleasing detail that you would expect on this type of vessel, **Photo 14.** Another of Brian's models, but not quite complete yet, was this River class minesweeper HMS Arun, **Photo 15.**

Pluto

Mentioned in Part One was the Belgian team of Simon Veemaels, Mark Suys, Patrick Verrue and Kurt Braeckmans, well known for their evolving D-Day themed giant diorama at the annual Intermodellbau in Dortmund. Over the past two years their diorama has been converted from static to working, where the models are sailed in a flooded tank. Introduced into the diorama at the Intermodellbau of April 2014 was PLUTO (Pipe Line Under The Ocean) that was used to pump fuel across the English Channel during, and after, the

initial D-Day landings.

The huge floating drum was called, perhaps appropriately, Conundrum! As it was towed across the channel it would rotate, allowing the Hemel steel pipe to uncoil. This was an amazingly successful operation and the pipe line then continued through Europe and on to the battlefront. One of the companies most active in its development was Siemens, a name still very much around today. By VE day (Victory in Europe day) PLUTO had delivered a staggering 172 million gallons of fuel oil. **Photo 16** is of the drum and pipe that can towed behind the tug Hector, and really pass liquid!

USS Nimitz

One of the most impressive exhibits was the 1:144 scale model of the USS Nimitz, displayed here in Glasgow by Rex Hunt on behalf of its builder, Chris Bullock. This particular model has a varied range of

Photo 14. No matter how excellent the kit, a good modeller will always try to go one better and here the rigging looks particularly realistic.

Photo 15. This smart looking 1:48 scale River class minesweeper HMS Arun was painted 100% using aerosols, demonstrating what can be achieved by this means of paint application.

Photo 16. The Belgian team brought models from their working D-Day diorama including the PLUTO pipe laying device.



Photo 17. Rex Hunt from Norfolk brought Chris Bullock's amazing and huge 1:144 scale USS Nimitz, which will be featured in greater detail next month

Photo 18. The winners and organizers after the magnificent 2014 National Model Warship Weekend in Glasgow. working features and as such it would be only right to devote a section of next month's Range Finder to it in recognition of the skills that have gone into creating such a model making marvel, **Photo 17.**

Trade support

An essential part of the event are the traders and as in previous years, Steve Pickering from Chylds Hall Model Shipyard brought along his expanding range of wood strip suitable for deck planking and his range of fittings for Victorian warships to 1:48 scale (his steam picket boat was reviewed in the August 2014 issue of MB). Scale Warship Ltd. had their increasing range of 3D mastered resin and etched brass fittings at differing scales for various warships and not just modern ones either. For example they offer etched brass fittings for the Airfix HMS Victory as well as functioning models of the Sampson radar ball for the modern Type 45 destroyers. Also new, was the Sea Slug SAM launcher for the 1960's County class of guided missile destroyers, a complex item to build at the best of times. Price is around £95, but the quality is outstanding and their website is: www.scalewarship.com.

Conclusion

A cracking event and well worth the distance travelled if you want to see and talk about model warships of all types and sizes. **Photo 18** is of the prize winners and the organisers from the Glasgow Richmond MBC and Scottish Model Warship Association. Congratulations are in order to all, for a job well done and a really enjoyable weekend.



HMS Skirmisher - Part Three

In the two previous issues I have explained how this model is being built from a Deans Marine kit.

Preparations for assembly of the basic superstructure

As mentioned earlier it does well to read the instructions! However, this is a slightly modified build as I can't resist super-detailing, the conscious decision being made to depart a little from the kit build as intended by Deans Marine and completing it as the vessel appeared in some specific photographs. There is nothing wrong with this approach, and I guess that model makers who have been building for many years often see a kit (any kit) as a good starting point for something unique they wish to create.

The first task was to use the instructions to identify exactly what the kit provided and how those parts should be assembled, then with the aid of the drawings and photographs determine how the existing parts could be easily modified (if needs be) to create HMS Skirmisher as exemplified in those pictures and a particular point in her career. It would therefore perhaps be helpful to list where the principal changes would need to be made.

- **1.** The deck housings under the funnels will have to be slightly lengthened.
- **2.** The deck housing tops will have to be adjusted to accommodate the relocation of some cowl vents.
- **3.** As each funnel will be sunk into a deck housing, their locations would need to be measured precisely to where they should fit and the relevant scrap sections of styrene removed.
- **4.** Whilst the constructional methods will remain the same, the funnels will have to be adjusted as their heights are altered and the boat supports and davits be moved and reset as in the on-board shots (please see Model Boats November 2014, Page 21).
- **5.** The aft deck housing, listed as Casing No. 3, needs to be slightly adjusted in its size.

None of these adjustments are difficult, and merely reflect my wish to build the model as reflecting a specific point in time of the full-size warship. That is the great thing about kits, in that although the manufacturer will have thoroughly researched it, the builder can amend it to reflect the ship earlier, or later, in its history as desired.

Deck housings

Underneath the funnels are the long 'box-like' housings that support them, the ship's boats and numerous cowl vents. The first task was to identify and remove from the carrier sheets all of the deck housing parts and lay them out in their intended locations on the main deck, **Photo 19.** Please note that the centre section of the main deck is removable, complete with the deck housings, funnels and some of the ship's boats.

The instructions state that coamings for the deck housings (Evergreen 3.5mm x 5mm strip) should be created on this removable centre section of the main deck. This enables the housings to be secure, yet also easily removable, **Photo 20.** The positions of these coamings require that the internal



Photo 19. Not essential, but if you wish to model a warship at a particular time in her career, inevitably some minor changes may be necessary. Here the kit parts for the deck housings beneath the funnels are laid out.

Photo 20. Each section of the deck housing has a coaming, around which to locate.



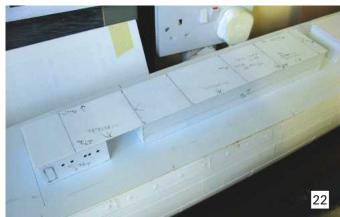




Photo 21. The original upper deck section over No's 2 and 3 deck housings has the side extensions for the boat platforms marked for removal.

Photo 22. A picture tells a 100 words! Here you can see how the No. 2 and No. 3 deck housings are configured.

Photo 23. The forward (first) deck housing. This shows how its top has been left unattached, pending cutting a hole for the forward funnel to pass through.

dimensions of the deck housings are known, before gluing them in place.

Starting with the laser-cut styrene No. 1 deck housing, this was extended to 125mm length whilst No. 2 deck housing was also increased in length to 230mm, but the six boat platforms on its top face were removed, **Photo 21**, with four new ones being later located further aft.

The No. 3 housing was reduced in length, but please note that the widths of them all were not adjusted. It is also worth mentioning that all of the large cowl vents are sited abaft of each funnel in groups of four and they will be discussed at a later stage, but provision for them has been allowed for in this modification. The height of the deck housings is also unchanged, so actually the work required is quite straightforward.

With the coamings in place and reflecting the adjusted housings' measurements, work can commence properly on the latter. For now, the task was to get the basic assemblies into place, adjusted to match the pictures and drawings, the 1905 drawings not reflecting exactly the 1913 pictures and **Photo 22** perhaps better explains what I am describing here. The housing tops remained detachable for now, as the holes for the funnels would soon need to be scribed and cut away with a compass cutter, **Photo 23**.



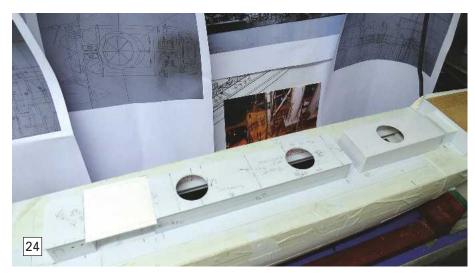


Photo 24. There is a bridging section between No's 2 and 3 housings and once complete, this slots into place.

Photo 25. Adjusting the shape of each side of the hull at the break of the forecastle. To be honest, this can be a bit subjective depending on how you look at this area and the official plans do not match the photographs! A minor change and not critical, unless you are a perfectionist.

Photo 26. With the small section of hull removed either side, the edges can be tidied up.

Photo 27. The revised shape of the hull either side of the forecastle break.

Photo 28. It is not a bad idea to mask over deck openings when sanding.







Funnel holes

The openings of 33mm diameter into the deck housing tops for each funnel were made using a compass cutter and measure 100mm from the forecastle break to the centre of the first funnel; 133mm from the centre of the first funnel to the second and then another 133mm to the centre of the third. Since they are raked, the holes will actually need to be further sanded slightly oval, lengthwise.

Aft of the third funnel at the end of No. 2 housing, the upper deck section was replaced by a slightly wider piece as it is on here that the larger boat platforms will located. This section has a framework underneath it and the whole thing slots between No. 2 and No. 3 deck housings, **Photo 24.**

All of this may seem complicated, but in reality all that was being done was to adjust the lengths of the deck housings beneath the funnels.

Forecastle break

On HMS Skirmisher the side of the hull at the break of the forecastle would appear to be slightly different to that of the moulded hull. I have to say

that with the drawings it is difficult to determine its exact angle and shape in relationship to the main deck, so it is really a cosmetic matter as a result of referring to photographs. Anyway, the choice is yours, but it was easy to remove part of the rounded tumblehome by first marking the section to be removed, then drilling a series of holes inside that line, **Photo 25**.

Once the scrap piece was removed, its exposed edges were smoothed, **Photo 26**, and the now open void covered with a matching piece of 1mm styrene sheet, **Photos 27**.

Whilst this work was undertaken, the deck openings were sealed to reduce the amount of debris entering the hull and **Photo 28** gives an overall impression of where we are, thus far.

First on the water trial

Testing the r/c and propulsion systems at this early stage is a distinct advantage, because if left to later when access becomes more restricted, then if it is going to go wrong, then it will - guaranteed! The basic ballasting and trimming requirements can also be assessed and in practical terms this means moving the batteries forward or aft. More ballast will be required to bring the hull to its proper waterline, but the aim here was to ensure all the systems worked as they should and **Photo 29** is an overall view of the hull's interior, still with space to add a motor mixer if required, just before being put on the water.

And how did it perform? Well, **Photo 30** is of that first trial, HMS Skirmisher still floating 'light'. It responded well to the rudder using 'tank drive' for the motors, which means each was controlled independently by the vertical axis' of the left and right sticks on the transmitter. So in summary, so far so good, and next month I will be discussing amongst other things, the work on the funnels, a prominent feature of warships of this era.





Answer to the December 2014 Mystery Picture

The clue was: These ships are named after certain warlike tribes.

This was USS Abnaki TF96. Of all the vessels featured here, many warships have survived to fight another day, but it's worth remembering that not all of the most active naval vessels are fighting ships. A good example of this is can be found in the service career of USS Abnaki, which was an ocean going fleet tug and as last month's clue implied, the vessel was named after an Indian tribe.

Built at Charleston and launched on 22nd April 1943, the tug entered service with the US Navy on 25th November 1943. Just before D-Day in 1944, the USS Abnaki was involved in the capture of U-505 a Type IX German U-boat , a valuable intelligence coup at the time and the tug was then given the responsibility of towing the submarine to Bermuda for full evaluation. This mission completed, the 1325 ton tug then returned to UK waters until 1945, before being deployed to the Pacific. USS Abnaki was to remain on active service in the Far East for almost 20 years providing much



needed support during the Korean War and later in the 1960's, also in the Vietnam War before returning to the USA and San Diego on 13th July 1973. On 30th September 1978, the tug was transferred to the Mexican Navy, but now renamed Yaqui. As far as I am aware, this ex-USN Fleet Tug with no less than 13 Battle Stars to her name, remains in service today - truly a veteran of WW2 and a testament to the Charleston shipbuilding skills of that time.

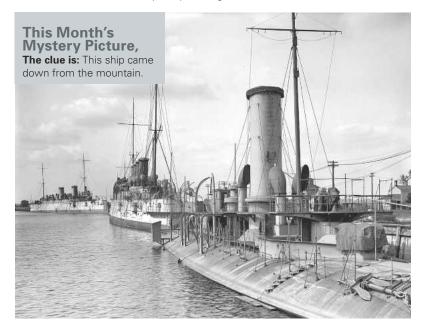
Photo 29. The batteries can be moved forward or aft to adjust the trim.

Photo 30. The first of two test runs. HMS Skirmisher sits well, but will require more ballast.

Postscript

Sad but inevitable, **Photo 32** is of the Type 12 frigate HMS Plymouth leaving Birkenhead on the River Mersey for the last time on 20th August 2014, heading for Turkey to be broken up. This warship became famous during the Falklands War of 1982 for her service and when on board in the wardroom the Argentinian commander on South Georgia signed the surrender document for his forces.

Photo 32. Postscript - sad but inevitably, HMS Plymouth finally left Birkenhead under tow in August 2014 for the last time to the ship breakers in Turkey.





References and acknowledgements

Seaplane carriers IJN Mizuho and Nisshin ref: Warships of the Imperial Japanese Navy 1869 to 1945, pages 65 & 66. Pluto ref: Oxford Companion to Ships and the Sea, page 654. USS Abnaki ref: Jane's fighting ships 1947 to 1948, page 392 and Jane's Fighting Ships 1972 to 1973.

Mexican Navy Yaqui (ex-USS Abnaki) ref: Combat Fleets 15th Edition, page 478.

My thanks to the **Scottish Model Warship Association and Glasgow Richmond MBC** for all their help and assistance and their hospitality. Also, thanks to **Bill Clarke** for sourcing picture of USS Abnaki.



had a small motor together with a speed controller, sufficient metal to make the propshaft and rudder,

nowhere, so there should not be a problem with r/c

plus an old 27MHz r/c system. The man with the sun-drenched swimming pool lives in the middle of

interference I surmised.

36

after sanding to shape, it was bonded into position. The top deck was laminated with a 1mm plywood veneer, previously 'lined 'with a sharp 2H pencil to

The remainder of the deck section was then cut to size including a full length access hatch and



simulate deck planking, Photo 4.

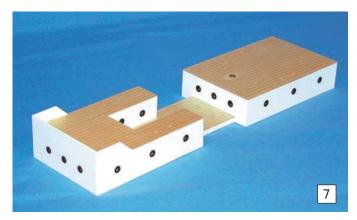
With the control systems fitted and functioning, the hull framework was clad in 1mm plywood, and sanded to shape. Two further strips of 1mm plywood were added each side of the hull as detailed on the Glynn Guest plans to give the impression of hull plating. The inside of the hatch opening was edged with 1mm plywood to create a positive location for the superstructure as well as helping to prevent water ingress when sailing. Two small holes were drilled in the foredeck and two in the upper bow sides to simulate hawse holes for the anchors, these openings being lined with 5mm diameter brass portholes (for the rims) and tube.

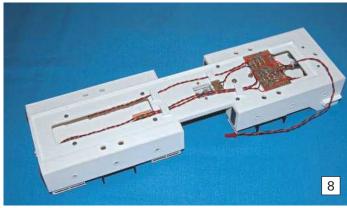
As the hull was now nearing completion it was important to protect it from accidental damage, so

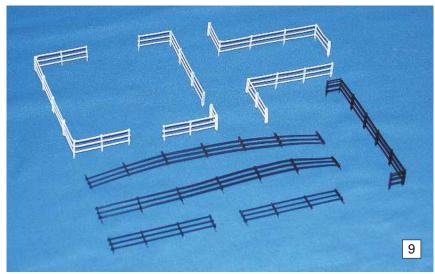
a simple stand was made with two end pieces of 20mm MDF shaped to match the bottom contours of the hull. These were joined together using two lengths of 15mm plastic conduit, the end pieces being drilled to suit. This was then all painted black and the hull touching surfaces covered in green felt.

The threaded propshaft and rudder were removed for painting. The hull and deck were given three coats of epoxy resin as a finishing coat, sanding down between each, and then the hull itself was painted black with red oxide below the waterline as in **Photo 5**.

The rudder assembly and threaded propshaft were then refitted, a hatch added to the foredeck together with two anchors, their chains and a winch, this being donated by a friend, **Photo 6**.









Superstructure

Although its construction would be similar to the original Noggsund design, it was decided to make two cabin structures the full width of the deck. The base superstructure was made from 3mm foamboard, edged with 1mm styrene and trimmed to fit snugly over the hatch opening. Three cutouts were machined into the base, two for access into the cabins and the third for access to an engine room skylight. The fore and aft cabins were made from 3mm foamboard for their roofs and the sides from 1.5mm styrene card. Portholes were drilled in the sides prior to gluing the individual parts together. Once the glue had cured, the edges of the cabin assemblies were lightly sanded to create a clean sharp finish to their corners. Brass porthole rims were then glued into their pre-drilled holes



and as for the main deck, plywood roof deck pieces were cut to size and marked with a 2H pencil to simulate planking. After varnishing, these were glued to the foamboard sub-roofs. The two cabin assemblies were then test fitted to the main cabin base to create the basic superstructure assembly as in **Photo 7.** After this trial, both cabin units were removed and given a final couple of coats of white paint.

Prior to finally gluing these two cabin assemblies to the base, LED lighting was installed, these lights being used to generate all the illumination on the model. They are mounted on copper laminate strips and held in position using M2.5 screws. One white LED was used for the stern light, mounted on the aft cabin's rear bulkhead; six white LED's in each of the two cabins to provide general lighting; a single orange LED for the engine room skylight and red and green LED's for the running lights, fitted in scratch built styrene running boards mounted on the sides of the forward cabin port and starboard bulkheads.

With all the LED assemblies now fitted, this allowed the two cabins to be positioned and finally bonded to the base, then the connecting wires from all the LED's were attached to a resistor termination board mounted on the underside of the cabin base,

Detailing

The next task was to make up the fittings including the guard rails from 1mm brass wire and Billings' 12mm brass rail stanchions, but an unexpected problem arose. When I ordered additional stanchions they were supplied in aluminium and not brass, the manufacturer having changed the material, so the later sets of railings were glued together with superglue as opposed to soldering, **Photo 9.** I sometimes wonder when this sort of thing happens if a manufacturer has considered all the ramifications of such a material change.

The funnel is from a Steradent denture cleaning tablet tube, wrapped with some strips of styrene, supported on the deck by a wooden block with a 25mm round dowel that fits inside its base, **Photo 10.** Four 'off the shelf' lifeboats were purchased, their outer surfaces being painted white and the wooden thwarts added from scrap material. The davits were purchased complete with swivel bases, but the cradles for the lifeboats are from styrene sheet painted black, **Photo 11.** The skylight is from the same material, also painted black, glazed on the inside and orange LED illuminated, **Photo 12.**

The two access ladders to the upper decks are purchased items, cut to size and the cabin doors are from 1.5mm styrene sheet, also cut to size and rounded on the corners and painted dark brown.



The cabin roofs and main deck with their simulated planking, were drilled to accept the bases for the davits, guard rail stanchions and fixings for the lifeboat cradles. The doors were glued to the cabin bulkheads and access ladders glued into their respective positions as well as six cleats being attached to the main deck. A ship's wheel complete with binnacle was screwed to the upper deck, M2.5 screws and washers being used to positively locate and fix the various fittings to enable their later removal for transport purposes, **Photo 13.**

The masts are from aluminium knitting needles (acquired from my wife). So that they should also be removable, brass sockets, into which the masts are inserted, were made and fitted to the deck. Rigging line is 1mm shirring elastic secured in position to small eyelets screwed into the deck with hooks made from hard brass wire. Finally, the model's name was added 'BJORN D' the Scandinavian equivalent of my friend's Christian names,

Photo 14.

Testing

Bjorn D was tested in the domestic bath to check its buoyancy and as anticipated, it required ballast, total extra weight required being 27 ounces. The sheet lead was cut and shaped to fit into the hull's bottom area and lock around one of the forward bulkheads as in **Photo 15.** By making the ballast in this way it allowed it to be easily removed for transport purposes and **Photo 16** shows the model in the test tank(!) with the correct amount of ballast in place.





On the water

It was a nice sunny day with not too much wind as Bjorn D was launched, run up to its maximum speed, a few twists and turns, it proving to be nice and stable, but also happy just chugging around at a snail's pace as in **Photo 17.** As I wrote earlier, the model is based on Glynn Guest's excellent original design, the principal modifications being to the superstructure outline.



Since this model had to be 'flown' to Spain, some thought was needed. The box was created out of an old double layered corrugated cardboard box that was very strong. The box was duly carved-up to suit the model and to fit within the confines of a normal suitcase. The box was lined with foam (top, bottom and sides) and with the case lid shut the model boat box lid was very firmly and positively closed. The ballast weights were removed from the hull to go in hand luggage, but the removable fittings were wrapped in tissue paper and stored inside the hull, the removable masts and rigging also being removed and placed between two layers of foam on one side of the cardboard box, **Photo 18**. The transmitter also went into that suitcase, suitably wrapped.

And Spain?

Our flight went smoothly, arriving to some nice warm weather and to be greeted by our friends. Yes, only half as many clothes as usual(!), but when unpacked, the model was intact and everything functioned okay. Our friends were delighted and their cat Stumpy (a nice name) was somewhat puzzled at the new arrival in its paradise home. So yes, job done and personally very satisfying and the recipients are very happy with it.

Suppliers

Noggsund plans: MM2057 - MyHobbyStore

ESC: 15amp Mtroniks

Motor: MFA
Drive belt & pulleys: Electronize

Ladders: Reade Models

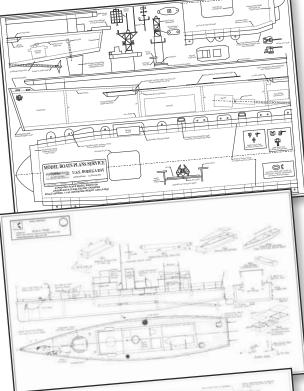
Battery box: Maplin

Propeller, deck cleats, ship's wheel, binnacle and stanchions are all from Cornwall Model Boats.

17

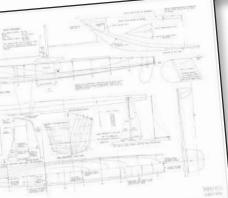
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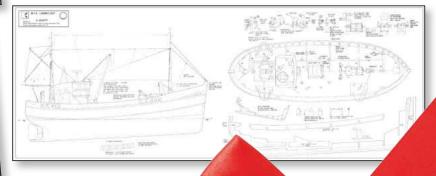
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USS Bodega Bay	MAGM2010	Glynn Guest
Wet Jet	MAGM2036	R. Wood
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International Model Boat Show 2014



Colin Bishop reports from Leamington Spa

his was held as usual at the Warwickshire Exhibition Centre near Leamington Spa in early November.

2014 marks the 120th anniversary of the opening of the Manchester Ship Canal and the 190th anniversary of the RNLI and both were themes at this show which certainly pulled out all the stops with many new boats on display and excellent presentations from over 30 clubs. The club stands were supported by 23 traders, between them selling most of the goodies any self-respecting model boater could possibly want. The award for best stand went to the Manx Model Boat Club for their stunning four sided display featuring a

wide range of models and even a mini-workshop, but many of the other clubs ran them close with imaginative layouts and some unusual and interesting exhibits. The famous steak and kidney pie served up by the restaurant was also well up to standard!

Space allows only a small selection of photos to be printed here, but more can be seen on the Model Boats Website and these pictures should give readers a flavour of what is regarded as one of the major events in the model boating calendar.

If you missed this 2014 show, then the dates for 2015 are 6th to 8th November inclusive.



Flotsam 3 Jetsam



John Parker delves into the archives 22: Batteries for Big Boats

ur models generally resemble their full-size counterparts, but only in outward appearance. Under the skin, the materials used, their sizes and methods of fastening, the means of powering and control and the internal arrangements, have little or nothing in common. Yet there is one surprising feature the two may share, other than the outward appearance. Lead-acid batteries provide power for many of our models and they also provide power for just about every full-size submarine ever built. This includes nuclear submarines, which rely on lead-acid batteries for emergency power.

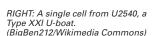
Background

The lead-acid battery was invented by Gaston Planté as far back as 1859 and was the first type of rechargeable battery ever made. As its name suggests, it consists of lead plates suspended in an acid solution, dilute sulphuric acid in this case. During charging, when current is passed

into the battery, the plates undergo a chemical change, and revert to their original state when the battery is discharged. The lead-acid battery does not particularly excel in any performance category, but it is well understood, cheaply made, rugged and reliable, all important factors when building one large enough to power a full-size submarine when submerged. In the future no doubt, other battery technologies will come to the fore, but to date it has been very rare for submarines to use anything else. When the Albacore research submarine (refer Flotsam and Jetsam No. 10) was fitted with a silver-zinc battery to achieve the highest possible underwater speed for example, the large amount of silver required had to be 'borrowed' from the National Mint! It was returned when the submarine was retired as the battery's operation did not actually consume any of the silver.

In recent years, the sealed or valve regulated lead acid battery (SLA or VRLA type) has superseded the original wet cell type for electronics and modelling applications, because of its obvious advantages of being non-spillable and able to be mounted in any orientation. Submarines (and car batteries) have stayed with the wet cell design for reasons that





ABOVE: This model wet-cell battery shares the same basic internal construction as its full-size

counterpart.

CENTRE: Banks of battery cells in the hull of a 1929 Russian submarine. (Mike1979 Russia/Wikimedia Commons)



include greater surge current capability, but their chemistry is the same and they all produce the same nominal voltage of 2v per cell, regardless of size. Note, that strictly speaking it takes a number of cells connected together to form a battery. Where they differ of course is in capacity and quite staggeringly so for someone used to model batteries.

Modern submarines

Each cell of a modern submarine battery is typically housed in a rubber-lined fibreglass casing, roughly 600mm by 400mm in section and standing around 1.4 metres high. In the case of the Oberon O class submarines, each cell was rated at 7420 ampere hours at the 5 hour rate, that is to say it was able to provide 1484 amps for 5 hours. A number of terminals on top of each cell give it the appearance of being a battery, but each row is in fact joined to the same set of plates in a current sharing arrangement, to be wired together by thick conducting bars bolted to their tops. With each cell weighing 500kg or more and the total battery installation accounting for perhaps 20% of the vessel's displacement, it was important that they be mounted as low as possible in the hull for centre of gravity reasons, resulting in rows of cells in tiers that follow the curvature of the hull's circular section. In the case of the Oberon class boats, 224 cells made up each of the two battery sections, with each battery considered to have a nominal voltage of 440 volts.

In an arrangement common to most submarines, the two batteries were able to be connected in series or parallel, and in addition, each of the two



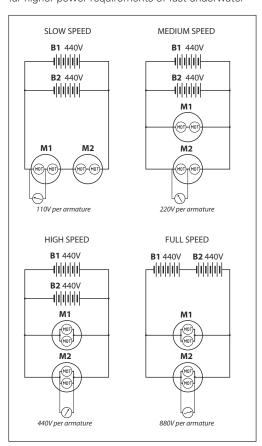


drive motors had two armatures on the one shaft, making possible a number of combinations to provide for different speeds. The diagrams (they are simplified, but correct in principle) show for example how each armature could be provided with a supply voltage of 110 volts (low speed), 220 volts (medium speed), 440 volts (high speed) or 880 volts (maximum speed). No need for an electronic speed controller!

A similar system could be used in a model, if only to demonstrate the principle. Four 6 volt, 4Ah batteries could be connected to provide 6 volts at 16Ah (parallel connection), 12 volts at 8Ah (seriesparallel connection) or 24 volts at 4Ah (series connection) for low, medium and high speeds. Each drive unit could consist of two motors driving in tandem (that is, their shafts connected end-to-end), to allow series or parallel connection.

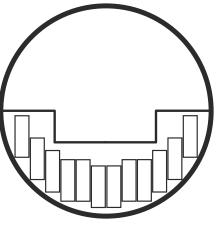
Capacity?

An unfortunate characteristic of the lead-acid battery is that its capacity is not a fixed quantity, but dependent on the rate of discharge. At maximum submerged speed and associated discharge rate, its capacity is likely to be only three-quarters that of the 5 hour rating. In practice, combined with the far higher power requirements of fast underwater



LEFT: Installing a battery cell in an American L class submarine, 1916. Note the protective gloves for the workmen, but not much else! (US Navy official photo)

TYPICAL ARRANGEMENT OF CELLS IN A SUBMARINE PRESSURE HULL



ABOVE: Typical arrangement of cells in a submarine pressure hull.

LEFT: Diagram showing different battery/motor combinations.

speed, this means a disproportionate fall-off in range for a submarine. A low-speed range of some 100's of nautical miles will probably yield no more than 20 to 25 nautical miles at maximum speed, equating to the 1 hour discharge rate. At this point, the submarine had better be out of the danger area, for its battery will be fully discharged and thus require many hours of recharging.

Our model batteries are usually rated at the 20 hour rate and if discharged at the 1 hour rate, as might be the case with a scale model boat, their realised capacity will be only around 60% of the rated capacity. According to a manufacturer's data sheet for example, the popular 12 volt, 7.2Ah SLA battery must be discharged at no more than 360mA to achieve its rated 7.2Ah (0.360A x 20 hours = 7.2Ah). A current of 1.15A can be maintained for 5 hours (the 5 hour rate), with a realised capacity of 1.15A x 5 hours = 5.75Ah, and the 1 hour rate discharge current is 4.32A for a realised capacity of 4.32A x 1 hour = 4.32Ah. This is considerably less than the 7.2 amps for 1 hour that a theoretical 'ideal' 7.2Ah battery would be expected to achieve.

A full-size submarine has a number of systems related to its battery operation that fortunately we don't have to worry about with our models. The lead acid battery gives off large amounts of explosive hydrogen gas during charging, so an elaborate ventilation system is provided to prevent the hydrogen gas concentration reaching danger point. The sealed lead acid batteries we use in

our models normally re-absorb this gas internally, though they still shouldn't be recharged in an unventilated space. The batteries also require topping-up of their electrolyte due to loss from evaporation, so many tonnes of distilled water must be carried onboard for this purpose, and a reticulation system provided for its supply to each battery cell. During operation it is possible for different density layers to form within the battery's electrolyte, so a battery agitation system is provided to blow bubbles of air into the bottom of each cell and stir up the electrolyte. Finally, to prevent overheating during rapid charge or discharge, another system provides cooling water, circulating it through cooling plates attached to the cell terminals to keep the cell temperature within the range of 27 to 43 degrees Celsius.

Conclusion

It is unlikely that Gaston Planté foresaw the impact his invention of the lead-acid battery would have on the history of the submarine, as it provided the long sought-for source of energy that could propel a submarine under the water, independent of the need for an air supply. Coupled to the equally reliable electric motor and recharged by an engine driven generator when the submarine was on the surface, it made the submarine a practical reality and also provided us with a low-cost means of powering our models.

I do miss my flag!

ith most modellers transferring their radio frequency allegiances over to 2.4GHz, a ribbon fluttering at the tip of a long transmitter aerial is nowadays a rare sight. I will confess to using and appreciating this new higher frequency, but not for any technical benefits it may bring. At least now you do not have to worry about others switching onto your frequency, flying the wrong flags and all the other problems that this simple task created for some modellers.

simple task created for some modellers.

There was always something nice about seeing frequency flags blowing in the wind.

There was always political less their under their

I suspect that there are still quite a few modellers who still use the 'old fashioned' 27 and 40MHz radio outfits. The reasons could well range from the; 'if it isn't broken, why change it' to 'it's too cheap to replace it', views I fully endorse. Of course for those modellers who indulge in sailing their models beneath the surface of the water, they have little choice since the new higher r/c frequency does not penetrate water as well as the old frequencies.

This situation does worry me a little, since our political leaders are not exactly well known for their understanding of technical matters. They

could easily be persuaded to believe that all radio modellers have migrated to 2.4GHz and thus the 27, 40 and not forgetting our aeromodelling cousins, 35MHz frequency bands, can be profitably allocated to some other use.

It would be a great shame if this were to happen and I do hope that the appropriate national bodies, MPBA for us boaters, is keeping an eye open for any such moves.

As for my regret at the absence of a frequency flag flying from the tip of my aerial? Well it always gave me good

idea in which direction the wind was blowing, but at least my new flagless 2.4GHz gear gives me an excuse when I sail my yachts badly.

www.modelboats.co.uk

scale musings



Glynn Guest with his regular monthly column of advice and tips for modellers

Boiler Room

Part Forty Nine: Oscillators versus Valve Engines

t occurred to me recently during a conversation at the pondside that while we regularly talk about the advantages and disadvantages of oscillating engines over slide valve type engines and frequently refer to the efficiency differences, there are probably still quite a few of us who do not know why there should be such differences. I thought therefore that a useful topic for this month may be to investigate just why a slide valve type of steam engine is more efficient than an oscillating engine and therefore how that might affect the choice of engine in our model.

Operation

It is probably well worth just going over a very brief review of how both types of engine work before we look a bit deeper as to how the efficiency is affected.

Oscillating engines

An oscillating engine is so named because the cylinder actually rotates backwards and forwards, around a central pivot, pushed by the connecting rod, which is solid with the piston, **Photo 1.** There is therefore no 'top end bearing' in the piston. The connecting rod rotates with the pin in the crankshaft and as the rod rotates, it moves the cylinder from side to side, **Photo 2.** This movement is then used

to open and close ports drilled into the cylinder and in the standard (main cylinder support) via a lapped rubbing face, so steam is admitted and exhausted through these ports both above and below the piston in a double-acting engine. Steam is supplied to the standard through the steam supply pipe and drillings and is exhausted through other drillings and the exhaust pipe. The oscillating action of the cylinder either opens a pair of inlet and exhaust ports pushing the piston in one direction, or it opens alternative ports to push the piston in the opposite direction. Not only is the arrangement very simple from an engineering perspective, having no valves and no oscillating bearings to worry about, but it is also very easy to reverse, requiring nothing more than changing over the supply of steam and the exhaust on the standard (main cylinder support).

Valve engines

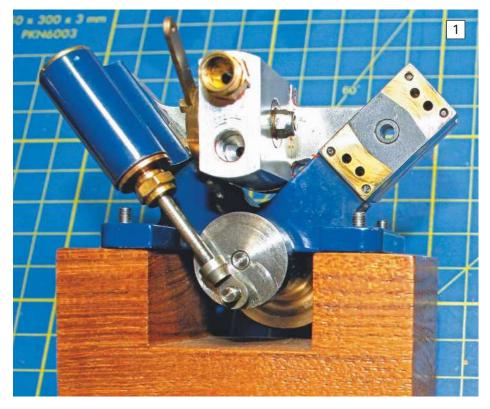
These engines are a bit closer to the trunk engine arrangement that we may find in our internal combustion engine with a fixed cylinder, a connecting rod that still rotates around the crank pin, but now the oscillating movement is accommodated by a bearing between the connecting rod and the piston. As the cylinder is fixed we cannot use the movement to open and close ports, so we have to use a valve to admit

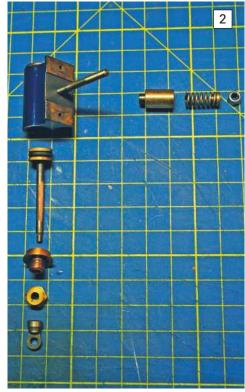
Richard Simpson's series on model steam plants



Photo 1. With the cylinder removed from the right hand unit of this oscillator, you can clearly see the four ports. The two lower ones supply or exhaust the under piston space and the two upper ones supply and exhaust the space above the piston. The cylinder rotates about the central pivot.

Photo 2. From this picture of the removed piston you can clearly see the pivot point that the cylinder rotates about and the fact that the piston is rigid with its connecting rod. The bearing at the bottom locates on the crank pin and oscillates the cylinder as it rotates.





steam basics 3 the first side to exhaust, however there are also such wonderful

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steam to one side of the piston, while allowing the other side to exhaust, Photo 3. This valve is most commonly a slide valve, but it could also be a piston valve. When the piston has moved its travel, the same valve then moves to an alternative position and admits steam to the other side of the piston while it allows

Photo 4. The valve is usually operated by an additional crankpin or eccentric on the crankshaft,

arrangements out there such as the old Stuart Cirrus engine that uses a bevel gear driven by the crankshaft to rotate a vertical shaft that has the eccentric fitted to it and which pushes the valve backwards and forwards across the tops of the cylinders.

So these are the very basic differences in the operation of the two different types of engine so now we can have a look at what that means for us and perhaps first of all, just what do we mean by efficiency?

Efficiency

In terms of any engine, machine or even process, the efficiency is basically how much we get out for how much we put in. In terms of internal combustion engines we would consider the amount of energy the fuel contains as what we put in against how much work we get out of it in terms of horse power. Steam engines are a little bit

> Photo 3. The ports in a slide valve engine can be clearly seen here along with the valve that normally covers them. Steam enters through the connection in the side of the valve chest, not shown, and is passed into the chest and occupies the space behind the valve. The valve directs one side to the central exhaust while allowing steam to enter the other.

Photo 4. Now with the valve chest in place and the valve operating rod connected to the valve. The valve remains free on this rod so allowing steam pressure to hold the valve against the port face.

Photo 5. With the cylinder in place you can now see the port face without the valve as well as the eccentric that provides the up and down motion via the bell crank. different as we can consider the engine itself, so we look at the amount of heat energy the steam contains against the amount of work we get out of it. Interestingly enough, a steam engine can be more efficient than an internal combustion engine, but in the case of the steam engine you have to consider the fuel as going into the boiler so the efficiency of the entire plant has to be considered. Unfortunately when all the plant including the boiler is taken into consideration, a steam plant is quite a bit less efficient than an internal combustion engine, which is exactly why the steam engine was slowly replaced by good old 'oil' engines.

Comparing model boat engines

So now we have an idea of how they operate and we know what efficiency is all about, how does this relate to the two different arrangements, assuming of course similar sized pistons and strokes and similar steam pressures?

The big problem with the oscillating engine is that the ports must be symmetrical on the port face to enable the engine to run in either direction. If they were not symmetrical then the port timing would be different ahead and astern so the engine would obviously be running very poorly one way. Consequently steam can only be admitted at a time when the piston is moving in the right direction and cannot be admitted for instance either 'just before' or even bang on one end of the stroke, which is ideally where you want it. If that was the case, the exhaust ports and the inlet ports would be in the same place! Consequently the piston already has to be moving in the direction that you want it before you admit the steam, so you are wasting a small percentage of the piston's travel. The advantage of a port arrangement is that you can reverse the engine by simply turning around the supply and



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exhaust pipes, but the disadvantage is that you are wasting part of the piston's travel and therefore the initial bit of steam that goes into the cylinder expands simply to fill up an already expanding volume so it is wasted as far as pushing the piston is concerned.

On the other hand, the fixed cylinder and the valve arrangement allows you to put steam into the cylinder exactly when you want it, usually very slightly before the end of travel, which thus ensures the maximum effect of the expanding steam is used to push the piston down the cylinder. This means that the greatest effect is made from the expanding steam, so for a given output from the engine less steam is needed to expand to move the piston. The bottom line is therefore that you need slightly less steam to get the same amount of effort out of a valve type engine than you do from an oscillator. This can relate to a slightly smaller boiler being needed for a given duration, or for the same boiler, slightly less fuel and water being needed for the same running time duration. Whichever way you look at it, you get that bit more duration from a valve engine, assuming everything else is the same. The disadvantage then is that this set-up is only valid for running in one direction, so if you want the engine to run the other way, then the arrangement must be reversed so a valve engine would need reversing gear, Photo 5, or you accept an engine that will only ever run in one direction, such as may be required to run a generator, Photo 6.

So which do I use?

Although the efficiency of the oscillator is a disadvantage, it still has many advantages that may well determine it could be the best engine for your model. If you have very little space in the hull and the boiler and fuel capacity is compromised, then



a valve engine might be preferred to make the absolute most of the available energy. The oscillating engine however is still very light and compact; is simple and easy to operate with a single servo and a fine sterned model might mean an oscillator fits in a bit better. A valve engine requires two servos to operate, one to operate the reversing mechanism and one for speed control, whereas an oscillator only needs one servo for full speed and direction control so that simplicity may be a great attraction either in a more simple model, or where manoeuvrability and ease of operation is a prime requirement such as in a twin engine tug, Photo 7. There are even the aesthetics to consider, as the valve engine with its valve operating rods and reversing gear is certainly a lot more visually appealing than the simple oscillating cylinders of the alternative, Photo 8.

Both engines have advantages and disadvantages which may well dictate which one you eventually decide to put in your model, and whereas efficiency may well be an important consideration, it is only one of them. It is also worth noting that the traditional slide valve engine, such as the Stuart 10V or D10, being quite a large and very heavy lumps of metal now have much more modern counterparts, which are notably lighter and more compact, such as the Graham Industries TVR1A.

Photo 6. On this Stuart Turner 10V engine the valve is in place and connected to the eccentric. Notice here there is no reversing arrangement so the eccentric is connected directly to the end of the valve rod.

Photo 7. Just to give you an idea, these two Cheddar Puffin engines are going to have quite a demand for steam so are supplied by a pretty large boiler. Being a tug set-up though, we do need the fast response and manoeuvrability.



Photo 8. The twin valve engine arrangement may be more economical on steam, but makes for a more complex and much more difficult to operate plant as a result of the requirement for additional reversing arrangements. They look good though!

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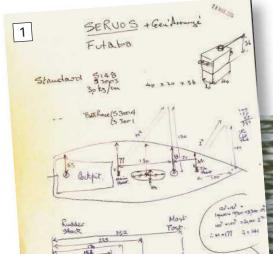


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Michael Watts upgrades the radio-control of a proprietary

model

L'Intrén

his project involved upgrading an existing radio controlled model yacht that can be purchased in the marketplace. It is almost a scale model, but does not come with full 'proper' rudder and sail control, so the intention was to upgrade to conventional two channel 2.4GHz radio control.

A bit of background information

When I was about eight years old my father told me that, given a wire rigging-hook, I should build a model yacht around it. This was certainly true and my pragmatic response to that inspiration remains with me today. Inspiration can come in a wide variety of forms, and although professionally a physicist, most of my work is, and has been practised, as an artist-craftsman. I know little about boats, or yachts in particular, other than that generously provided by members of the Oxford MBC. However, I do know something about model making as a whole, design and some technical matters.

Brighton ModelWorld is a large exhibition held each February and not unsurprisingly, is in Brighton! As an event, it is targeted at families and offers a rich mix of models of all types. On the Southwater Dabblers MBC stand, amongst their other exhibits, was the scale model yacht L'Intrépide. The club chairman was on hand (it was his model) and he was most willing to explain its details, having recently purchased it secondhand for a nominal sum. Notably, the full-size prototype is a 6.5m yacht that has participated in MiniTransat races.

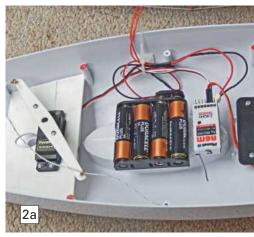
Website searches revealed that its included radio control is for rudder only and that the hull seems to ship water that is subsequently difficult to remove and could possibly affect the control system. The Internet is a wonderful shopping tool and shortly afterwards a brand new L'Intrépide model arrived on my doorstep, direct from China. Price? Well, depending on where you go it can be for as little as



Photo 1: The A4 page of hull & deck dimensions, measured approximately with rule and a straight-edge. Also shown are some calculations for the

sail sheets servo-arm lengths.







£60, or perhaps even less. The included r/c was on the 27MHz frequency band and limited to centre/port/starboard rudder control only. The box contents included a plastic display-stand and the hull is 550mm long (excluding the dummy photovoltaic cell array fitted aft), 160mm beam and a 895mm mast height from the deck. However, something is a bit awry as the model's scale is quoted as 1:25, but if the prototype's hull is the full 6.5m long, then the model's hull should be 260mm, so from its actual length, it must mean a model scale of about 1:12.

The supplied model yacht

The deck is secured to the hull with seven screws, hidden under small rubber-plugs around the deck edge. The fin and keel weight is similarly secured to the hull with screws, and the mast with its sails and all the rigging is readily demountable via spring hooks to metal eyes on the deck. The radio control system for rudder only is secured with screws and plastic brackets within the hull. Since I was going to change everything, it was therefore an easy matter to remove the included r/c system from the hull. Very often with ready to run models, it can be major task removing the decks etc. but this one was easy.

New parts

A Planet T5 2.4GHz system was to hand and proper full proportional control of the rudder and sails was the intended result of the new installation. A sketch plan & elevation of the hull and deck mouldings were derived from a few basic dimensions taken from the actual hull, **Photo 1.**

It was clear that the flat-topped raised central section for the keel mounting within the hull, could be used to mount the receiver and its battery using Velcro tape. There was plenty of space forward

to mount a sail operation servo, but the rudder servo would have to be small to be accommodated beneath the lower cockpit floor. This latter adaption was much helped by the sketches, as the limiting space dimensions enabled a suitable miniature servo to be selected. The standard sized sail servo is ball-raced, but otherwise is nothing special.

Using the existing pillar mount in the hull as a guide, two styrene (plasticard) 1.5mm thick plates were made to mount the servos. The rudder was linked to its new servo via a couple of plastic snaplinks and a threaded rod, **Photo 2 & 2a.**

Quick, easy access to switch the receiver battery On/Off is handy, so a mini dolly-switch was added to the starboard side of the cockpit's forward bulkhead, its electrical wire joints all being soldered and secured with heat-shrink sleeves. Surplus wire was included in the loom so that if the cabin top section (and deck) had to be removed, there was still sufficient length enabling everything to be lifted clear and work in the hull's interior be easy without taut wires hindering matters.

The sail sheet route from the servo's output arm to the booms needed a bit more thought, as did the fixing points and adjustments on them. A hole was drilled in the main deck below the jib boom, for its sheet to pass though, **Photo 3**. The cabin roof securing turnbuckle was removed and a hole drilled for the main sheet to pass through, **Photo 4**.

The main sheet's fixing point on the boom was moved aft a little, so as to increase the amount of leverage. The double-ended sheet servo output arm was made from 1.5mm styrene with correctly proportioned leverage for the movements of each

Photo 2 & 2a: The original radio-system has been stripped out, but some plastic parts were saved for re-use. Above is the deck underside - note the two large holes cut for access and the pair of red wires to the switch. Below is the hull interior – the two servos are fitted in their new styrene mounts, and the servo arms fitted. The receiver and its battery are secured with Velcro and the wiring is complete. Those mounting pillars with red tops are the original deck fixing points, but two additional pillars near the bow were also later utilised.

Photo 3: Close-up of the jib-sheet exit via the new fairlead in the foredeck and note the dummy spinnaker booms mounted on the deck.

Photo 4: The mainsail sheet exits from the cabin-roof via new grey-plastic fairlead. Also visible are the holes in the deck edge for the fixing screws to the hull.



readers' models

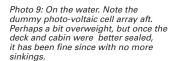


Photo 5: The deck is loosely re-fitted and the cabin top tilted to show the access holes in the main deck. The sheets have not been threaded.

Photo 6: In this general view from aft, you can see the white dolly switch on the starboard side of the cockpit forward bulkhead.

Photo 7: Adjustment was provided for the main sheet with an additional metal loop fitting, glued into the boom end, and a plastic bowsie. The jib boom has been similarly equipped.

Photo 8: A kicking-strap was also fitted, with bowsie adjustment.





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sail (please see Photo 2 again).

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Photo 5 is of the cabin roof lifted and tilted to one side showing the access to the hull's interior without the need to remove the whole deck and **Photo 6** is a stern view and you just see the white knob of the dolly switch on the starboard side of the cockpit forward bulkhead.

To ensure sufficient boom movement because of the relatively small output arm 'swing', a 2:1 arrangement was used with the inner end of each sheet fixed to a convenient point within the hull. In the pictures you can see the hard-plastic fairleads made for where each sheet passes out of the hull through the foredeck and cabin roof. To adjust the sheet lengths, a metal loop and a plastic bowsie was added to each boom, **Photo 7**, together with a kicker strap on the main boom, **Photo 8**. Once all the rigging was completed, a small drop of cyanoacrylate glue on every knot made them 100% secure.

Waterproofing?

Having cut access holes beneath the cabin roof piece, this meant this was a good place for water to enter the hull. It is worth mentioning that the rear end of the cabin roof is now secured to the deck by a couple of neodymium magnets, its front end still being secured by the original tongue & loop fitting.

Water-tightness? The cabin roof to deck join and the hull to deck join proved to be justified concerns and especially the latter, as the first on the water outing resulted in a sinking after about 10 minutes, but fortunately close to the pond's edge.

There is a rebate in the underside of the deck piece into which the top edge of the hull moulding locates, so this was further fettled to provide a better dry fit. A narrow strip of foam plastic will just fit within this rebate and so improve water resistance. A self-adhesive foam strip between the cabin roof 's edge and the deck was also added. There are also several additional unused securing pillars in the hull that can also be used to secure the deck, so some additional screws were fitted through the deck near the bows.

On the water

Launching it for the first time, L'Intrépide sat somewhat lower in the water than expected and did feel quite heavy, but nevertheless sailed quite well until the aforementioned sinking, **Photo 9.**

Apart from those already mentioned deck sealing modifications, the AA cell battery has since been replaced with AAA's – a reduction of 24gms (a little less than 1oz). It may be possible to reduce the keel weight a little, but then only sail the model in light winds, so a bit of a Catch-22 situation. Anyway, it seems to sail quite well as it is, but the rudder response is not that good, probably due to the two large fixed stabilising fins either side at the rear of the hull. It will be a straightforward job to experimentally extend/enlarge the rudder in due course to see what effect that has.

Conclusion

Ready to run craft are part of the hobby nowadays, however much some may bemoan the fact. Some of them can be quite toy-like, but with a little bit of effort a practical 'every day' r/c model can be produced from 'what's in the box', often quite inexpensively. So, don't turn your noses up at what we increasingly see in shops as much fun can be had from them for relatively little effort. As an aside, you may like to know that I discovered that Humbrol No.79 Blue Grey acrylic-matt is a good match for the deck colour should you scratch it and I wonder why that is?

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HMS Snake, 1797, 18 gun Sloop, 1:64, 910mm	£194.57
HMS Diana, 38 gun heavy frigate, 1180mm	£442.19
Mary Rose, 1545, 1:80, 730mm	£241.17
HM Bark Endeavour, (Cooks) 1:64, 725 x 275mm	£208.06
HMS Jalouse, 1794 ex French 18 gun brig 1:64 815mm	£204.99



Blackpool Model **Boat Show 2014**



BELOW: The North West Model

Shipwrights display is always varied and has a wealth of detailed model

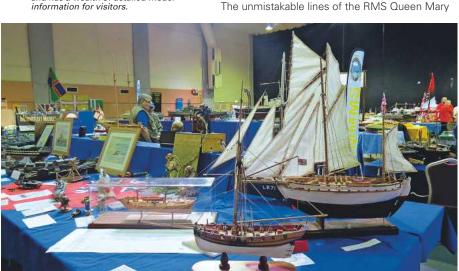
Dave Wooley reports from Norcalympia Hall

> eld in late-October and sponsored by A Model World, this is a popular annual event, it being a long established show, although it has changed venues over the years. The Norcalympia Hall is attached to the Norbreck Castle Hotel on the Queens Promenade in Blackpool and the event features model clubs, traders and a pool.

The models

With such regular events, inevitably there will be some repetition of the models on display and the clubs attending, but there is always something new as one just has to look and of course if you have never been before, then everything is a learning experience. One very different diorama not seen before was on the North West Model Shipwrights stand showing naval divers operating below a dock

The unmistakable lines of the RMS Queen Mary





LEFT: A general view of the Norcalympia Hall event just before it closed for the day.

ABOVE: The spark ignition i.c. engine of the all-metal, 78 year old, RMS Stirling Castle model.

(a 20 year model construction project) and an equally large Queen Elizabeth 2 were both 'show stoppers'. These superb models where built by the late Wilf Burrows, but thoughtfully displayed with appropriate memorabilia by Mick French from the Falmouth MBC. Both models are fully illuminated with numerous nice detail touches including the aft swimming pool complete with figures on the QE2.

Occupying two tables was the huge 1:32 scale GRP hull for the stretched Batch 3 Type 42 HMS Edinburgh, a project by John Hammer that will eventually be what must the largest working model of this warship. Notably, the propellers are 150mm diameter (nearly six inches) and this is an amazing ongoing project. Alan Derham of the Surface Warship Association bought along his new 1:96 scale model of HMS Berwick, a County class cruiser depicted in the China Station livery of a white hull with buff upperworks as used between WW1 and WW2, and it was awarded the Best Boat in Show

The Hull Model Boat Group had a wide selection of fishing craft and one of these was Arab H238, built by Stan Donachie. Stan is no stranger to building such vessels to exacting standards and he is well known in the North of the UK for his first class models. Showing the diversity of model boats was an all-metal 78 year old spark ignition (petrol) powered model built by George Brough in 1935 of RMS Stirling Castle which appeared to be equipped with some form of early sequential radio control. Not all models are of surface ships, submarines seemingly having a growing following and one such model was a two man chariot with a very realistic crew on another stand.





LEFT: Wilf Burrows' outstanding model of the QE2.

Clubs

Ribble MBC had brought along their huge tanker model for towing, together with their tug football team and close by, the Lifeboat Enthusiast's stand that is always a focus of attention had an excellent display. Just up the coast from Blackpool is Fleetwood and the local club there, Fleetwood MY&PBC, were well represented, featuring as part of their display a fine model of the Danish royal yacht HDMY Dannebrog. Of further interest and quite large, was the RN motor launch Argonaut, built by John Humphries and Mick Rigby. Seemingly this model was built around the figures, rather than the model first and then the crew being added later!

Trade support

Over 20 traders were on site and I understand they did well over the two days of this event. In spite of the Internet, it is nice to physically see and touch the items one intends to purchase and I for one would be sorry to see shows disappear because of cost or market pressures. On the Saturday the event was very busy, but perhaps not quite so much on the Sunday, but the traders with whom I spoke all seemed well-satisfied with what they had achieved. There were some new items to be had on a number of trade stands, including Adrian's Figures having a new range of accessories of use to us model boat enthusiasts.



ABOVE: The open bridge of Alan Derham's 1:96 scale HMS Berwick.

LEFT: Alan Derham's 1:96 scale HMS Berwick won the Best in Show Award.



As in previous years, there was a decent-sized temporary pool at one end of the hall with seating on its four sides and a good place to have a sit-down and a natter. Some of the clubs and associations have planned demonstrations on the water at particular times, and always worth watching.

ABOVE: A working Chariot human torpedo, but it is the frogmen that really catch the eye because they are so realistic.

Conclusion

This event fills a need for an event in this part of the UK, attracting clubs and visitors from Scotland, the Isle of Man and North West as a whole. Shows such as this provide an opportunity for enthusiasts to meet, chat and buy what they need, be it complete kits or just a few fittings and gain inspiration from the models displayed, so long may they continue!

BELOW: Adding the right figures can enhance a model and create a more lifelike appearance.







Hawkins of the Burton & District MBC

ABOVE: Ron Dean in the shop with

TB39, a new kit planned for release in 2015.

RIGHT: View of the pool. Just a small part of the new shop unit can be seen in the right background which will be the envy of many retailers.



LEFT: Detail on the stern of the Victorian battleship HMS Inflexible – another

RIGHT: The laser cutter in action on the new St. Olaf hospital ship kit's

Deans Marine Open Days - September 2014



Colin Bishop reports

long with some other manufacturers such as Mobile Marine Models, Deans Marine hold annual open day events which give existing and prospective customers the opportunity to tour their premises, inspect the current product range and see what new items are in the pipeline. Of course you can also stock up on goodies while you are there and see interesting demos' of some of the kit manufacturing processes which give an insight on what is involved in putting the parts into the box!

Deans Marine have an extensive complex at Farcet, Cambridgeshire in a very rural location, but only minutes from the A1M motorway. It includes a showroom, manufacturing units and most recently, a new well stocked shop, although do check in advance for opening hours. Another recent addition is a good sized pool for testing purposes. For the Open Days there is also an on site café which does great egg & bacon sandwiches as well as snacks and beverages, so what more could you possibly

I went along on the Friday afternoon and Saturday

morning, so I missed the popular Saturday evening hog roast and also some frolics in the pool of a wet T shirt nature, this last being a unique event as somebody subsequently commented!

The showroom was very interesting in demonstrating the very wide range of kits available from this manufacturer, including prototypes which have yet to make it into production and some which have fallen by the wayside.

I happen to have three Deans Marine kits in working order; SY Medea; Sir Walter Raleigh and Julie M., and took them with me to run on the pool where they all performed to specification and attracted quite a lot of interest, this facility seeing a lot of use by models of all types during my visit. There were also some trade stands including Mobile Marine Models and Mike Allsop's Scale Flags to add to the items available from the Deans Marine shop

All in all a very worthwhile visit, although perhaps next time I would do both the Saturday and Sunday to take in the hog roast!



Full colour catalogues Deans Marine £5..95 Raboesch £4..00 RB Fittings £2..00 + £3..00 postage each Or all 3 for £12..50 incl p&p u k **ONLINE SHOP & NEW OUTLET STORE** THE STORE WITH A HUGE RANGE of model marine products and a test pond see or website deansmarine.co.uk















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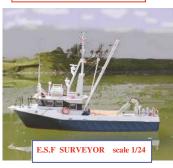
















Lady Wroxham













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around the clubs

RIGHT: Bournville MY&PBC have one of the best model boating facilities in the UK.



2014 Bournville **Submarine Dive**

Report from Robert Fowler

BELOW: Roger Flaherty's HMS Resolution, U2511 and P35 submarines.



BELOW LEFT: Rob Fowler's (L to R) Aquabat, Aquaflite, HMS Resolution, Type XXI and Type VII U-boats.

unday 21st September 2014 was the setting

for the first dedicated, and open to all, radio

control submarine day at the model boating

pool in Valley Parkway, Bournville, Birmingham.

Such an event has not been held for at least 20 years I believe. Billed as the 'Submarine Dive In'

as a gesture to the Facebook Group that made it

possible, it was generously hosted by Bournville

MY&PBC with the exclusive use of their water for

the submarines on the day. There was convenient

parking, plenty of tea, coffee and hot food, the

hospitably of the club being second to none and

the venue, the pond is a dedicated model boating

lake with a full flat lined concrete base. It is 900ft long and just over 3ft deep, making it particularly

greatly appreciated by all. For those not familiar with

BELOW RIGHT: Mountfleet Models' Adam Slater is reviving the Darnell range of submarines and his soon to be released fully functioning two man Chariot (green hull) is in the background of this picture.

best all-round model boating facilities in the UK.

The event started at 1000hrs, but it was reassuring to see submariners arriving earlier to make the most of the day. We managed to get the gazebos and tables set up just in time though, with the majority of visitors steadily arriving during the morning. For a while, most of the skippers were chatting and greeting each other, since most had only previously conversed via the Facebook forum and it was a good opportunity to put faces to

It was also interesting for the public to see the many and varied designs of submarine with the different systems employed to operate them, inventiveness and ingenuity forming a great part of this hobby. All the models I saw on the water were operating well, so well done to all the skippers who attended and it was also good to see some work in progress models, which we hope to see 100% complete at the 2015 event.

Another feature of the day was the Bring and Buy Sale, this being a good chance for the skippers to swop, barter and buy submarine related items that are sometimes hard to come by. So, all in all, an excellent day for model submarine enthusiasts.

2015

The event is planned again for September 2015, together with a proposed extra date in May. Confirmation and precise dates will be posted in social media and in this magazine in due course.

Bournville MY&PBC:

www.bournville-mypb-club.org.uk

Facebook Group: Dive - into model submarines Sub Committee: www.subcommittee.com

Association of Model Submariners: associationofmodelsubmariners.com





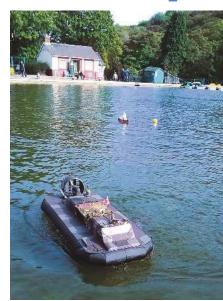
Sheffield Ship Model Society

John Blackwell reports from Millhouses Park

unday 5th Oct saw the Sheffield Ship Model Society's 2014 Open Day get off to a good start with members turning up at 7.30am to erect the gazebo, tables and set out the steering course which occupied half of the pond. The other half was dedicated to a Club 500 fast electric racing course which was shared with the yachts at agreed half hourly intervals. A peg board system was in operation throughout the day for the 27 and 40MHz frequencies and the weather was on our side from an early cool beginning to a steady progression of sunshine all day. It was at short notice that we had managed to regain a full day's use of the lake and thanks to the notice of the event in September 2014 MB we attracted members from the CADMA. Buxton, Kings Mill and Stoke clubs, all bringing a good selection of model yachts, r/c scale and

static boats, the Club 500 being supported by the Sheffield S.M.S. members. The event was just as it stated, namely a day of free sailing for all from 10am to 4pm with models gracing the water from start to finish giving good entertainment to the large number of the general public who visit Millhouses Park. Gazebos were used for displaying the models not on the water, allowing everyone an opportunity to have a close inspection and ask many questions. It was a successful day and the Sheffield S.M.S. would like to thank all who attended and supported our Open Day event.

The club regularly meets at Millhouses Park Pond, Abbeydale Road, Sheffield, S7 2QQ,on a Tuesday, Thursday and Sunday morning, or for more information about the club, please check the website: www.sheffieldshipmodelsociety.co.uk



ABOVE: Terry Walden's (Sheffield SMS) Griffon 2000 hovercraft with the clubhouse in the background.

LEFT: The CADMA club's display.







ABOVE: Wayne Abbott's huge Arun lifeboat.

LEFT: A very nice model of HMS Cossack from the Stoke club.



ABOVE: Geoff Dixon's steam powered HMS Canopus with



RIGHT: John Albinson's Bristol Pilot Cutter

Southend Model



Peter Bone reports from the Essex Country Show - September 2014

his club hosted the model boating element of this annual weekend event held near Billericay. They were supported by Brentwood MBC, Moorhen MBC, Brightlingsea MBC, AMBO, Gt. Yarmouth MBC and The Warship Squadron, together with a small group of local independent model boating enthusiasts. This is a good event to bring model boating to the general public as over 30000 people come through the gates. The model boat marquee was filled to bursting with over two hundred models, ranging from highly detailed warships though to no-frills dedicated racing yachts and the fine weekend weather enabled a full programme of on the water activity with time slots for the scale models, Club 500's and yacht racing.

The models

Notably amongst the many exhibits, Mike Warnes from the Great Yarmouth MBC was showing his beautifully built steam powered Krick Borkum. He had enhanced the basic kit by planking the inside of the hull and upholstering the seats. The power plant was a French Anton Jade 4.5cc slide valve engine, running off a Cheddar boiler. Inland waterways craft are not particularly well represented in the model boating world, so it was nice to see a model of a typical British Waterways pusher tug. The model was researched from the full-size boat based near Chester and had been built by Keith Rutledge, a relatively new member of the Southend MPBC. Keith likes to use recycled materials wherever possible, so his tug was built from the plywood skins of a discarded office door; the drive motor is from the seat mechanism of a Mercedes car; the figures and tyres are from children's toys and the broom is part of a nail brush! A Technobots unit

RIGHT: Dragon Force/RG65 racing yachts are becoming increasingly popular

BELOW: Keith Rutledge's unique British Waterways pusher tug.











ABOVE: MV Balmoral: Bill Croucher's Best in Show model.

around the clubs

Power Boat Club

provides the engine sound, whilst the horn sound unit is home built and operated by a reed switch activated by full right rudder.

The popularity of Dragon Force/RG65 racing yachts has grown at a remarkable rate recently. They provide a very affordable entry level into model boating in general and yacht racing in particular, and members of the general public were very interested by the marquee static display of these yachts, and when they were sailing.

On the water

Throughout the weekend there was plenty of activity on the adjacent large lake. Notably, John Albinson's Bristol Pilot Cutter is plank-on-frame and incorporates a drum winch on the main sail and 'sail arm' control for the foresails. He has also installed a motor operated by a simple micro-switch for when the wind dies! The sails are from Chris

Brown Model Boats, the complete kit being named 'Cariad'. Geoff Dixon also brought along his scratch built, steam powered, pre-dreadnought battleship HMS Canopus with its guns that actually fire and it looked really good on the water.

Best-in-Show

Bill Croucher's recently completed 1:50 scale MV Balmoral was the well-deserved winner of this award. The GRP hull and plan were supplied by Models by Design and everything else has been scratch built over the last two years. The standard is top class with a great deal of detail included in this 48 inch long model. So, all-in-all, a most enjoyable weekend with great camaraderie between all the supporting clubs, just as it should be!

Southend MPBC website: www.smpbc.co.uk Report supplied by Peter Bone



ABOVE: Bill Croucher receiving the Best in Show trophy from And Seymour, the Southend MPBC

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- A Features area that has sections for: **Build Features, Kit and Product Reviews, Hints,** Tips and Technical, Show and Regatta Reports and General Interest Articles on Model Boating.
- A Link to www.myhobbystore.com which has over 3000 plans available and numerous modelling items, books and kits. These can all be purchased online.

Steve Martin's Models

Photographed by **John Callin**

teve is a Canadian British Columbia, reader of this magazine and Glynn Guest persuaded him, with John Callin's assistance, to send to us some pictures and details of his outstanding models.

HMCS Haida:

This was a Tribal class destroyer and the model depicts her as in 1960. The drawings came from Douglas Monroe of Vanguard Model Marine in Ottawa and 'Friends of Haida' provided much of the detail research information required. The Tribal class was of 27 destroyers built between 1937 and 1943 which saw service with the Royal Navy, Royal Australian Navy and the Royal Canadian Navy. HMCS Haida is the only surviving example of the class and is now a museum ship on the waterfront at Hamilton, Canada. The model was built during 39 months from 2009 to 2012, is to a scale of 1:60 and is 75.4ins (191.5cm) long. Weight is 38lbs (17.2kg) and propulsion is by a single 12v motor geared to the propshafts. The radar scanners rotate and the model has a top

Steve Martin

A bit of history. His first model was a 1:96 scratch-built HMS Exeter, made when he joined the Canadian Army in 1965, aged 18. He retired from military service in 1994 having been in the communications and electronics branch of the service. His interest in warships stems from his being in the Sea Cadets for six years from 1957 to 1963 and spending six weeks on board HMCS Haida for a training cruise.

Steve's models: He has built a total of eight radio controlled models in varying scales, their r/c systems being the older VHF type in all but one, which uses 2.4GHz. The hulls are all of GRP (fibreglass) from his own masters and moulds. The decks (or sub-decks) are also of GRP with aluminium reinforcing bars, meaning that the decks and hulls react equally, whether it be hot or cold. Bilge keels are built around styrene strips set into

slots cut into the hulls. The superstructures are all primarily of 1.5mm styrene; stanchions and handrails are of brass rod and thread, and the paints used are Humbrol enamels as well as Tremclad, sprayed or brush applied, this seeming to bond really well to the GRP hulls. (Tremclad is the brand name for a range of paints from the Canadian manufacturer 'Rust-Oleum', website: www.rustoleum.ca)

The only, and not very obvious, difference from true scale is that on some models the hull is 0.5 ins

deeper than it ought to be, so as to improve their stability on the relatively exposed lakes where

Steve normally sails his models.

Featured models

Pictures of four of Steve's models were sent to MB via Glynn Guest, together with the background information and a selection of them are printed here and I think you will agree they are all top-class models. Regretfully, on the water pictures were not included, but nevertheless, the exquisite finely detailed workmanship means they are well worth close examination.



speed of 6 mph (9.6 kph).









HMCS Nanaimo

HMCS Nanaimo
This was a Flower class corvette, one of five built by Yarrow Shipyard at Esquimalt, British Columbia, the estimated cost in 1941 being \$600000. Although paid-off from military service in 1945, she then served as a whale catcher, being finally scrapped in 1966. The only surviving example of the class is HMCS Sackville that is currently a museum ship at Halifax, Canada. The model depicts the vessel as in 1943, and is to scale of 1:48 having a length of 51.2ins (130cm). It is powered by a single 6v electric motor and has an operating siren from the three channel r/c system. Steve built the model in 20 months during 2000 and 2001.

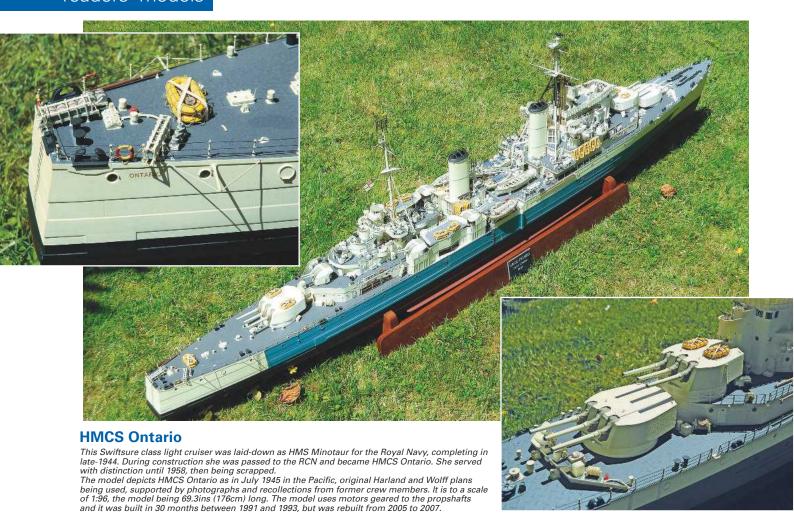














HM Canadian MTB No. 726

This Fairmile D type craft was ordered in 1942 from A. M. Dickie & Sons (Bangor, Wales, UK) and commissioned during March 1944 into the RCN. The boat was returned to the Royal Navy in May 1945.

The model is to scale of 1:24 and is 57.5 ins (146cm) long and depicts the craft as in 1944. Propulsion is by a single 12v motor, geared to the propshafts with two channel r/c for the rudder and motor. The hull is of GRP, but the superstructure is plywood, laminated externally with styrene sheet and the model took 18 months to build between 2003 and 2005.

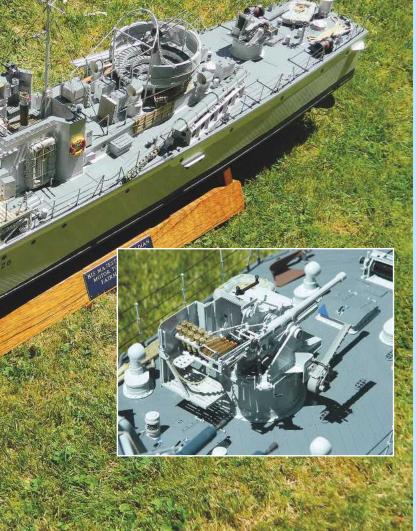
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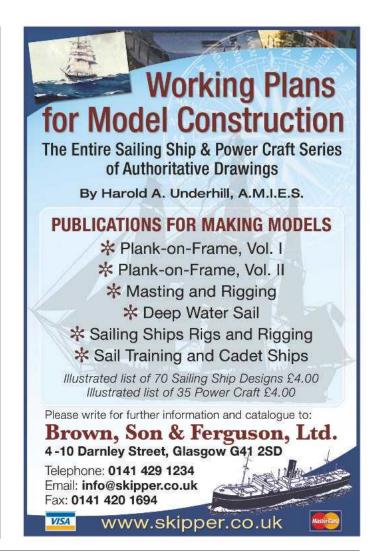
















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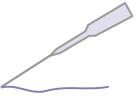
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Model Boats looks at new products

Attention - Manufacturers & Distributors

 These pages are open to you - your shop window to bring to the attention of our thousands of readers, new products - kits, books, videos, engines, R/C gear, motors, anything that could be of interest to model boat builders. Send your information initially to Model Boats Test Bench, PO Box 9890, Brentwood, CM14 9EF - or ring the Editor on 01277 849927 for more details. You cannot afford to miss this opportunity!

News from Marcle Models

New card kits from GPM

HMS Graph

This is a new 1:100 scale card model of U-570, a type VIIC submarine, which was captured intact in August 1941, transferred to the Royal Navy and was then put into service as HMS Graph. The full hull kit, priced at £35.95, makes into a model over 27 inches long. The kit parts are printed on four sheets of A4 card with a further four pages

of diagrams and illustrations and some generalised English instructions to supplement the Polish text. Also included in the kit are several sheets of laser-cut card, providing internal hull parts and detailed parts such as gratings





TID tugs

The TID tug was a standardised British design for a tugboat developed and built in WW2. Because there was a shortage of shipyard capacity, the design consisted of 8 welded sections which could be built by other manufacturers with spare welding capacity. Each section weighed no more than 6 tons, thus making it possible to transport the sections by road. 182 vessels were built for the Ministry of War Transport and several are still in existence today, including one at Chatham Historic Dockvard.

GPM's kit to a scale of 1:50 of the vessel preserved at Chatham, TID No. 164 (£44.95) makes into a model of about 18 inches in length. The parts are printed on

four sheets of A3 card together with five sheets of A3 and A4 card, containing laser-cut parts for the hull interior and other details.

To a scale of 1:100, GPM's other new kit (£35.95) for either Nos. 20 or 27, contains both lasercut parts and some to be cut out. The finished model, which can be designated as either TID No. 20 or TID No, 27, is about 9 inches long. Both these TID kits have generalised English instructions to supplement the Polish text.

Prices include UK p&p; overseas surcharge per order is Europe £5 and ROW £9. Available from Marcle Models, Turnagain, Finch Lane, Amersham, Bucks, HP7 9NE, England. Tel/fax (+44) 01494 765910, website: www.marcle.co.uk.

Hitec Flash 7 **Transmitter**

his is the latest in the Hitec range of computer radios for beginners and experts alike. With advanced built-in AFHSS/SLT flexibility on the 2.4Ghz frequency band, impressive 4096 resolution and ultra-low latency, this feature-packed transmitter brings ease and reliability to all users. The Flash 7 transmitter enables the user to store up to 20 models and has full telemetry capability. Model naming is enabled for up to eight characters. One of the transmitter's notable features is that any of the seven channels can have

the speed of the relevant

servo's output, slowed to

end of its travel. Also, two

25 seconds from end to

by a switch or be programmed to start when the throttle is opened.

There are three on-sale versions, each including a top of the range receiver and recommended price is from £169.99. The Flash 7 is distributed into the trade by J. Perkins Distribution Ltd.



X-ACT Sportive .21 Marine Engine ow available is this UK developed

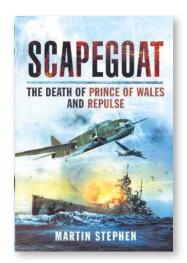
marine glow (nitro) fuel engine. It is is based on the 0.21 cubic inch buggy engine from the same distributor and offers outstanding value for money, retailing as a nonpull start version or pull start, for **£64.79** and **£68.79** respectively. Its parts are all manufactured in Taiwan and handassembled in the UK

This three port engine has a marine specific crankshaft, water-cooled cylinder head, flywheel and collet plus a rotary carburettor suited to marine use. It is available with or without a pull-start and spares

The non-pull start version of the X-ACT Sportive .21 Marine Engine.

are inexpensive.

UK distributor is Answer RC, website: www. answer-rc.com. tel: +44 (0) 1617 621105, and the engine is available thought



Scapegoat – The Death of Prince of Wales and **Repulse**

Written by Martin Stephen. Hardback, 194 pages, 240 x 165mm, 37 black & white photographs and maps. ISBN: 978-1-78383-178-4. Price (RRP) £19.99 Published by Pen & Sword Books Ltd, , 47 Church Street, Barnsley, South Yorkshire, S70 2AS. Tel: 01226 734222 website: www.pen-and-sword. co.uk. Available direct from the publisher or through the usual retail outlets.

On the 10th December 1941 two Royal Navy warships, the newly constructed King George V class battleship Prince of Wales and the World War One battlecruiser Repulse, were sunk by land based Japanese bombers and torpedo bombers in the South China Sea while attempting to disrupt Japanese landings on British held

territories, the length of Malaya (now Malaysia). A few weeks later Singapore, from whence the ships had set sail on their last voyage, was to fall to the Japanese.

In this radical new account, the author, naval historian Martin Stephen, has made full use of modern research and unrivalled access to previously unseen private family papers to suggests that Admiral Sir Tom Phillips, the commander of the ill-fated Force Z, who lost his life in the engagement as did Captain J. C. Leach of the Prince of Wales, was held responsible in greater or lesser measure for a battle in which he was blameless and that Winston Churchill, the Admiralty

and chronic failures in ship design and intelligence were what sank the ships. The book also shows what a very close run thing the sinking's were and how the Japanese success depended on having luck on their side.

Scapegoat is a convincing attempt to right a wrong that has been allowed to stand for over seventy years, as well as a prime illustration of the way in which the Establishment always protects itself first.

This extremely well crafted book has got be must-read for anyone with an interest in the Royal Navy and sea battles of the Second World War.

Book Review by John Deamer

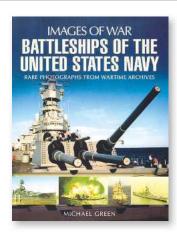
Images of War -**Battleships of the United States Navv**

Written by Michael Green. Softback, 189 pages, 247 x 199mm, over 240 black & white and colour photographs and diagrams . ISBN: 978-1-78303-035-4. Price (RRP) £14.99 Published by Pen & Sword Books Ltd, , 47 Church Street, Barnsley, South Yorkshire, S70 2AS. Tel: 01226 734222 website: www. pen-and-sword.co.uk. Available direct from the publisher or through the usual retail outlets.

From 1895 to 1944, the US Navy commissioned almost 60 steel-clad battleships, the first being Indiana (BB-1) and the last USS Missouri (BB-63).

After an impressive showing in the Spanish-American War and the 'Great White Fleet's' circumnavigation of the world, US battleships played only a minor role in the First World War. They came into their own during the Second World War primarily bombarding enemy coastal regions and supporting Allied operations in Europe and the Pacific. Their firepower was awesome and later examples, like the lowa class, had nine 16 inch and up to twenty 5 inch guns plus copious anti-aircraft defences.

On the few occasions these mighty ships took on their Japanese counterparts, they performed brilliantly, but protection of the increasingly important aircraft carriers was



more decisive. Armour plate nearly a foot and a half (46cm) thick saved many from fatal attacks from suicidal kamikaze pilots.

During the post-WWII era, the battleships were relegated to war reserve status but later their value protecting American military power worldwide and their conversion to platforms for cruise missiles saw a re-birth. USS Missouri retired in 1992 having served in the Second World War, the Korean War and finally, Operation Desert Storm in 1991. In this new book from the Images of War series which is lavishly illustrated with rare photographs from wartime archives, noted military author Michael Green gives both the expert and layman a broad overview of the glorious history of the US Navy steel-clad battleships from the beginning to their end.

Book Review by **John Deamer**

Ferries Across The Humber

The Story of the Humber Ferries and the Last Coal-Burning Paddle Steamers in Regular Service in Britain

Written by Kirk Martin. Hardback, 166 pages, 288 x 225mm, over 200 black & white and colour photographs, illustrations, maps and memorabilia, ISBN: 978-1-78383-102-9. Price (RRP) £25.00. Published by Pen & Sword Books Limited, 47 Church Street. Barnsley, South Yorkshire, S70 2AS. Tel: 01226 734222 website: www.pen-and-sword.co.uk. Available direct from the publisher or through the usual retail outlets.

This new book by Kirk Martin really does evoke an era of 'days gone by', starting with his

discovery of the coal-burning paddle-steamers of the Humber in the early 1970's, whilst studying at Hull University. His book continues with a history of the ferries on the Humber Estuary. the coming of the first paddle steamer Caledonia in 1814, and the rapid expansion of steamers operating routes to and from Hull to New Holland, Grimsby, Selby, Barton and Goole.

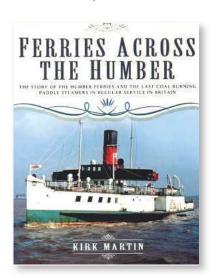
Also included are the personal memories of some of the crew that worked the ferries, as well as reminiscences of passengers that used and loved them. It especially looks at the paddle steamers Tattershall Castle, Wingfield Castle and the Lincoln Castle. this one becoming the last coalburning paddle steamer operating a regular service in the United

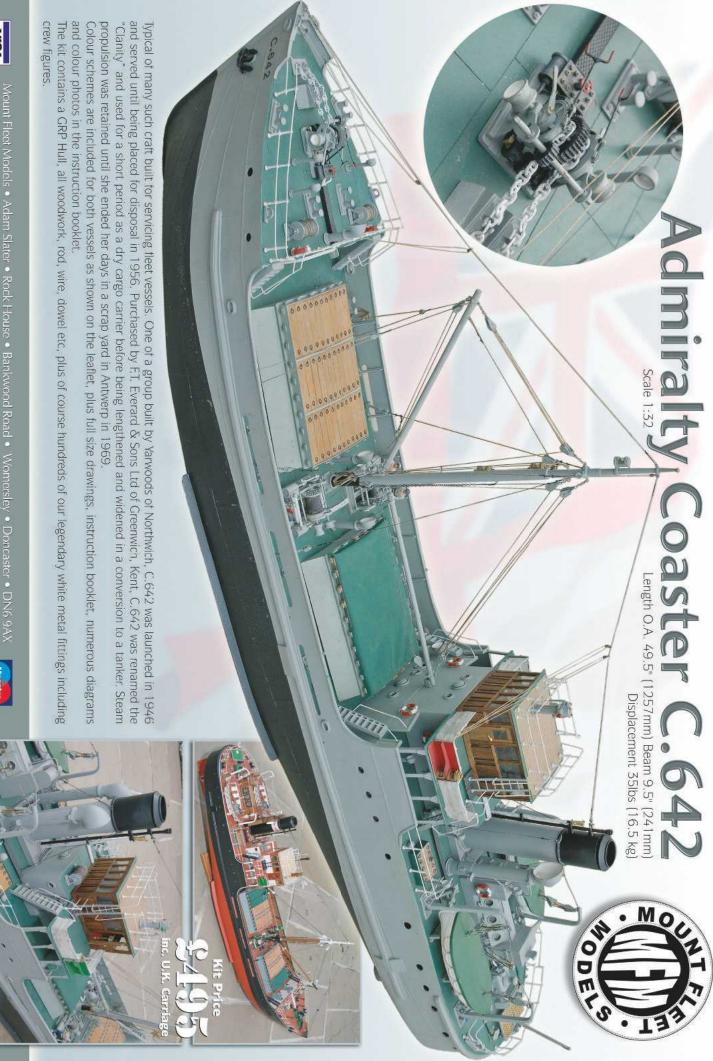
Kingdom. The book features a great number of photographs of these three vessels taken at various times during their working lives, from entry into service in the 1930's and 40's, to the demise of the Humber Ferry service in the 1980's with the opening of the Humber Bridge

The book concludes with an appendix which lists over 80 paddle steamers, from the Caledonia of 1814 to the last, Lincoln Castle, all identified as working on the Humber Estuary from published archive sources. It also includes the diesel powered paddle vessel Farringford, which saw out the service in 1981 and also other vessels associated with the Hull to New Holland Ferry. This highly illustrated book would make interesting reading

for ship modellers, historians and enthusiasts alike.

Book Review by John Deamer







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ABOVE: Daz Elson's beautifully moulded new catamaran hull ready for fitting out to race. Photo courtesy of Judith Beesley

ABOVE: The superb boat preparation area next to the water's edge at King Lear Lake.

LEFT: A close battle between boats D9 and D4.

BMPRS News

Website: www.bmprs.co.uk





Craig Dickson reports from Watermead Country Park, Leicester

RIGHT: C20: Mike Gelson (left) doing pre-launch checks of his C class winning Stratos and Dave Clay is his pit man (right).

hen we opened the booking office for entries to this event, the seventh out of the nine scheduled for this season, eager anticipation followed and why you might wonder? It was because the first planned event of our calendar at this location had to be regrettably cancelled due to the bad weather early in the season. Would members book in to race in sufficient numbers on this occasion and yes they did. The great thing about this venue is that the King Lear Lake (part of the Watermead Country Park) is a mile in circumference, so it is so ideally suited to a big racing course and a special 'Thank You' to the King Lear MBC who provided all of the key facilities needed, including the rescue boat with a dedicated crew. Combining all this with an excellent concrete launch area and a large fenced off boat compound at the lake's edge, we had the key components for a great day ahead.



Pre-race formalities

Mark Wild yet again volunteered his services to act as OOD (Officer of the Day) and called the drivers meeting early to run through key safety aspects and give an opportunity for any questions or concerns to be raised prior to the racing getting underway. A minor adjustment was made to two of the buoys and then the racing got started and here follows the key highlights from the various classes.

AA class

With four competitors in this class, the MDS 28 Sea Spirit of Mike Barnes, powered him home with 45 laps for first place. He achieved good consistency in both heats which always gives a race winning advantage. Mike's second heat saw him bring his boat in only once to remove a big clump of weed that was wrapped around his rudder, but that only cost him a couple of laps or so. With 37 laps in total, Mark Beesley's OS 21 outboard powered Cavalier gained second place. The boat stopped in Heat Two and even though he was quick to restart the engine following recovery, it cost quite a few laps. Graham Stanley took third place with his impressively quick OS 21 powered Cavalier scoring 26 laps in total. He achieved the highest single heat score in this class as all of his 26 laps were from the first heat, but unfortunately for him in the second, he didn't seem to be able to get the engine running and scored zero laps. The Challenger 43 of Dave Clay achieved only one lap in Heat One for the fourth place. The boat stopped soon after launch and he quickly realised that the teeth on the drive wheel in the gearbox had stripped, resulting in retirement from the race.

A class

Out of the four boats entered in this class, three, including mine, were running ASP/SC sports type engines, up against the much more powerful CMB 45vac powered Orion of Dave Clay. His boat was easily the quickest on the course and after the first heat had finished, he had a commanding lead.



However in Heat I wo the engine was not running as it should, leading to the boat being retired early, resulting in a total of just 35 laps for second place in the class.

My SC 46 powered Crusader 3, despite flipping over in Heat One, achieved 50 laps in total for first place and junior member Kian Searle racing his ASP 46 powered Crusader 3 clocked up 35 laps, just a fraction of a lap behind Dave Clay's score, for the third place. Kian's boat ran very well and quickly and if it wasn't for the boat stopping in Heat One, he would have achieved a better result. Junior member Luke Bramwell's Sea Spirit 2 showed great potential running very quickly, but despite achieving 31 laps in total, this left him in fourth place. The engine kept cutting out and needing rescue and this was because the failsafe was kicking in, causing the throttle to cut. On this occasion it was because in the adrenalin fuelled excitement of the moment, he had left the transmitter aerial pointing in the worse possible direction and this was only realised at race end.

B class

This mid-sized mono hull, nitro powered engine class (usually around 10cc) featured three regular competitors and despite commonly seeing fewer entries than other classes, it is always competitive. In my opinion, the interesting aspect of this class is that it demonstrates that those members running the less powerful sports engines can achieve good results when up against much faster and more expensive tuned engine powered hulls.

With 54 laps in total, Mark Beesley's ASP 61 powered boat was first. With only one lap less at 53, the vintage Webra 61 powered Challenger of Garry Dickson earned him second place.

The powerful and impressive CMB 67 powered Apache of Malcolm Pratt had to settle for third place on this occasion with just 36 laps. After the race, Malcolm explained that the CMB engine was ready for a replacement piston and liner having been raced regularly now for nearly two full seasons.

C class

The lap totals scored in this biggest engine class of nitro powered mono hulls were spectacular. Topping the bill with 89 laps was Mike Gelson with his CMB 91RS Evo (on a gearbox) powered Stratos. Mike's driving skills and faultless consistency deservedly earned him first place and the award for Highest Laps of the Day as well, so 'Well done' to Mike.

However, the OPS 90 powered Warhawk of Harry Stuart however kept Mike on his toes throughout both heats with furious racing battles

between these two. Harry ended up with a total of 87 laps for second place.

Mark Beesley's CMB 91 powered XXX (strange name for a boat perhaps?) gained third place with 32 laps in total. His boat was not running as it normally does and only towards the end of his racing was it realised that insufficient water-cooling was the cause. A partially blocked cooling pipe was suspected, but thankfully despite the engine overheating, no permanent damage resulted. Ian Searle's Makara started off running like a rocket, but then had a spectacular flip-over. Although he kept the engine running to limp back to the pit area, he ended up with only 14 laps and fourth place.

D class

The huge popularity of this class saw 11 competitors and Mark Wild wisely opted to split the boats into two separate heats to avoid carnage. So that meant two D class morning heats and two during the afternoon session.

Only six laps separated the top four places, demonstrating just how close a race this was. The MPM 29 powered Patriot of Mike Barnes gained 72 laps in total for first place, this being Mike's sixth consecutive win on the trot in this class which is a remarkable achievement, so 'Well Done' Mike.

With 68 laps, Kevin Alcock's Patriot gained a close fought second place. 48 of his laps were scored in the second heat, which was the highest single heat score of the day and demonstrated just how fast the boat was running. However, in the morning heat his Patriot only scored 20 laps because it stopped early after suffering a broken dog drive (which locks the propeller to the propshaft), but that was promptly replaced before

TOP LEFT: OOD Mark Wild (second from left) settling pre-race nerves with some cheery banter. Photo courtesy of Judith Beesley

ABOVE: Daz Elson's F1 catamaran of his own design and construction. Photo courtesy of Judith Beesley



ABOVE: Junior member Boyd Elson at the helm, driving to a race win with his father Daz Elson there for guidance. Note the steering wheel type of transmitter.

BELOW: Dave Clay launching the B9 Apache of Malcolm Pratt.



RIGHT: D108: Ron Willet's Apache on its way to third place in the D class.



ABOVE: A128. The Crusader 3 by Kian Searle on the way to gaining third place in its class. Photo courtesy of Judith Beesley

Willets fabulously presented Apache achieved 67 laps in total for third place with excellent consistency in both heats.

Unfortunately for Ken Dodd, the failsafe of his Phantom kept triggering, cutting the engine and

Unfortunately for Ken Dodd, the failsafe of his Phantom kept triggering, cutting the engine and resulting in nil laps being scored. Steve Abbott's Phantom also suffered failsafe issues and when the boat stopped in Heat One, it was discovered that the fuel supply pipe had split. Although promptly fixed, Steve's total lap score of just 27 left him in ninth place.

Some of you may wonder whether these failsafe systems are a hindrance because we have seen quite a few instances of them kicking-in this season. However, it is important to remember that the failsafe device is designed to trigger if the receiver loses its signal from the transmitter. So when it does trigger and cuts the throttle, it potentially stops a boat dead in its tracks, when without such a device it could continue at full speed and out of control.



Our youngest member, 10 year old Boyd Elson, with a total of 30 laps deservedly gained his first win of the season racing his APS 46 powered X CAT 38. We all noticing just how far he has progressed in the 2014 season in terms of his driving skills. Previously his dad Daz had helped with a little guidance at the controls, but on this occasion it wasn't needed as Boyd's confidence was now very evident.

Second place with 17 laps went to junior member



ABOVE: Harry Stuart firing up his OPS 45 powered catamaran. Note the leather cord used instead of an electric starter.

BELOW: D127 upside down. The result of pressing a boat a little too hard, and the engine has still not yet stopped! Photo courtesy of Judith Beesley



Kian Searle racing his OPS 21 powered Sprint Cat. This was running remarkably fast, so much so that a couple of times it flipped over, needing rescue and a restart costing valuable laps. Because the duration of the catamaran heats is only 10 minutes, instead of the 15 for all other heats, if a boat stops it really does affect the potential lap total. On this occasion, Harry Stuart had to settle for third place with 13 laps in total, all scored in the first heat.

Cat T2 class

Featuring the larger engines (nitro and spark ignition) this class is always very exciting to watch as especially on calm water, the catamarans can be outstandingly quick. The CMB 91RS powered Aeromarine of Malcolm Pratt won first place with 41 laps in total. Malcolm in the first heat lost valuable laps when his boat stopped to avoid colliding with another, but he made it up for this in the second, with a faultless performance and the eventual win.

With 37 laps in total, Garry Dickson's Mercury gained second place. In his second heat, the boat was retired early as its spark ignition engine was showing signs of overheating, so best to bring it in for a good check-over. Kevin Alcock's Conquest took third place with a total of 28 laps, he having also to retire this boat early in the second heat because the throttle arm had sheared off the RCMK engine.

Daz Elson's own design and built F1 had to settle for fourth place with only ten laps, as early in the first heat a strong gust of wind got under the hull making it literally take-off, somersaulting and as a consequence, ripping off the hatch cover, thus ending ended that race.

Conclusion

The splendid weather throughout the day, combined with the great people present, made this another fantastic meeting. Super racing and good fun was enjoyed by all, which is exactly what our society seeks to achieve. Special thanks were given to King Lear MBC and to all those that helped out with the key duties, making the day run so smoothly. We ended with the presentation of the certificates to the winners, something which always includes some good banter as well!

D class – why is it proving so popular?

This class is rather unique in that it is the only class of mono hulled boats that run s.i. (spark ignition) engines and the craft usually feature the largest hulls. Closest to D class is arguably the C class which feature, as a key difference, the large nitro (glow fuel) powered engines and are equally as fast, but the D class boats do have a lot going for them.

In terms of purchase cost, a marine spark ignition engine such as the popular Zenoah, can be



propwash

LEFT: The Leicester winners, and it was great to see three juniors with certificates.

BELOW: Luke Bramwell's A class Sea Spirit practically takiing off. Photo courtesy of Judith Beesley

purchased new for around £240 and purchased race tuned for less than £300. Seeking a nitro equivalent performance-wise, such as the popular CMB engines and you are talking of doubling the outlay.

In terms of running costs, fuel for s.i. engines is petrol and a two-stroke oil mix. That costs less than half as much per gallon as what you can pay for nitro (glow) fuel. In terms of consumables, the spark plug in a petrol engine can last a full season, but those running the nitro engines will often fit a new glow plug prior to each race which works out very expensive by comparison.

In addition, the large D class hulls, by their very nature, have bags of room inside making them relatively easy to build and their size also tends to make them very capable of easily handling choppy waters.

Having said all of this, there are also good reasons why a D class boat might not appeal to everyone as the size of their hulls can make it a challenge fit one into your vehicle! The raw power and speed of these boats makes them not suitable (in my opinion) for beginners as it can take nerves of steel to drive one with confidence and that also applies to the C class boats. Seasoned racers tend to have a natural preference for a preferred choice of power unit for a boat, whether it be either nitro or petrol engines.

In summary though, the great thing about the BMPRS is that the classes available allow for most preferences to be met and that is perhaps what this hobby is all about, namely catering for as many enthusiasts as possible.

Cheers for now - Craig



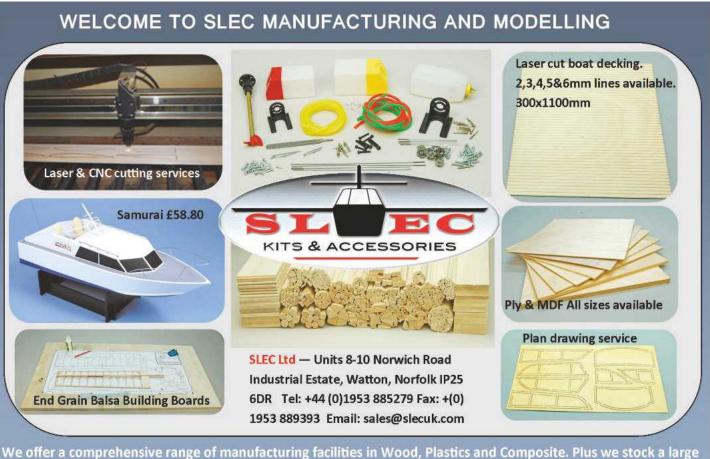
Leicester Results - 21 September 2014

	Name	Number	Hull	Engine	Heat 1	Heat 2	Total Laps
AA class							
1st	Mike Barnes	4	Seaspirit	MDS 28	24	21	45
2nd	Mark Beesley	176	Cavalier	OS21 OB	21	16	37
3rd	Graham Stanley	29	Cavalier	OS 21	26	0	26
4th	Dave Clay	42	Challenger 43	CMB 21	1	0	1
A class	0 1 51 1			00.40			=0
1st	Craig Dickson	55	Crusader 3	SC 46	21	29	50
2nd	Dave Clay	42	Orion	CMB45 Vac	30	5	35
3rd	Kian Searle	128	Crusader 3	ASP 46	12	23	35
4th	Luke Bramwell	6	Seaspirit 2	SC 40	9	22	31
B class		4=0		10001			
1st	Mark Beesley	176	Unknown	ASP61	31	23	54
2nd	Garry Dickson	44	Challenger 48	Webra 61	29	24	53
3rd	Malcolm Pratt	9	Apache	CMB67	14	22	36
C class							
1st	Mike Gelson	36	Stratos	CMB 91RS Evo	44	45	89
2nd	Harry Stuart	133	Warhawk	OPS 90	42	45	87
3rd	Mark Beesley	176	XXX	CMB91	26	6	32
4th	lan Searle	127	Makara	CMB90	14	0	14
\D class							
1st	Mike Barnes	4	Patriot	MPM29	28	44	72
2nd	Kevin Alcock	75	Patriot	RCMK/Zen Gizmo	20	48	68
3rd	Ron Willets	108	Apache	RCMK Evo	34	33	67
4th	Malcolm Pratt	9	Sigma	Zen 30	25	41	66
5th	Harry Stuart	133	Woody	GWS 26i	18	41	59
6th	lan Searle	127	Apache	RCMK	17	32	49
7th	Garry Dickson	44	Patriot	MPM31 Zen	3	40	43
8th	Mark Beesley	176	Waverider	Zen 26	21	20	41
9th	Steve Abbott	18	Phantom	RCMK	16	11	27
10th	Graham Stanley	29	Pipe Dream	Zen 26	1	0	1
11th	Ken Dodd	78	Phantom	Zen 29	0	0	0
Cat T1 class		70	V CAT CO	A C D A C	0	0.1	00
1st	Boyd Elson	72	X CAT 38	ASP 46	9	21	30
2nd	Kian Searle	128	Sprint Cat	OPS 21	3	14	17
3rd	Harry Stuart	133	R2 Silver Fox	OPS 45	13	0	13
Cat 2 class	MALL D	0		0140.0400	4.0	00	44
1st	Malcolm Pratt	9	Aeromarine	CMB 91RS	12	29	41
2nd	Garry Dickson	44	Mercury	MPM 31	27	10	37
3rd	Kevin Alcock	75	Conquest	RCMK27	19	9	28
4th	Daz Elson	73	F1	RCMK 30	10	0	10



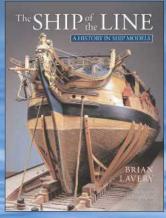
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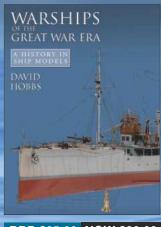


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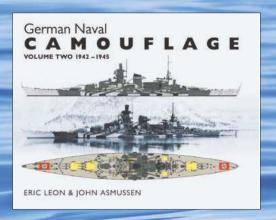
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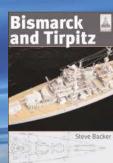


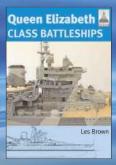


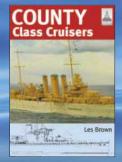


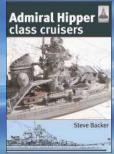
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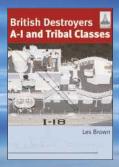












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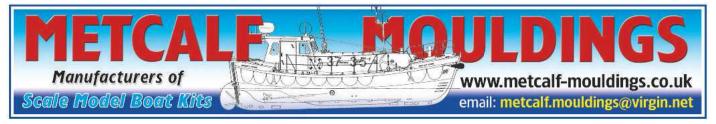
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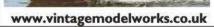
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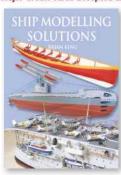
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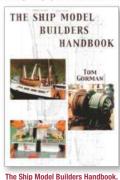
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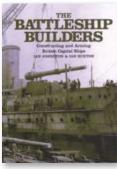


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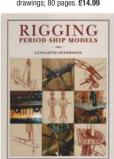


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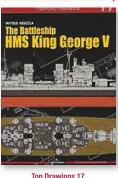
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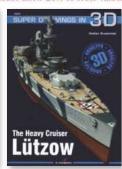
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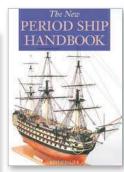
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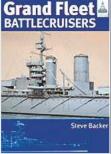
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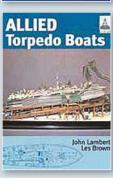
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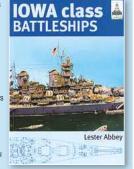


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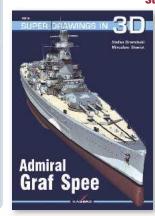


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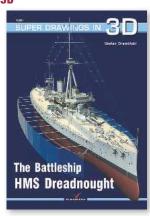
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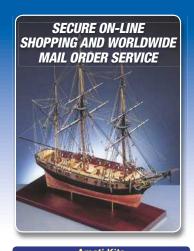




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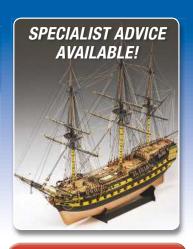
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