

Model Dockyard



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COMPASS 360

General items, what's on, comment and an unusual model for the open



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FLOTSAM & JETSAM

John Parker looks at the Dumas product range



SHELL CENTURION GALLERY

Phil' Scales unique model based on a Mountfleet Models kit



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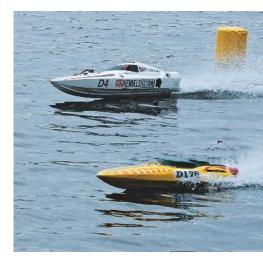
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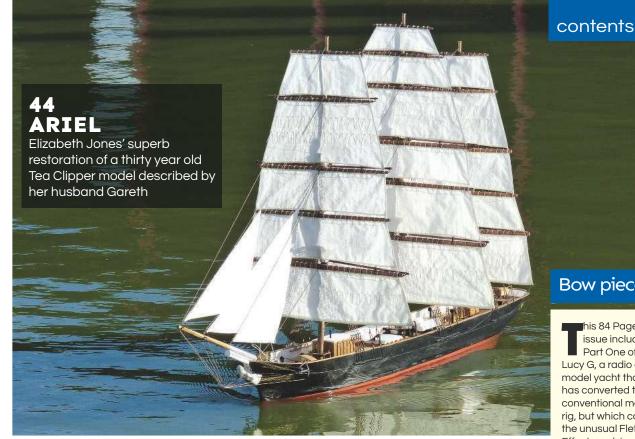
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BMPRS NEWS

Craig Dickson reports from Leicester





Special Features

2016 MODEL ENGINEER EXHIBITION

Colin Bishop reports from the Brooklands Museum





28 **LUCY G**

Phil Button's dual purpose model yacht

INTERNATIONAL MODEL BOAT SHOW 2016

Colin Bishop reports from the Warwickshire **Exhibition Centre**



Bow piece

his 84 Page issue includes Part One of Lucy G, a radio controlled model yacht that Phil Button has converted to have a conventional modern sailing rig, but which can also use the unusual Flettner Magnus Effect revolving sail which will be fully demonstrated in the forthcoming February 2017 issue. In addition, Liz Jones has restored her model of the tea clipper Ariel to full radio control functionality and we have an in-depth report on the outstanding marine models seen at the MyTimeMedia sponsored 2016 Model Engineer Exhibition, held within the Brooklands Museum complex.

We also have the usual regulars of Range Finder, Flotsam and Jetsam, Boiler Room, BMPRS News, Test Bench, your Reader's Free Advertisements and Colin Bishop has rapidly produced a photo report from the recent November 2016 International Model Boat Show held in Warwickshire. In Reader's Models, five of our readers have their projects featured and we are very pleased to have them all onboard. The Gallery for this issue features Phil' Scales' Shell Centurion coastal tanker model based on a Mountfleet Models kit.

This is the first issue for 2017, albeit going on sale just before Christmas 2016 and I, together with Steve Stoner who designs this magazine and Colin Bishop who looks after the website on my behalf, wish you all the very best for 2017 and the New Year.

Paul Freshney - Editor

Compass 360

Model Boats notice board for your news

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Alvaston Pirates Model Boat Club

Alvaston Pirates MBC, who normally sail on Saturday, Sunday & Wednesday at Alvaston Park, Derby, have a couple of dates in 2017 for your diaries.

First, they will be supporting the Alvaston Park Friends in their Stargazing Night on **4th February 2017** by sailing illuminated boats on the lake during the evening. Second, their annual regatta will take place on **25th June 2017**. All are welcome to go along and visit on these dates, or any other time at DE24 8QQ. More details can be found on the club's website: www.alvastonpiratesmodelboatclub.co.uk

(Information supplied by **Phil' Button**)

International Model Boat Show - 2016

A report by Colin Bishop appears on Pages 52 to 54 of this magazine, but the organisers also supplied the following post—event update.

Visitors were treated to a packed hall with over 600 fantastic models from the 31 club and society displays. Twenty two specialist suppliers were also present offering visitors everything they could need for their model projects. The Best Society/Club Display, as voted for by the clubs themselves, was awarded to King Lear Model Boat Club and in second place was Bournville Radio Sailing & Model Boat Club and in joint third were Wicksteed Park Model Boat Club

Society of Model and Experimental Engineers

This Society run a variety of training courses including one covering the basics of building a model steam engine and others helping individuals to upgrade their metal-working skills and associated subjects.

The Basic Training Course discusses the setting-up of a workshop, what equipment is desirable and the basics of how to use machine and hand tools. Each day session consists of lectures, discussion and sometimes demonstrations. All are held at the Society's base in South London, with its meeting room, library and workshop, over three Saturdays starting in February 2017.

The second course, over six sessions, covers construction of a small oscillating steam engine and boiler using a variety of metal working techniques all properly demonstrated. After each session the delegates make parts in their own workshops in time for the next session. These two courses are open to all-comers, but there are some further SMEE courses for members only.

The organiser of these courses is Allen Berman, a keen model engineer.

Further information can be found on the SMEE website: www.sm-ee.co.uk or email: courses@sm-ee.co.uk (Information supplied by Roger Backhouse)

& The Lifeboat Enthusiasts.

Avril Spence, the Exhibition Manager said, 'We had another successful and enjoyable show for all of our visitors and exhibitors with an increased attendance this year. We thank the Clubs and Societies who brought along a fabulous selection of models and worked really hard to organise their displays and made the show so successful and we thank the Pool Master, Steve Dean, and his individual exhibitors who displayed a wonderful varied range of unique and interesting models'

London Model Engineering Exhibition

This is the next major event for marine modellers and takes place at Alexandra Palace,
London N22 7AY, from the **20th to**

22nd January 2017 and which will have a vast range of models on display across the whole hobby spectrum including marine vessels.

Clubs attending the London Model Engineering Exhibition include:

- Association of Model Barge Owners
- Blackheath Model Power BoatClub
- Broomfield Model Boat ClubModel Hydroplane ClubPhoenix Marine Model BoatClub
- Kent Model Boat Display Team Moorhen Model Boat Club
 Royal Spithead Review & Keel Historic Harbour
- •Surface Warship Association Victoria Model Steam Boat Club Also, the Bluebird Supporters Group will be putting on a model display and picture display to celebrate the life of Donald Campbell who died following his crash 50 years ago.

For more information and advance tickets, please check the website:

www.londonmodelengineering.

Information supplied by **Alice Hayward**

A large model

Jan Lundberg's monster boat

eeding a model boat that could cope with true open water operations, Jan has built this r/c craft that uses parts from a full-size electric outboard motor for its propulsion unit. Radio control is achieved by means of a conventional servo attached to the speed control device of the 12v electric outboard motor which is powered by a conventional car battery. This concept model has been based

on three objectives:

- 1) Low cost
- 2) High power
- 3) Performing well, especially in rough seas

The principle drawback is that the model is bulky and heavy, but its advantage is that it can cope with really rough open sea water. Jan Lundberg - Professor Machine Elements and Maintenance, Luleå University of Technology.



wow, not for the raint-hearted! The underwater drive unit of the dismanded electric outboard can clearly be seen.

Temptation and a Quadcopter

Darryl Foxwell's ready to run aircraft carrier model

aving read the September 2016 issue of Model Boats and spotted the regular advertisement from Howes Models, I could not believe that you could buy a 790mm r/c aircraft carrier complete, and ready to run, for just £34.99. As a result, out came the piece of plastic and the following day it arrived, but to say that you have everything you need in the box is not strictly 100% true.

Model Boats Law No. 1:

Always try a model boat in the bath first and if you only have a shower, go next door and borrow theirs. So, in the bath it went and immediately it listed a good 30 degrees. What was obviously lacking was ballast, so out came the roofing lead for this and then some M6 bolts were suitably distributed around the hull for the final adjustment.

Model Boats Law No. 2:

If the colour scheme offends you, then change it. I did not like bright silver gun turrets and aircraft etc., so out came the masking tape and the spray 'rattle' can and soon I had an overall grey finish.

Model Boats Law No. 3:

Never ever take your new model boat out in public, at least initially, as well-meaning people will have opinions and these might give you fresh ideas.

Advice?

Bill Luty and I were sailing this aircraft carrier on Batley Lake when he came up with the throwaway line; 'Pity you cannot fly the planes off the deck', followed by a quiet chuckle, and then I remembered that a very small quadcopter was in a drawer somewhere at home, so could it be done?

Once home, the quadcopter was found and yes, it fitted on the flight deck. It was all tested in the domestic backroom and it took-off okay.

Model Boats Law No. 4: The more stupid the idea, the more it seems like a good one, ignoring the fact that lakes have water and quadcopters sink, but planning duly continued.

Model Boats Law No. 5: If you are no good at photography find someone who is.

I called all my photographic friends and when they had stopped laughing, they came up with some suggestions.

Model Boats Law No. 6:

Warships are forty nine and three quarters 'Shades of Grey'. They are generally grey; the water on a dull day is grey; on a dull day the sky is grey and aircraft and helicopters tend to be grey. The quadcopter was also grey, so seeing anything on the water was virtually impossible.



Above: This first photo shows the quadcopter on the flight deck by the island.



Above: In this second photo, the quadcopter has just taken from the flight deck and is by the funnel.



Above: Up and away! The quadcopter is now clear of the aircraft carrier.

Model Boats Law No. 7:

The BBC Nature Team at their Bristol office have the right equipment, but I could not afford them, so on to Plan B.

And the end result?

I tried the quadcopter flying from the aircraft carrier on the water and it worked, but it was landed on terra firma rather than at sea as it were, but as to photos, sorry, not a chance and then in came Stephen with his camera and a good idea. We setup the aircraft carrier in the back room, erected a blue backdrop and the photos speak for themselves, which is probably how the TV Companies do it.

The point of this little homily



Above: If a model aircraft carrier were to a larger scale and using modern 24GHz r/c gear, two operators could perhaps launch two quadcopters at the same time?

though, is that with modern warships often carrying helicopters and the like, flying a small quadcopter (perhaps suitably disguised to an approximation of a 'normal' helicopter) from such a model is practical, but the photography isn't!

Enjoy your hobby – **Darryl Foxwell**



Above: On the open sea, this large model copes really well.

Right: A normal servo operates the 12v electric outboard via its own speed and power control unit.





Next month in Boats

This issue will include a Free Plan for a British Torpedo Boat Destroyer of the late-19th and early-20th centuries. The plan has been drawn by Glynn Guest and is accompanied by a full step by step construction article. In addition, there will be Jurmo, a Swedish fast landing craft built by Andy Cope and Part Two of the Lucy G yacht, but now with its alternative Flettner Magnus Effect rotating sail.

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**

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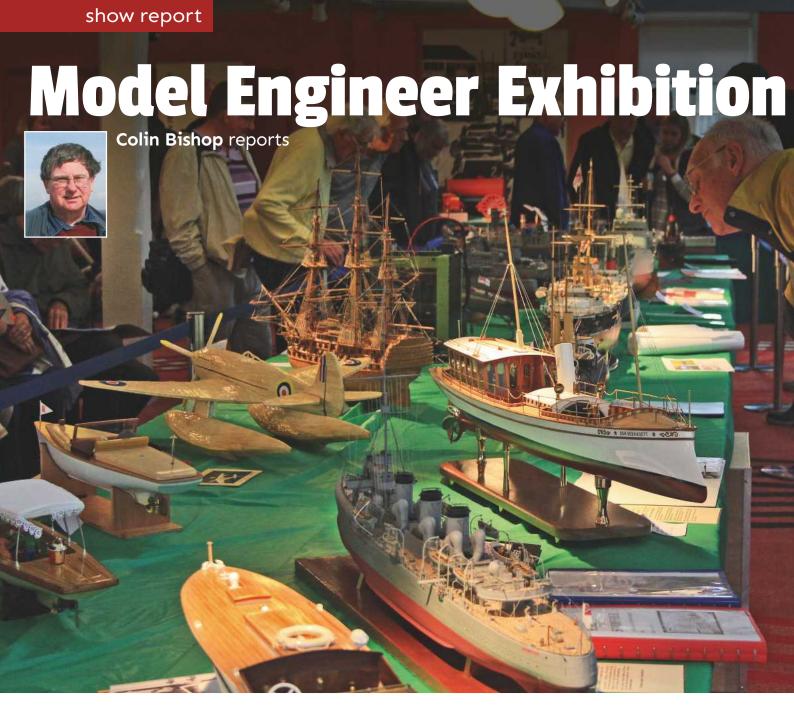
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here was no exhibition held in 2015, but it resurfaced in September 2016 at the Brooklands Museum in Weybridge, Surrey, which occupies the famous old race track and airfield site. Admission to the exhibition included the museum as well, so there were lots of full size engineering related things to see as well as their miniature counterparts. The historic venue and old buildings did however mean that the exhibition was rather fragmented around the site and housed in various spaces in two blocks over two floors, with the rather depleted trade presence occupying a large marquee a little distance away. Signage was improved during the course of the show to help visitors find their way around. Subsequent comments were positive about the juxtaposition of full size and miniature engineering.

Marine models

It was very pleasing to see a much stronger marine competition entry than has been the

case in in recent years, supplemented by models in the Loan Class and on three of the club stands including those of Hanwell and Phoenix. Obviously not every model qualified for an award, but there were none present that didn't fully deserve to be there as fine examples of model boat building.

No less than five Gold Medals were awarded, something we haven't seen for many years now. Two of these went to working model battleships and the first to HMS Renown, a Victorian second class battleship built by Andrew Dalton.

HMS Renown

This is an interesting subject and the last of her type as second class battleships were intended for foreign climes where they were unlikely to encounter superior opposition and her main armament was four 10 inch guns rather than the usual 12 inch.

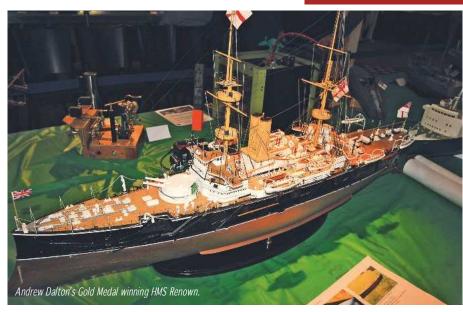
To reduce the heavy hull fouling that occurs in warmer waters, the hull was first sheathed in wood and then in copper, an expensive

process which added weight, but necessary in regions where dry dock facilities were few and far between. HMS Renown was a pretty ship, lighter in appearance than her first class consorts with a marked sheer to her hull and became Admiral 'Jackie' Fisher's favourite, serving as his flagship while C in C Mediterranean Fleet. Andrew's model captured HMS Renown beautifully in exquisite detail and the more you looked, the more you found. The multiple ship's boats were a tour de force in their own right. It was clear that a huge amount of work had gone into this absolute gem of a model which perhaps surpasses even the superb models made by the late-Brian King. HMS Renown was also awarded the Earl Mountbatten Trophy for the best warship model.

HMS Iron Duke

The second battleship was of a later generation, being HMS Iron Duke, Admiral Jellicoe's flagship at Jutland, the model being constructed by Geoff Dixon. As a







Right: This unusual Seaplane Tender earned Stephen Duckworth a Silver Medal.



Left & Above: Some of the incredible detail on HMS Renown.

'Super' Dreadnought, HMS Iron Duke has a much more warlike appearance than HMS Renown with less scope for fine detail, but Geoff had incorporated a number of working features into his model with the main armament able to train and simulate gunfire using an ingenious adaptation of water mist technology which is more commonly used for imitation funnel smoke. The model build has been a long running topic on the Model Boat Mayhem website forum and it was a pleasure to see the finished article. Unfortunately it arrived late in the day and was not displayed to best advantage, but I hope that did not mean it was overlooked by the visitors.

Most of the marine exhibits were in the first

floor education room.

Edwardian Steam Launch

The third Gold Medal went to an entirely different craft altogether. Our first impression of lan Gerrard's Edwardian Steam Launch was that it was rather bigger than the usual example of this type of model at 1:5 scale, but obviously very well constructed and finished. So it came as no surprise that it was propelled

Below: The French Turret Ram Tigre by Alan Ludbrook was just one of the strange warships which were built during the ironclad period.





show report

by a Stuart D10 steam engine. At this point things started to get very interesting as the steam plant did not have a conventional boiler as one might expect, but what Ian describes as a 'Once Through Steam Generator'.

In its essentials, this is what would normally be regarded as a flash steam boiler using a 50 foot coil of copper pipe to generate the steam supply. Ian supplied technical notes, which there is no space for here (it has been fully described in Engineering in Miniature Magazine), and which explained how he has used sensors in conjunction with computerised controlled feedback procedures and automated mechanisms to enable this normally rather erratic method of steam generation to deliver a smooth sustained power output consistent with the performance required from a launch model.

lan had done all the experimentation and computer programming himself which is impressive to say the least. Not content with that, the model also features remote voice control for boiler and steam functions together with an electronic compass permitting compass steering instructions and an on-board MP3 player repertoire.

The model boat itself returns telemetry data back to the controller, monitoring key operating parameters and perhaps I should also mention that the Stuart D10 engine was built by lan from raw castings!

This really was an extraordinary model, combining period charm with state of the art engineering and technological expertise and demonstrating lan's wide range of different skills, and we had no hesitation in awarding a Gold Medal together with the H.V. Evans Trophy for Research and Presentation. Ian was also very happy to stand by his model answering questions from fascinated show visitors.

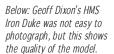
Kit Class Gold Medals

The final two Gold Medals were awarded in this Class. The first went to David Wooley for his HMS Skirmisher based on the Deans Marine kit. Regular readers will be familiar with Dave's long running series of articles in this magazine detailing his very exacting work in enhancing this Deans Marine Victorian third class cruiser kit and I very much enjoyed seeing the pretty much finished article which just shows what you can do with a commercial kit if you set your mind to it.

The second Gold Medal was awarded to Arthur Barlow for his model of the Der Seekadett steam launch from Marten, Howes and Baylis. Arthur had incorporated a number of improvements into the kit as supplied, including remaking various fittings and the wood deck gratings. The overall finish of the model was quite exceptional and really did show the kit to its best advantage.

Other medals and awards

One Silver Medal was awarded and this went to Stephen Duckworth's Saunders-Roe Seaplane Tender. These boats were used to Right: The high standard of finish is evident on Arthur Barlow's Der Seekadett Jaunch







Left: Ian Gerrard with his extraordinary Edwardian Steam Launch featuring a computerised flash steam boiler.



transfer passengers from airline flying boats to shore between the world wars and Stephen had carried out considerable research in building his authentic model. The hull presented some problems, it being a complex shape with many curves and was constructed in diagonal planked balsa. The finish and detail on the model was immaculate and it was nicely presented on a base with images of the period.

Alan Ludbrook has a track record of choosing unusual subjects and this year's offering was the French Battleship Ram Tigre of 1871, scale 1:72. An example of something from an experimental period in naval history, this warship combined a ram with a twin

gun turret forward and was intended for coastal defence purposes. The hull was actually of wood with iron plates fitted over the turtleback upper deck to deflect incoming shot. Although a relatively straightforward subject, Alan had made an excellent job of bringing this naval dinosaur back to life and the iron armour plating was very well simulated. The model was awarded a Bronze Medal and a number of Certificates were also awarded

A Very Highly Commended went to Robin Lee for his impressive model of the German pocket battleship Admiral Graf Spee built on a Fleetscale hull with some commercial fittings, the remainder of the model being scratch

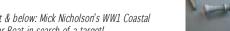




Tosephine

Below: Amidships view of Robin Lee's Admiral Graf Spee built on a Fleetscale hull.

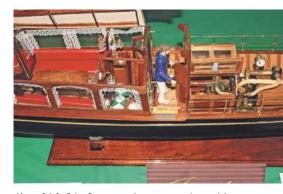
Right & below: Mick Nicholson's WW1 Coastal Motor Boat in search of a target!







Above: Dave Wooley's HMS Skirmisher which has been a long running feature of his Range Finder column in Model Boats magazine.



Above & left: Brian Rose entered a very attractive model of Josephine, a Victorian gentleman's steam launch fitted with a Cheddar Models' steam plant







Above: What can you do with matchsticks? David Reynolds shows us with his HMS Victory.

Left: The Phoenix Marine Model Club stand.

Below: Steam picket boats were maids of all work as this example from Mick Nicholson shows. Note the four barrel Nordenfelt qun mounted on the aft cabin roof.



Above: Peter Shires' informative presentation of his lug rigged Norfolk Day boat.

built. The planking was particularly well done. It is difficult in competitions for this type of model, which combines commercial and scratch built elements, to achieve sufficient marks to take it into the medal categories, but this is the way many models are built these days. His KM Admiral Graf Spee is an excellent model in all respects.

Brian Rose's lake steamer Josephine was also given a Very Highly Commended Certificate. This model was attractively presented to show the internal cabin detail and powered by a Cheddar Models Pintail engine and boiler. It was very well finished although we did feel that some of the deck varnish was perhaps a little overdone.

David Reynolds is well known for his matchstick models and had entered HMS Victory using this technique. The proportions of the original vessel had been retained (not always the case with this type of construction) and the rigging had been very well done



indeed. This is as probably as good as you could hope to find of its type and was awarded a Highly Commended Certificate.

Commended Certificates were awarded to the following:

Mick Nicholson, firstly for his WW1 Coastal Motor Boat No. 4 which captured the essence of these risky craft which relied upon dropping the torpedo off the back of the boat and getting out of the way quickly. It was nicely finished with the crew members adding to the degree of realism. Mick also received a certificate for his well detailed naval steam picket boat converted to a torpedo boat, demonstrating the versatility of these craft.

Ray Renowden for MTB No. 49, originally built by him as a boy from a Vic Smeed design in 1963 and renovated in 2007. His original build must have been to a high standard as the model still looks very good today.

Peter Shires for a lug rigged Norfolk Broads Day Boat, plank on frame in mahogany, which was well researched, executed and presented.

Peter Perry for his example of the classic Fairey Swordsman fast motorboat. This was generally very well finished, but let down a little by the narrow and varying width deck planking which was rather too glossy at this scale.

Conclusion

At the time of writing it remains to be seen if the Model Engineer Exhibition will continue at the Brooklands Museum in 2017. It is clear however that a lot of visitors did enjoy the opportunity to explore the museum and its transport and aviation related engineering historic collections, and will no doubt return if this is the case.

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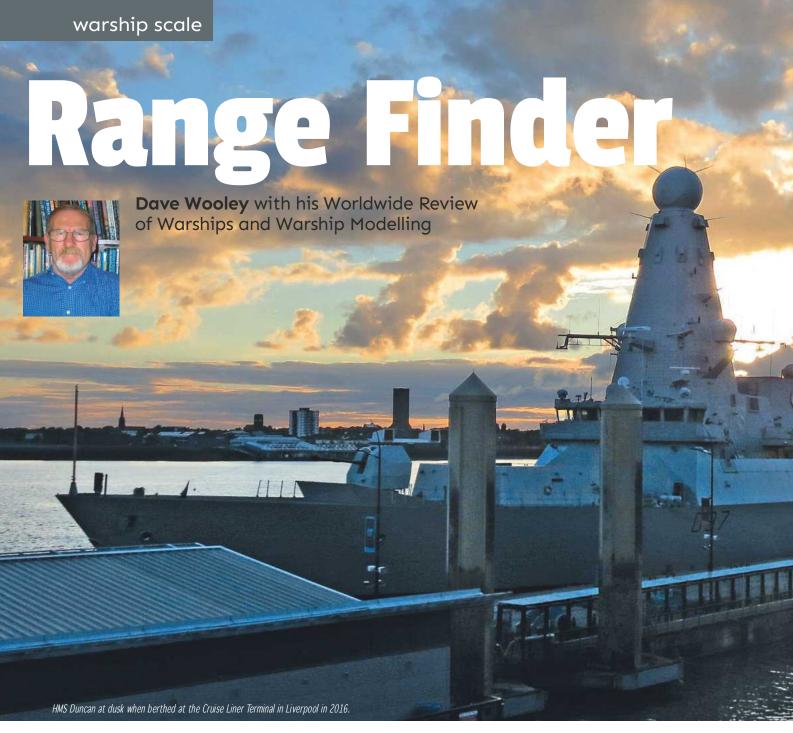
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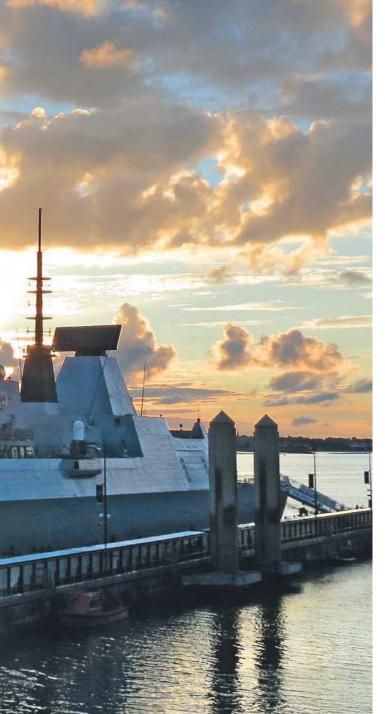
elcome once again to our regular sortie into the world of fighting ships, and this month we continue our onboard tour of HMS Duncan D37 and doing the finishing touches to the Deans Marine HMS Skirmisher project, plus have the usual Mystery Picture.

HMS Duncan D37 Ship's Tour – Part Two

When building a 1:72 scale HMS Daring, I was keen to get photos of parts of the superstructure that were not so much out of view, but often ignored. A good example of this, and applied when visiting HMS Duncan recently, was to point the camera up towards the extended area of the bridge which has revealed a considerable amount of external detail, **Photo 1.** Moving up to the top of the bridge, there are a number of fittings relating to the communication and navigation aids, but on either edge of the bridge roof are two electro-optical surface surveillance, target acquisition and tracking pods, here seen ringed in yellow, **Photo 2.**

The foremast on the Type 45 destroyers is as





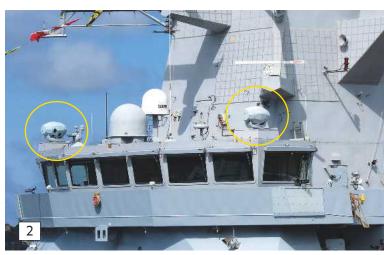


Photo 2. The quayside gave an excellent photographic view of the fittings mounted on the bridge roof.

Photo 3. The tall foremast has what is considered to be one of the most effective 3D target tracking and illumination radars currently in naval service.

Photo 4. The UAT early warning antennae.





shown in **Photo 3** and ringed in yellow at the top is the most prominent feature which supports the rotating globe shaped Sampson liquid cooled 3D multifunctional phased array radar, a type of radar designed to be highly resistant to jamming. Immediately below it are eight early warning UAT antennae and mounted on the port and starboard sides of the mast are the Scot 3 satellite communication radomes and ringed in red are the tiles for reducing the interference to the navigation radar caused by the proximity of that device to the mast.

A close view of the UAT integrated intercept and jammer array can be seen in **Photo 4**, and further down the side of the mast is a close view of a Scot 3 device, **Photo 5**.

There are a series of four extended arrays around the foremast and for the model maker it is worth noting that they are designed and fitted to reduce their RCS (Radar Cross Section), and hence the angular shapes of the antennae and the positioning of these on the foremast, **Photo 6.** The manufacture of these and other fittings was included in the full build series of the 1:72 scale



Fleetscale HMS Daring that was featured in this magazine between 2011 and 2014.

Moving aff along the main deck to port, and towards the funnel exhaust casing, we can see what is a significant difference between HMS Daring, the first of class and HMS Duncan, the last, and these are the external watertight doors. On HMS Daring these are of a lever operated five panel type, but on

Photo 5. One of the Scot 3 satellite communications radomes.

Photo 6. Almost all of the exposed structures are designed to minimise their radar cross section,







Photo 7. The exterior watertight doors fitted to HMS Duncan use a centre wheel to open and close them, whereas those of the first of the class HMS Daring have a single lever to engage or release the dogs around them.

Photo 8. Looking towards the port side of the exhaust uptake and the 30mm general purpose gun, here ringed in red.

Photo 9. A view from the starboard side looking towards the foremast with the Phalanx Close in Weapons System to the right of this picture.



Photo 10. One of the two Phalanx systems mounted amidships. These are modular and the entire mounting can be removed for major servicing ashore.

Photo 11 A view from amidships to starboard looking forward. The ready use locker to the left of the picture contains a survival suit.





HMS Duncan they are of a wheel operated single panel type, **Photo 7.** A general view of this area also brings into focus the 30mm 75 calibre dual purpose gun, here ringed in red, **Photo 8.**

Remaining within this area, but moving over to starboard, we can see many of the fittings discussed so far from the point of view of looking forward towards the foremast and directly in the foreground is one of the two Phalanx close in weapons systems, **Photos 9 and 10.** Remaining in the same area, but now looking forward along the main deck towards the area beneath the starboard

gun platform and the bridge, we have **Photo 11.**We perhaps have a better general view of all this with an amidships picture from off the warship, **Photo 12.**

Our next picture is almost at a position directly amidships between the two Phalanx systems, but looking towards the rear of the funnel. Once again the noticeable change is in the watertight door installation, **Photo 13**, and note how the upper hinge is angled so the door opens vertically and does not lay back against the superstructure. Turning a full 180 degrees we are now looking



Photo 12. A general view of the starboard side and please note the mini-gun mounting immediately below the bridge wing.

Photo 13. Looking towards the rear of the exhaust uptake and please note the staggered door hinges.

Photo 14. Amidships viewing towards the base of the communications mast.









towards the arrangements at the base of the communications mast, **Photo 14.**

The bulwark is divided into a number of panels fitted with castors, and designed so each panel can be easily moved, with **Photo 15** giving a good view of their design. Making these was also discussed in detail in the recent build series for the HMS Daring model. Turning away from the bulwark and now looking towards the base of the communications mast, this reveals a vertical panel which is for access to the replenishment at sea equipment (ringed in red), **Photo 16**, and ringed in yellow is part of the wash-down spray equipment for use in the event of nuclear fall-out contamination.

On the port side of this mast is a slightly different arrangement, but incorporated into the side, on the left of the picture, is once again a vertical panel for access to replenishment at sea equipment,

Photo 17. In the February 2017 issue will be the final

Photo 15. The bulwark has a number of removable panels, shown here with castor wheels.

Photo 16. Starboard side of the communications mast. Note the deck eye plates to assist with replenishment at sea operations.

Photo 17. Port side of the communications mast looking aft towards the Smartello radar housing.

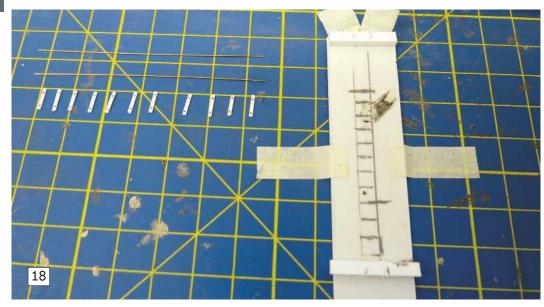


Photo 18. A simple jig for creating the boat access ladders. These would have been rope with wooden treads, but for convenience I've made them rigid.

Photo 19. With the 0.31mm wire and styrene treads in place on the jig, each tread could be set in place as marked.

Photo 20. The ladder can be tidied-up once removed from the jig.

Photo 21 Now painted and in place, the ladder looks quite effective.









HMS Skirmisher

PART TWENTY SEVEN

Access ladders for the ship's boats

These are shown on the plan attached to the sides of the ship's boats and to the spreader jack stay. They are generally made from rope with either metal, wood or rope foot rests (or rungs), and can be readily stowed when not in use.

For HMS Skirmisher I decided to show these ladders unfolded and attached to the gunwales of the boats and lowered to the deck, this allowing them to appear quite straight. I experimented by producing a rope ladder made from fine cord with wire foot rests, and as an alternative, a 100% rigid ladder using 0.31mm brass wire for the side cords. Whilst the former was probably more in keeping with what such a ladder would be like, that made from 0.31 wire worked at a practical level and looked more in keeping. To create such ladders required a simple jig, 80mm in length and two lengths of 0.31mm brass wire 70mm long and the eleven treads cut to size from 0.4 x 1.5mm Evergreen strip No. 113, using a pin vice and drill to create the holes at each end of the tread as in Photo 18.

Each of the treads was threaded on to the two 0.31mm brass wires and all that was required was

to line up each tread with the marks on the jig and apply a dab of thin superglue. Creating each ladder took approximately just five minutes, **Photo 19**. Once all set, the ladder could be removed from the jig ready for cleaning, cut to the right length to correspond with the height of the ship's boat from the deck (dutifully noting which ladder fitted to which boat), as in **Photo 20**. Once all was checked and okay, each ladder was airbrushed grey, before being finally installed into its respective location as in **Photo 21**.

Night Life Buoys

It is often the case that some of the more interesting fittings are left until a model is almost completed, and the Night Life Buoy's and their release frames are a good example of this. The Night Life Buoy was, in 1905, the equivalent of a small inflatable life preserver with the prime aim of keeping a man who had fallen overboard afloat and indicating his position. Modern life preservers have a strobe light and/or radio beacon, but the Night Life Buoy of 1905 had a calcium light. When in contact with water the phosphide of the calcium would emit white smoke and flames that would be visible from some distance away, but perhaps not be too good for the incumbent hanging on to the device, but a tot of rum and a whistle were also included in one of the

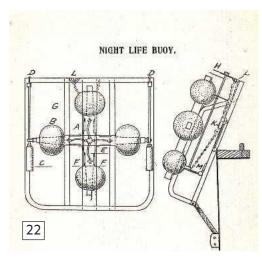
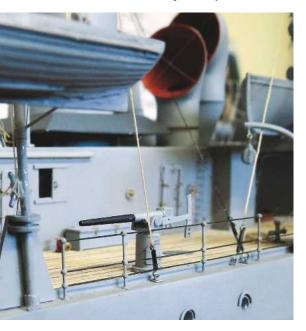


Photo 22. An illustration of how a Night Life Buoy would have looked.



copper globes, Photo 22.

Thinking of the Night Life Buoy, brings back to me my experience on a survival course with the RAF. This involved being ditched over the side of a moderately quick launch operating from RAF Bridlington and then left to inflate a one-man dinghy, deploying its drogue and with a huge amount of effort climbing into it and enclosing oneself within the hooded canopy. Thinking back to those days, the tot of rum (if it could have ever have been released from a copper globe) would have been quite handy to numb my already dulled senses due to the impact of the very cold North Sea. As for the whistle, I really did not have the energy to use it, so thank heavens for the light. I should add that I was not plucked from the sea until two hours later as part of this training exercise!

Making the Night Life Buoy

This is a simple piece of model making, but they look effective when completed and in place on HMS Skirmisher and the first task was to make each of the four globes. All that was required was to roll Milliput into balls, each of 3mm diameter, **Photo 23**, and add them to the ends of the cruciform centre piece. The full-size cruciform was of wood, but for this model version, 1.5mm brass rod is perfectly okay. **Photo 24** is of the buoys and frames, one of

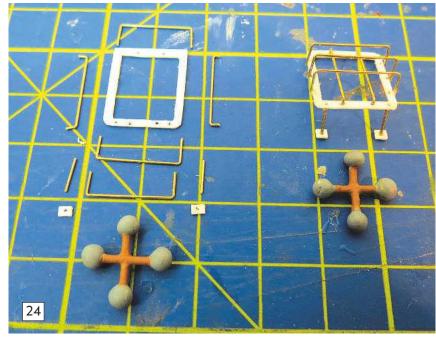




Photo 23. Using Milliput for the four copper globes for each life buoy.

Photo 24. Forming the crucifix and the parts that make up the life buoy support frame.

the latter part assembled and the other as a set of parts. The frames consist of:

- **A)** The back frame piece of 1mm styrene, 16 x 14mm square.
- **B)** The life buoy supports are of 0.45mm brass wire.
- **C)** The front frames are of 0.45mm brass wire.
- D) The distance bars are of 0.45mm brass wire.
- E) The support plates for the hull sides are of 1mm styrene.

Photo 25 shows both frames, my fingers giving an idea of their actual size. A fully assembled and painted Night Life Buoy in its support frame together with two cylinders of brass rod and tube, was added to each frame. The cylinders contained the Calcium lights, **Photo 26**, and are of 0.31mm brass wire and 0.40mm o.d. brass tube.

The last picture in this sequence is of one of the Night Life Buoys fitted in position on the side of the hull, **Photo 27.**

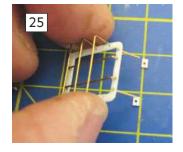


Photo 25. Fixing the support arm plates that will eventually fit to the side of the hull whilst holding the frame at an angle clear of the hull.

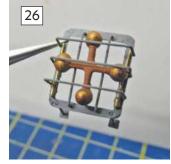
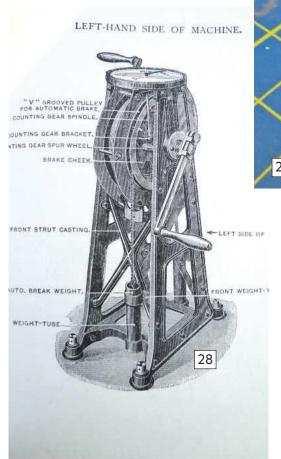


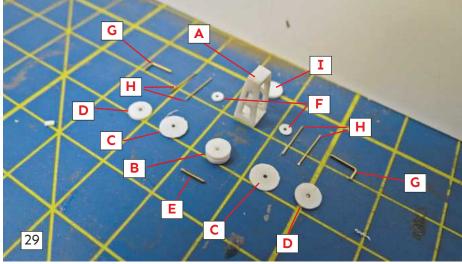
Photo 26. A completed life buoy.

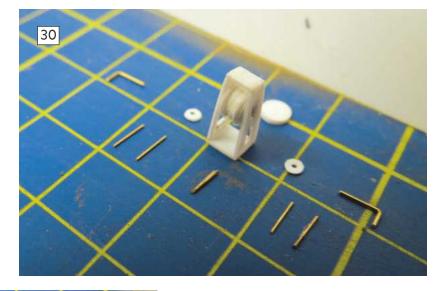
Photo 27. The Night Life Buoy and its frame fitted to the side of the hull.



warship scale







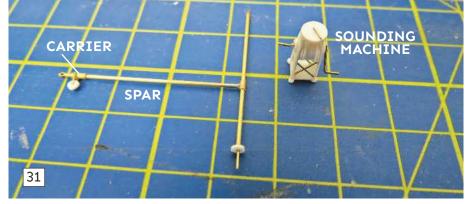


Photo 28. An illustration c1909 of a hand cranked sounding machine.

Photo 29. A breakdown of the individual components for the sounding machine.

Photo 30. The wire drum assembly, guard plate and sprocket wheel are in place.

Photo 31. The fully assembled sounding machine, its spar and carrier.

Sounding Machine and Carrier Spar

The mechanical Kelvin Mk. IV sounding machine, **Photo 28**, was used as a replacement for the time honoured method of ascertaining the depth of the water beneath a ship's keel. This used to be done by a seaman throwing a hand held lead and line from a small platform either side of a ship's forecastle, and marking the depth from the line. This was inevitably a very wet and onerous task, particularly in bad weather, and the sounding machine, prior to modern electronic means, was a practical alternative.

To assist in the deployment of the lead sinker, the line or wire from the sounding machine was run out on a 30ft long spar. Both the sounding machine and spar have been fitted to this model and are located right aft to port as indicated on the drawing.

Preparing and forming the parts

The method follows the usual pattern of reducing the device to as many individual parts as is

practical, Photo 29.

- A) This is the basic framework of 1mm styrene sheet, 10×4 mm sq. base.
- **B)** The wire drums are styrene, 1.5×3 mm dia. discs.
- ${f C}$) The guard plates are 0 .5 x 4mm punched styrene discs.
- **D)** Vee-brake and sprocket wheel are 1 x 3mm dia. styrene discs.
- E) Centre spindle is of brass rod, 0.45 x 3mm.
- **F)** The shaft covers are of styrene, punched discs each 1.5mm dia.
- G) Handles are of 0.31mm brass wire.
- H) Internal struts, four of, are 0.31 x 4mm long.
- ${\bf I})$ The dial top is a 3mm disc of 1mm punched styrene.

Assembly commenced with the wire drum (B) to which was added the vee-brake and sprocket wheels (D), **Photo 30.** This was followed by inserting the centre spindle (E) on to which were added the two shaft covers (F) to support the assembled drum. Both the left and right handles (G) were fixed on to the shaft cover (F). The four cross bracing struts (H) are fitted to the lower part of the frame and the dial top (I) was added to the top of the frame. All that then remained was to fix four deck plates of 1 mm dia. (Evergreen rod No. 211) to the foot of the frame, plus a dial top pointer as in **Photo 31.**

The spar that supports the carrier and sinker is made from 1.5mm Albion Alloys (trade name) fine brass tube 35mm in length for the horizontal section and 30mm in height for the vertical section with the carrier at the end of the spar and an eye for the topping lift . The completed assembly is mounted on the stern as in **Photo 32**. Probably still a bit wet for the seamen operating the device,



the builder's drawings.

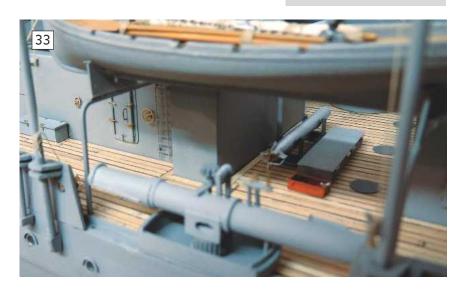
Photo 33. Modeller's licence here with the torpedo and tool box. The former would have been hoisted through the hatch by the small davit attached to the deck housing.

References and acknowledgements

HMS Duncan ref: Combat Fleets of the World, 15th Edition.

HMS Skirmisher refs: Night Life Buoy (pages 364 & 365) and Sounding Machine (pages 140 to 147) from the Manual of Seamanship, Volume One

HMS Swift ref: Warships of WW1 by HM Le Fleming, pages 146 & 147. British Destroyers of WW1 by R A Burt, pages 28 & 29.



but perhaps not so bad as previously. Our final picture for this, the penultimate part of this HMS Skirmisher Series, is an 18 inch torpedo hoisted from the torpedo magazine on to a dolly with, as a touch of modeller's licence, a tool box with tools for removing its propeller (underneath and behind the ship's boat), Photo 33.

Answer to the December 2016 Mystery Picture

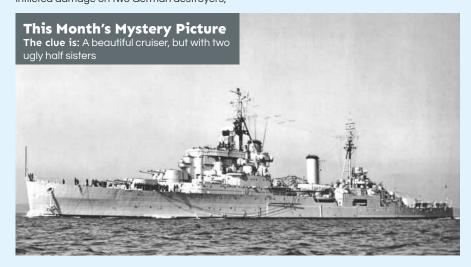
The Clue was: A big gun for a not so little ship.

The warship in question was a one-off so this could be seen as an easy Mystery Picture with that distinctive profile and the answer of course was HMS Swift, completed in 1907 as a prototype flotilla leader. She was turbine powered developing 50000shp and fitted with four propellers and capable of 35 knots, but was reputed to have exceeded 40 knots. A questionable performance, but if true this was a speed not equalled until the advent of the fast minelayers of the Manxman class.

With a displacement of 2207 tons, HMS Swift was 353 feet long with a beam of just over 34 feet and was fitted on completion with four x 4 inch, one x 2pdr and two x 18 inch torpedo tubes. The two forward 4 inch guns were removed in 1916 and replaced by a single 6 inch, the largest gun ever fitted to a British destroyer. On paper, this combination of speed and armament should have been a game changer, but unfortunately the adoption of the single

6 inch gun was a failure which was borne out in April 1917 during an engagement in the Dover Straits with a number of German destroyers. Although the accompanying destroyer (HMS Broke) and HMS Swift inflicted damage on two German destroyers,

the poor performance of the 6 inch gun convinced the Admiralty to abandon it in favour of the smaller, but better performing 4 inch, a size of gun that was to become standard for many future RN destroyers.





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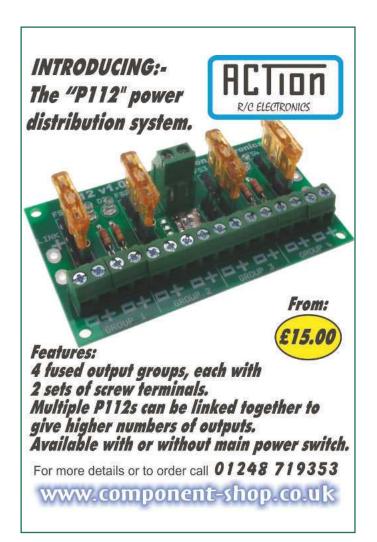
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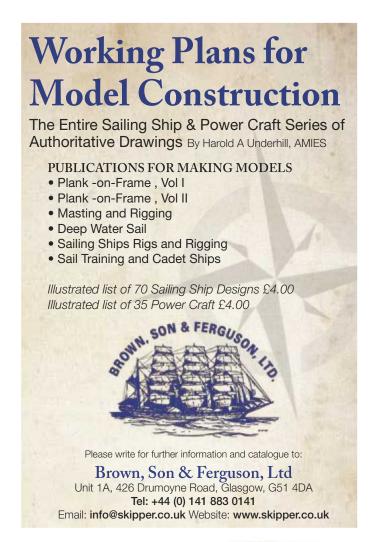
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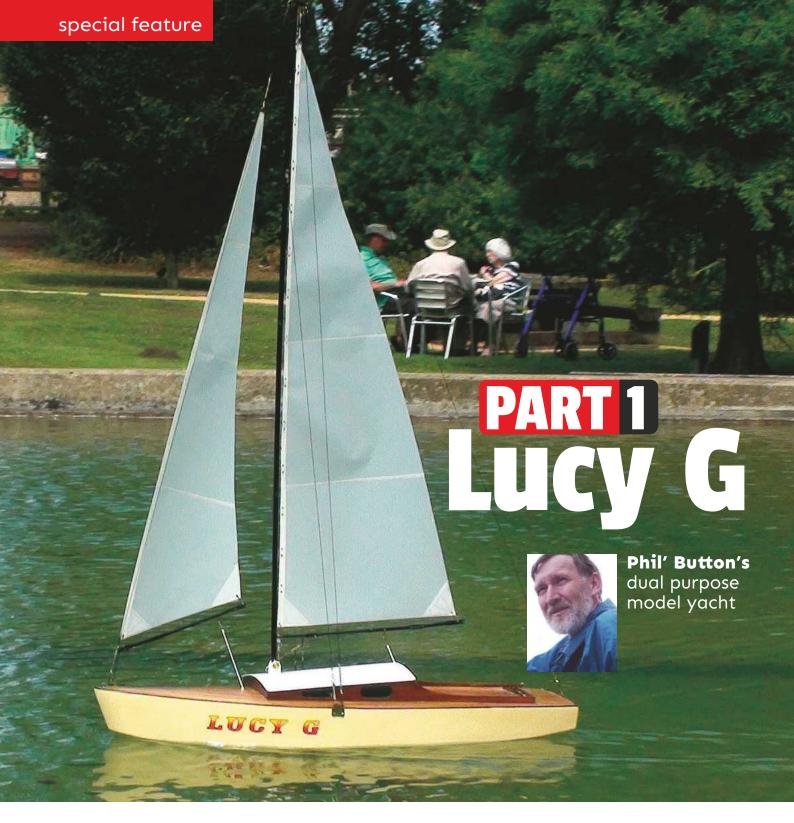


ODEL SPACE



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o how did it all start? Whilst wandering around on eBay in 2011, I found an auction for a model yacht that looked at first glance very much like a Vic Smeed Starlet. The model had what appeared to be a well-built hull fitted with a dowel mast and boom, with the cotton sails held on by staples and **Photo 1** shows one of the pictures (poor quality - sorry) from eBay. I decided to bid on the item at somewhere around the closing time of the auction and then promptly forgot all about doing so. However, the yacht failed to find a buyer and was then re-listed. This time I put in the maximum price that I was prepared to go to and 'won' the model for the princely sum of £35 as the one and only bidder. I arranged to go and collect the model as it was in Aylsham, Norfolk, which is a mere 4 miles from my home.

The model yacht

The approximate overall dimensions of it are 870mm (34.25 inches) long by 280mm (11 inches) beam. It had a bulbous lead keel weight on a plywood keel and turned out to have been well built, although totally devoid of any radio control gear. I decided that I would scrap the dowel mast and spars, together with the stapled-on sails and would make up new parts when the time came. **Photo 2** shows an overall view of the mast, boom, rigging and sails that came with the boat and **Photo 3** shows a detail of the stapling.

For almost three years, this model yacht languished in my boat shed (aka garage) whilst I worked on other projects and wondered about what to do with it. In the meantime, I had bought another yacht from eBay (complete this time, although









needing work before she could go on the water) and that came with two sets of commercial plastic film sails with aluminium masts and spars.

'Aha!' I thought, 'I can use one set of sails from the new model on this yacht as they seem about the right size'. So, this project model was resurrected to become a Bermudan rigged yacht as Vic Smeed had intended from the word go. You may well be wondering about the 'dual purpose' mentioned at the start of this article, and please bear with me, as all will become clear in Part Two next month, once the refurbishment as a Bermudan rigged yacht is complete.

Refurbishment

Before proceeding with this, a stand was needed as the one shown on eBay did not come with the model yacht. This was made from strips of hardwood and dowel with chair seat webbing stapled across the bottom rails and **Photo 4** shows the yacht on its new stand. Later, the stand was padded with foam where it touched the hull to protect the paintwork. After a thorough inspection of the hull, a number of repairs were required as the cockpit floor had a hole through it and the cabin back and sides had

become unglued. The hole was fixed by gluing a piece of 1.5mm ply under the floor and making good later, while the cabin sides were eased apart carefully to allow some glue to be pushed in before being clamped in place for the adhesive to set, **Photo 5.**

Also, the rudder skeg had come away from the brass half tube used to guide the rudder spindle









and was none too securely fixed to the hull. These faults were made good with car body filler as in Photo 6. The plan of action was to provide it with a fully planked deck and to veneer the cabin sides and back. The next step was to sand the bow to a slightly better shape, **Photo 7,** and to glue a shaped piece of 3mm plywood to its top. Lengths of 3mm square stripwood were then fixed all around the deck's sides, Photo 8, to provide something for the deck planks to butt up against, finishing with a strip across the transom, Photo 9. The strips were held in place with masking tape while the glue set, before being given a coat of wood stain and left to dry. Now it was the turn of the cabin roof to receive attention. The original cabin roof had a hole in it, other than the one for the mast and why? Well, I don't know, so the roof was removed and a pair of formers in 3mm plywood glued in place between the cabin sides, far enough apart to allow some side plates that would carry the mast to be installed. Photo 10 shows these mast supports after

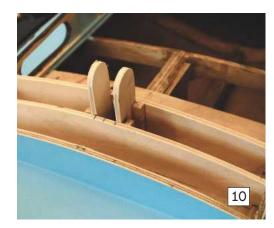
By this point, all of the hull, decks and cabin had been thoroughly rubbed down (as there was no intention of keeping the original pale blue paint finish) so work could now move on to applying the wood veneer to the cabin sides and its back. Each piece of veneer was cut somewhat oversize and then thinly coated with Alpha Thixofix contact

adhesive. The surface to which the veneer was to be fixed was also coated with this adhesive and both surfaces allowed to dry. This adhesive is not 'instant grab' and allows a short time to move parts for a good fit before it finally sticks. The glued veneer was applied to the cabin and rubbed down using a polished piece of hardwood to remove all the air bubbles for a good fit and **Photo 11** shows the veneering when part-finished.

Once the adhesive had set, holes for the cabin windows were cut out and the veneer trimmed to size using a craft knife and fine sandpaper, **Photo 12,** before adding more veneer around the inside edges of the cockpit area. **Photo 13** shows these pieces before trimming.

Rudder?

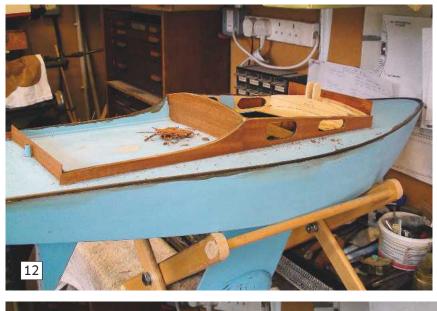
As a change from woodwork, thoughts turned to thinking about the installation of the rudder, its connecting link and related servo. It is usually easier to install these before getting too far into the refurbishment project so that you do not wind up undoing earlier work. The rudder stock came up through the hull just astern of the after cockpit bulkhead and there did not seem to be any access to it from inside the hull. As a check on whether access could be made available, a large hole was cut in the cockpit floor, **Photo 14.** This proved that





no access to the rudder was going to be easily available 'below decks' as it were, so the rudder operation was going to have to be visible.

With a couple of earlier yacht builds, a Bowden cable had been used (actually a bicycle gear cable), connected to a ball swivel on the tiller arm to control the rudder and the decision was made to go down that route with this model. A tiller arm was made from a piece of scrap mahogany and fitted to the threaded rudder stock with locknuts and washers. A small ball joint was screwed into the bottom of the tiller and the joint connector epoxied to the end of the inner Bowden cable as you can see in this last photo.





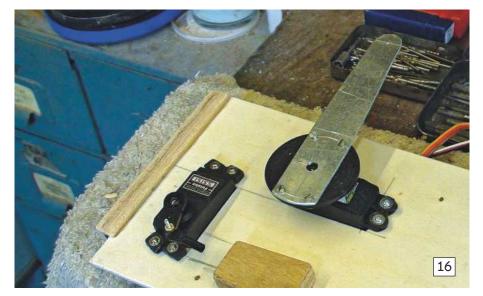


Tests by pulling and pushing at the remote end of the cable showed that the inner cable would flex too much at the rudder end to move the rudder when being pushed and that explains the presence of the two small screw eyes, so as to keep it all in line.

The outer part of the Bowden cable (the after end of which can be seen coming out of the cockpit floor in Photo 14) was fixed below the cockpit floor using blobs of car body filler as in **Photo 15.** Not pretty, but it's hard to get to with 1:1 scale hands and anyway, it's hidden inside the hull where nobody can see it.



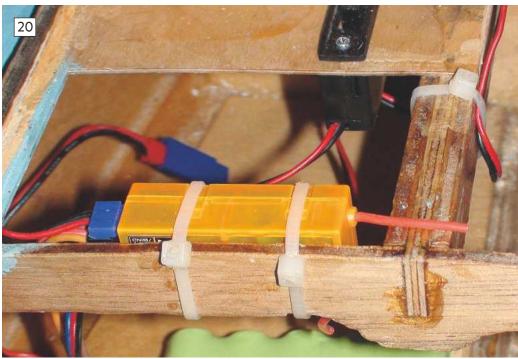
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Servo mountings

A 3mm plywood plate, **Photo 16**, was made to carry both the rudder and the sail arm servos and this was provided with a hardwood block to carry the clamp for the servo end of the rudder Bowden cable. The slot in the plate fits over one of the hull formers to locate the plate in position. The amidships side of the servo plate was screwed to a wood block fixed to the keel inside the hull. **Photo 17** shows the plate, complete with the two servos, fitted in the hull and the arrangements for fixing and connecting the rudder cable at the servo end.

Sheets & servos

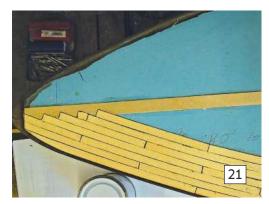
Following some calculations of the distance that the mainsheet and jib sheet (sheets are the lines that control the positioning of the sails) would need to travel for full control, it was realised that it would not be possible to fit a sail arm on the sail servo that was long enough to get the required length of pull. This does not really pose a major problem as the pull on the sheet can be easily doubled by fixing one end of the sheet inside the hull and routing it

around a pulley on the sail arm before going out to the sails. **Photo 18** shows the sail arm with its pulley (underneath the arm) and the arrangement of the sheet going forward to a ring eye before running aft to the mainsail.

A standard servo for the sail servo, fitted with an aluminium sail arm screwed to the servo output disc would be adequate it was thought, this arrangement working okay previously in small yachts.

Plastic tubes were installed inside the hull for routing the mainsheet to behind the cabin rear bulkhead and the jib sheet to a position on the forward deck just in front of the cabin. Both tubes were held at their inboard end by a wooden clamp, screwed to a support post fixed to one of the hull formers, **Photo 19**. Having said all this and with the caveat 'would be adequate it was thought', the combination of a standard servo and plastic tubes would come back to bite me severely during the initial sailing trials.

As a test of the two servos, the generic 2.4GHz receiver was installed as high as possible in the hull, fixed on to one of the hull formers using cable ties. The 6 volt receiver battery pack was fitted on the cabin floor using self-adhesive Velcro and the installation completed with an On/Off slider switch







forward of the receiver. Photo 20, and everything seemed to then check out fine with the transmitter working it all.

Back to the woodwork

Now came a welcome return to this in that the model required the addition of decking as a planked deck was to be fitted as I had experience from another model of how to go about it, and also how not to go about it, something which may be told at a later date.



Yacht deck planking is generally fitted to align with the outer edges of the hull which gives a pleasing appearance with the curved planks setting into a central plank, particularly on the forward deck. A planking scheme was worked-out; a decision made about the maximum length of plank, and work started by fitting the central plank on the forward deck. This was cut from 1mm plywood as it needed to be wider than the deck planks. All of the other deck planks were cut from some 7mm x 1mm Lime strips that were left over from an earlier model. After cutting each plank to the required length, the edges were marked with a soft lead pencil to imitate the caulking of a full-size deck and glued in place using contact adhesive in the same way as for the cabin veneer. Photo 21 shows the planking under way on the forward deck. Planks were cut in to the central plank by being laid over it, and both pieces cut at the same time.

On completion of the planking, the deck was smoothed with fine sandpaper, cleaned of dust and given a coat of wood stain before being finished with satin varnish. Photo 22.

To cover the damage to the cockpit floor, and the aforementioned rudder access hole, a piece of 1.5mm plywood was cut to fit, given a wood veneer coating as for the cabin sides and then lined with a ballpoint pen for the planking, before being glued into place in the cockpit, Photo 23. Why no Lime planks? The answer is simple, as there was no Lime now left in stock!

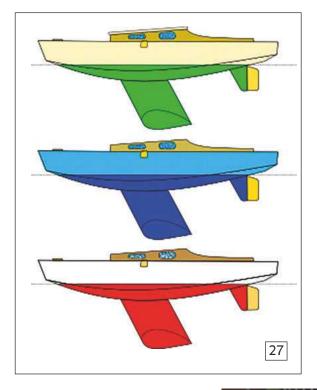
Cabin roof

The fixed forward section of the cabin roof was cut out from 1.5mm plywood and provided with two slots to fit around the mast step plates before being glued to the top of the roof formers. Photos 24 shows the roof being persuaded into shape with weights and clamps during gluing and the end result is in Photo 25.

The removable after section of the cabin roof was made from a pair of shaped formers, and two stringers glued to 1.5mm plywood, using a multitude of clamps along the way, Photo 26. Once the glue had dried, a strip of 1.5mm plywood was added along the front inside surface of the completed roof to form a lip to locate underneath the forward (fixed) part of the roof to keep it in place.









29

Painting

Finally, the stage was reached when the model could receive its paint job. An outline drawing on the PC had already been prepared using the Serif DrawPlus software and several colour schemes were reviewed in the virtual world, **Photo 27**, and now it was time to do it for real.

The majority of the hull was painted in a colour called 'County Cream' with a standard green paint below the waterline. Initially, the upper part of the hull was cleaned to remove dust and then painted County Cream (it was all sanded much earlier in this refurbishment project) and the waterline was marked with a washable felt tip using the set-up shown in **Photo 28.** Generally my models are brush painted as I never seem to have much success with spraying.

After masking the upper part of the hull at the waterline (not forgetting that it is upside down), the lower part of the hull and keel were painted green and the tape removed once the paint had dried, **Photo 29.** The rudder was polished and refitted and a bottom bearing added to the rudder in the form of a brass strip, screwed to the skeg, **Photo 30.** Fitting this part caused a split the skeg as you can just see in this last picture, and so another repair job for later in the project.

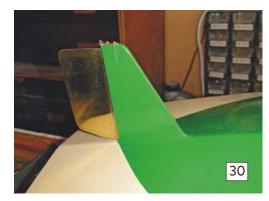
At this point, she needed a name as one couldn't keep just calling her 'yacht'. One of my boats is named after my middle daughter Anjibee. and another after my granddaughter Gina, but my eldest daughter now wanted one named after her and so after some thought the yacht became Lucy G as in the title of this article.

Mast and rigging

Now came the moment when the model received its mast, boom and sails and truly became a yacht, but first of all there was the small matter of the hull fittings for the rigging attachments. All of the brass fittings had been salvaged from the original yacht and comprised a Tee-shaped piece on the forward deck, **Photo 31**, to carry the forestay and jib, a fixing plate on the transom for the after stay, **Photo 32**, and one plate each side (known as chain plates) to take the side stays (also called shrouds) from the mast, **Photo 33**. All these pieces were cleaned and polished before being screwed to the boat

Finally, as the bottom of the mast already had a hole drilled through it for mounting to the boat, the same size holes were drilled through the mast step plates on the cabin roof and fitted with a brass pin and a stainless steel retaining clip as in **Photo 34** (also seen in Photo 33).

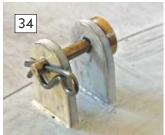
Luckily, the mast, boom and sails (please remember that they came from a different yacht) fitted this boat with very few minor changes, giving a finished yacht as in **Photo 35.**











Decals

To add names to a boat, I generally make up waterslide transfers. These are designed on the PC and printed using an inkjet printer on to a product called Lazertran. After cutting the transfers to their finished size, they are soaked in water to free the transfer from the backing and slid into place on the model. After carefully smoothing into place with kitchen towel to remove all air bubbles they are left to dry. Once dry, the transfers turn white, but this can easily be fixed by giving them a coat of oil based varnish, which also stops them coming off in the water.

Maiden voyage

At Christmas I went to stay with my daughter in Derby and decided to take the new yacht for her maiden voyage on the lake in Alvaston Park, home of the Alvaston Pirates MBC. For most of the time whilst in Derby, the lake had a coating of ice up to an inch thick, so model boating was not really on the agenda. However, at the start of my stay there was no ice, even though it was bitterly cold especially on the day that there was a good breeze for sailing, but it was sunny and bright.

The yacht was duly taken to the lake, rigged with sails and the r/c equipment checked for correct operation. It's always a pain when you forget to do a simple set of pre-sailing checks and find for example, that once on the water the rudder action is reversed, so it is much easier to check all this before letting the model go or even before leaving home. Lucy G was placed on the water and sailed away from the landing stage in grand style, answering the helm beautifully and did not heel excessively. 'Great, another successful model' I thought, but they say pride comes before a fall and it certainly applied with a vengeance with this model yacht.





to haul them back in. Sailing like
this is a challenge to say the least,
but the model was duly recovered
and taken out of the water for further
investigation.
You may remember that I wrote earlier that the
choice of plastic tubes for the sail sheets would
come back to bite me. Well it certainly did as there

choice of plastic tubes for the sail sheets would come back to bite me. Well it certainly did as there was so much friction between the nylon cord sail sheets and the tubes that one had difficulty in pulling the sails in by hand, so no wonder the servo was struggling.

Modifications

This problem of a standard servo with a sail arm failing to sheet in the sails had arisen in Daydream (Model Boats, April and May 2012), but it was for different reasons, namely bigger sails and a much longer length of pull. It was cured in that model by sourcing the biggest servo that could be found that would fit in the space available, this being a

model and Photo 36 shows the SpringRC servo with a standard serve for comparison purposes. Using a servo of this size and power is rather akin to using a sledge hammer to crack a nut, but something that would definitely work was needed. The sail arm from the standard servo was unbolted from the servo disc and refitted to a disc for the replacement servo and the plywood servo plate modified as seen in **Photo 37** to carry the new unit. In the meantime, the plastic tubes for the sheets had been removed and replaced with PTFE-lined Bowden outer cable (bicycle gear cable, again). The nylon sheets now seemed to run freely through this new tubing, and hopefully the combination of new tubes and bigger servo would do the trick. Bench tests with the new sail servo resulted in the original sail arm (of thin sheet aluminium) bending under simulated sail loads, so that arm was replaced by a stronger one of 3mm aluminium strip which could carry the load. At one end of travel, this new arm fouled against a geared motor unit (please bear with me as all will be explained in due course) and it had to be re-shaped as in Photo 38.



The modified model was taken back to Alvaston Park lake in Derby in May 2015 for further trials. After checking all the radio control functions, she was placed in the water and sailed away on the light breeze that was blowing that day. This time she sailed beautifully, answering the helm as expected with full control of the sails and all-in-all a most successful sailing experience, and looking brilliant as well on the water!

Conclusion

In Part Two, in the next issue of MB, the reasons why this model has been called a 'dual purpose' yacht will become clear, with its conversion to an unusual method of sail propulsion utilising the Magnus Effect as successfully demonstrated by Dr. Flettner in 1924.



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Full size plans, drawn from actual factory plans. Models are built same as large boats with frame construction and strip planking. Kit contains all printed parts and planking, sanding sealer, blade, brush, copper shaft and trim wire, metal display propellers, cement, flag, condpaper, plastic sheet, 5 page instruction booklet, etc. Not included are finish points or material for inside trinishings, although detailed plans of inside are on the master plan. Speeds to 50 M.P.H. with ¼ H.P. engines. Send for literature on models, drive units and fittings. We have only the finest!

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5 New Chris-Crafts for early 1950

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John Parker delves into the archives

46: Dumas Products

he largest manufacturer of model power boats

in the world' was the claim the American Dumas company made on the plans that accompanied their early kits. Cruisers and pleasure craft from the likes of Chris-Craft, Owens Yachts, Vinyard and Colonial Harco formed the bulk of their model subjects and the kits, scaled from drawings supplied by the manufacturers, had distributors in the USA, Canada, China, Singapore, Alaska and Honduras. Europe and the UK were then noticeably absent from the list, perhaps due to local tariffs.

Dumas Products had been founded in 1946 by Al Dumas in Milwaukee, Wisconsin. Only the very early kits carry that address, for the company soon relocated to Tucson, Arizona sometime in 1948 or 1949. The plan for the Vinyard 40 foot Cruiser is dated 15th January 1949 and carries the new address as 2114 South Alvernon, Tucson. The kits were mainly of balsawood, with the parts die-cut and printed on sheets of the same, plus some sheet mahogany parts where appropriate (there was no plywood). They were 16 inches to 35 inches (406 to 890mm) long with a set of cast metal fittings available separately if desired. A 1949 listing shows thirteen different Chris-Craft models from a 17 inch long Speedboat to the 35 inch Sport Fisherman, and

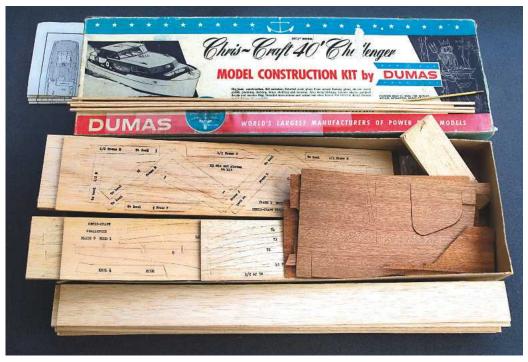
LEFT: Early Dumas advertisement from about 1949.

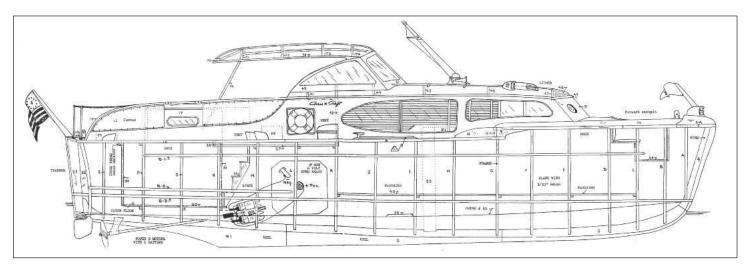
Below: Contents of the 40ft Chris-Craft Challenger kit.

five other similar craft from other manufacturers.

Not much is known of the company in the period 1950 to 1964. Al Dumas sold out in 1952 to the Snyder family, but apparently it changed ownership twice more and was at a low ebb when the Brandon family came to Tucson for the healthy desert air and decided to purchase the company and they remain the current owners in late-2016. At the time of purchase, Dumas occupied just a 20 foot by 60 foot (6 x 18 metre) section of a building, had no employees and had not released a new kit in seven years. A revitalisation of the product range was begun, starting with a new kit of a PT boat. The boat kits of the American Junior Aircraft Co. were added to the line by the late 1960's and as a by-product of wanting to purchase their die-cutting press, Veco Airplanes was acquired and their kits added to the range, necessitating a move to larger premises at 790 South Park Avenue, Tucson.

The range of kits steadily grew to include scale fishing boats, tugs and military craft, racing hydroplanes and deep-vee craft and a range of sailboats as well as the cabin cruisers and runabouts that Dumas were perhaps best known for. Veco Airplanes was sold off and Dumas now billed themselves as 'The Model Boat People'. In line with changing technology, pre-fabricated hulls of vacuum-formed plastic, or fibreglass, made their appearance; plans began to show the addition of radio control and electric motors began to supplant i.c. engines even in fast scale boats. The larger die-cutting press enabled complete frames to





Above: Challenger construction, side profile.

Right: Detail of the L-shaped frame halves.

be pre-cut in plywood, greatly facilitating kit construction and enabling the phasing out of the original kits by the early 1970's.

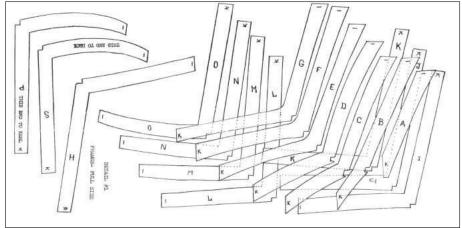
In 1980, the company moved to their current premises at 909 East 17th Street, Tucson.

Chris-Craft 40 foot Challenger kit

The design of this kit, from my own collection, dates from about 1948 and can be taken to be typical of the earliest Dumas kits. In the box there are thirteen sheets of die-cut and printed 1/8 inch balsa, die-cut 1/16 inch mahogany for the deck, 3/32 inch sheet balsa for the planking, various other block, sheet and strip balsa, a flag and transfers, basic stern tube, plastic sheet for the windows, some basic metal fittings including the rudder and a propeller, and a full-size plan. Comparison with another early kit suggests there should also be typed instruction sheets and a parts list, that are missing from my example. A Deluxe Metal Fitting Kit was available at extra cost and this provided the lights, anchor, struts, deck cleats etc. in the form of heavy castings in a lead-based alloy. The model was to 'fit the box' scale, measured 33 inches long when completed and the plan shows electric propulsion, running free.

The first thing that strikes you about this kit is the complication of the built-up structure which requires a building board, unlike the egg box construction of English kits. There are 17 frames and each is made up of two open L-shapes (or knees), joined at the keel. The knees are die-cut, but because they are in balsa and not ply, the short grain of the timber makes them very weak until the planking is in place. Overall the construction is much lighter than a plywood Aerokits model for example, and would not stand up as well to the rigours of typical pondside use, particularly if i.c. engine powered. On the other hand, the model makes a fair attempt at being scale, unlike an Aerokit, and the planked hull scores here in allowing a degree of double-curvature, or flare, whilst the superstructure is not over-simplified for easier building.

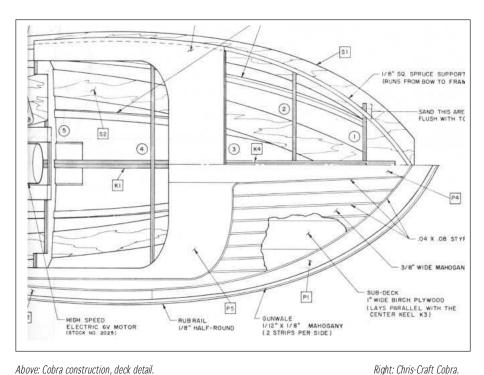
I was disappointed that the kit provides mahogany for the deck, but not the cabin sides,



floor and other parts which are merely balsa. This makes it impossible to duplicate the painted hull and mahogany superstructure that was such a characteristic feature of these Chris-Craft boats. I would have been a bit miffed too, as a loyal customer, to find that my Dumas Chris-Craft models were all to a different scale, the 34 foot Commander for example, measuring the same 33 inches as the Challenger, despite being a much smaller boat.

Below: Full-size Express Cruiser version of the Challenger for comparison (the hardtop was an optional extra).





Above: Cobra construction, deck detail.



Below: New models feature in a 1955 advertisement.



Perhaps I am being too critical though, and the modeller of 1948 would have been glad to get his (or her) hands on one. Certainly, with attentions to

things like a plywood frame, mahogany cabin sides, fibreglass hull coating and brushless propulsion, the Dumas Chris-Craft Challenger, then a model of a current boat but now a rare classic, would make a fine model today.

Chris-Craft 18 foot Cobra kit

I have made several kits currently offered in the Dumas range, and have selected the 1:8 scale Chris-Craft Cobra, kit No. 1232, to serve as an example (though it does not use the latest form of construction, of which more later). The 1955 Chris-Craft 2/3 seat Cobra, with its fibreglass fin and sports car styling, certainly presents a striking appearance.

Construction of this kit is much more conventional than the earlier Challenger. The frames are die-cut in 3.2mm plywood, and they have extensions for assembly on a building board. The hull has two layers of planking, the first in 1.6mm plywood on the diagonal, the second in 2mm mahogany laid horizontally. Contrasting pale basswood and white plastic strips are used on the deck, vacuum formed ABS for the upholstery and rear turtle deck, and plated metal fittings are included. It's not an easy build, requiring careful workmanship to achieve a fine finish, but the instructions are very good, taking you slowly through the various stages, including the staining and finishing with fine fibreglass cloth.

I had an issue with the supplied windscreen, as its clarity was spoilt by the vacuum forming and just didn't do justice to the model, so I made a scratchbuilt replacement for it. Another improvement was to replace the plastic extruded rubbing strips with aluminium ones. The Cobra when built as



Above: A well-thumbed Dumas catalogue from the 1990's.

company forming the subject of my

article. Happily, that is not the case here as Dumas Products appears to be in good hands to meet the challenges of selling traditional kits requiring real building skills in an era of ready-to-run models and instant gratification.

A fairly extensive range of running hardware and fittings is available to complement the Dumas kits. The propellers are now made by Raboesch (the supplier of the original cast bronze versions suffered a fire) and through a long-standing tie-in with Pittman (Flotsam and Jetsam No. 37, April 2016 MB), their motors and Adapt-A-Drive hardware are part of the range. Laser cutting technology has been used to launch a new series of smaller 1:24 kits for static display called the Laser Classic Collection and made possible a return to model aircraft in 1997 with a range of rubber-powered and radio controlled electric scale models. They even

have a kit for Noah's Ark, and one wonders how they managed to get hold of the original plans!

As to the range of Chris-Craft models, in the early days almost every manufacturer, such as Sterling Models or Berkeley Models, once made kits of Chris-Craft boats. Today, the demise of those companies and following patient lobbying by Dumas, has given them exclusive rights to manufacture Chris-Craft models and we continue to see the welcome release of new models, their most recent being the 1929 Chris-Craft 38 foot Commuter.

Full details of the Dumas range may be found at: www.dumasproducts.com

I would like to acknowledge the help of **Doug** Hengstler of Dumas Products in the preparation of this article - John Parker.





Phil' Scales converts the Mountfleet Models Admiralty C642 kit to a 1950's coastal tanker

Shell Centurion

quick look around any model boat show will reveal at most one or two tankers and there is a shortage of dedicated r/c kits, although Deans Marine can oblige. Shell Centurion (a fictitious name) is a reworked 1:32 Mountfleet Models kit of the Admiralty Cargo Coaster C642 to a 1950's small tanker. In real life the Admiralty coaster was sold to Everard's and renamed Clanity, an option that exists with the kit.

The conversion

The hull had its bulwarks removed and profile amended to a tanker hull, loosely based on the real Clanity. The hull was ballasted with fixed ballast forward so it would sit with the main deck almost awash, just as in real life when fully loaded. Removable ballast consists of two 7lb sash weights and two 6v SLA batteries which can be installed through the poop deck opening, so the total model weight is 30lbs (13.6kg). The kit supplied plywood decks were discarded in favour of 3mm styrene sheet overlaid where necessary by wood planking. The shape and layout of the main superstructure was amended to negate the kit's flush poop deck appearance and solid bridge bulwarks were installed with a fully detailed bridge interior, plus a new funnel.

The kit supplied lifeboats were changed from wood clinker to smooth steel, as tankers do not usually have inflammable lifeboats! The fore deck is largely the same as the original kit as there was little that needed to be altered, although the mooring bitts were modified and some other details added.

The main part of this model is of course the tanker's main deck and a fore and aft trunk was installed with a pump room at the aft end including a detailed

interior. A new mast and derrick was fitted towards the front. A full suite of pipework has been added including vapour pipes, pressure control valves, oil fuel loading pipes and fire fighting hydrant pipes. The principal loading and discharge pipes run port and starboard to the crossover discharge pipes across the main deck and have valves and handwheels. There is a full complement of deck valve wheels, ullage and sounding pipes and six tank hatches with lids. Most of the pipework with its elbows, flanges and valves can be obtained from various architectural and model making sources.

The handrails on the foredeck and poop are the kit supplied two rail stanchions, but those on the main deck ones are custom made three rail flat bar stanchions. Kit fittings have been used whenever suitable, but as already mentioned, the main plywood sub-decks have been substituted with 3mm styrene card and the superstructure is of the same 1mm sheet.

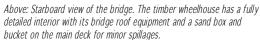
Colour scheme

This is of the Shell Mex ϑ BP fleet of the late 1950's. Shell Centurion flies the red petrol flag and the Shell ϑ BP House flag and has the required red warning lights fitted on the mast and bridge, but 'weathering' to the paintwork is still pending. This model is intended to sail in quite rough water with its main deck awash, and so the only internal hull aperture is that for the main aft superstructure unit opening on the poop deck with its one inch high coaming.

(This is the second of Phil's featured models, the first being Scaleforce in the MB September 2016 issue -Editor)







Right: Shell Centurion afloat and ballasted down to full load draft. In practice this means the deck is awash in any kind of waves or heavy weather.

Below: A steel lifeboat with its bilge grab rails, opening flaps to the canvas for the lifting hooks, rubbing patches for the lashings and fabric joint seams.





Above: Wheelhouse roof detail.

Left: The rear section of the tank deck showing the pump room (which has a detailed interior), tank hatches and grey oil pipework, black fuelling pipework and red fire main. Each tank hatch has a vapour pipe and valve.



Above: The forecastle is largely unchanged from the kit as it was not changed during the lifetime of the real ship.



Above: The boat deck and bridge superstructure with its timber wheelhouse, enlarged funnel, mast, steel lifeboats and other detail changes.





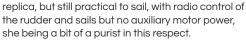
ne hundred and fifty years ago, Tea Clippers were the fastest long distance transports on the planet, travelling between China and the UK in less than one hundred days using only wind power. Ariel was designed by Robert Steel and built in Greenock in 1865 for Shaw, Lowther and Maxton of London. She was 195 feet long with a displacement of just over 1000 tons and could carry over 25000 sq. ft. of sail area. She was of composite construction with iron frames and wooden planking. On her second outward passage to China under skipper John Keay, she made the fastest ever time against the monsoon, of 83 days. In 1866 she took part in a momentous race back to London against the clippers Taeping, Serica, Fiery Cross and

Taitsing. After leaving China on the same tide and sailing 14000 miles in 99 days, Taeping narrowly won, beating Ariel by 28 minutes, with Serica a further hour and 15 minutes later. Fiery Cross arrived on the following tide and Taitsing a day later. The premium price paid on the London market for the first season's consignment of tea was split between Taeping and Ariel but because of the large quantity of tea arriving in such a short space of time, the price of tea plummeted and the payment of a premium rate was abandoned in the following years. In 1872 Ariel set sail for Sydney and was never heard of again. It is usually assumed that she was pooped, i.e. swamped by a large following wave, when running east after rounding the Cape of Good Hope. Her fine lines and flush deck made her particularly vulnerable to such an event.

Origins of the model

The model was built about 35 years ago, but then spent about 30 years languishing in the builder's loft. It was passed to another member of Goole Model Boat Club as a result of an impending house move, but the new recipient eventually decided he would never have the time to restore it. Knowing that my wife Elizabeth is an accomplished restorer of vintage sailing vessels he donated it to her in December 2012. The model is approximately 53 inches overall in length and 30 inches high. It was a free sailing model with a very simplistic superstructure and rigging, Photo 1, with a separate false lead keel bolted under the hull through two vertical metal tubes. The sails and rigging had been damaged and deteriorated during storage, but a bigger concern was the bread and butter construction hull which was badly delaminated along all the longitudinal joints. Elizabeth decided on a long term plan to restore the model to a much more detailed scale





Some initial research (aided by Colin Bishop on the Model Boats website forum), indicated that the model had been built to a Nexus (Now MyHobbyStore) plan for Ariel at a scale of approximately 1:60. The plan depicts a very simplified interpretation of the original vessel. An interesting trip to visit the surviving tea clipper Cutty Sark in Greenwich was made in 2013 and lots of photographs taken for reference. David MacGregor's book 'The Tea Clippers' provided the most detailed information on the original ship with scale deck plans and elevations which formed the basis of the restoration. There are no surviving photographs or original drawings of Ariel, so a certain amount of guesswork and interpretation was inevitable.

Restoration of the hull

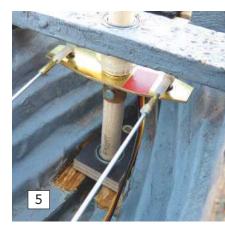
All the superstructure, masts, rigging and deck were removed and set aside. Although the long term plan



was to replace them with new, they were useful as reference items. The hull was cleaned up, rubbed down and the laminations prised apart so that slow setting epoxy adhesive could be squeezed into all the cracks. The whole assembly was then clamped together and left for a few days until the glue had dried, **Photo 2.** After rubbing down the hull, it was then enveloped in a leg from a pair of black tights, (no marks for guessing where they came from), and then given several coats of Eze-Kote resin until the weave had been filled. The surface was then rubbed down smooth and the hull given a coat of Halford's grey acrylic primer, **Photo 3.** At this stage two more major decisions were made.

The method of sail control had been pondered for some time and there would clearly need to be a compromise between the extent and realism of the running rigging and making the model a practical sailable proposition. We decided, since Elizabeth delegates radio control systems to me, that as an experiment the sails would be controlled by rotating the masts approximately 45 degrees either way from central. I was not too concerned about the standing rigging restraining the masts as it is primarily there to resist bending rather than torsion. As a fallback position I thought a little use of elastic might be required, but in the end this proved unnecessary. To allow rotation, each of the three masts is supported in two sealed ball bearings, one at deck level and the other at the bottom of the hull. A single Hitec HS 815BB sail servo is mounted in the hull with a closed loop linkage to each mast, **Photos** 4 and 5. A low profile rudder servo was fitted into a recess in the rear of the hull and the linkage is accessible through a removable hatch, to access the servo and a removable grating to access the connection to the rudder shaft. Photo 6.



















The second major decision made by Elizabeth at this point was that Ariel would have a combined keel and stand, as described in an article by Brian Mitchell in the July 2013 edition of Model Boats magazine. This is made from two pieces of steel strip bent to form a Vee shape, connected by a further flat steel strip on each side. Lead strips of the same width were eventually added to the longitudinal sections to ballast the finished model down to the correct waterline. The stand attaches to the hull using bolts through the vertical tubes that were used with the original detachable external keel, **Photo 7.**

A new deck was made from a sheet of 1.5 mm ply. Gluing this in position is always a major turning point in the build of any model since it severely restricts access to the mechanisms inside the hull. A hatch was cut between the foremast and mainmast to give access to the mast servo with a smaller sub-hatch in it to allow access to fit and remove the battery. The edges of these hatches were carefully arranged to line up with the spacing of the deck planking so they are reasonably well hidden. A short length of dowel was used as a temporary substitute for each mast to locate the linkage and levers for the sail controls until the real masts could be fitted later. The deck was planked using 3mm wide Lime strips but no attempt was made to simulate the caulking between the real planks.

A trial of the assembled hull and bare steel keel stand was made in our garden pond at this point, **Photo 8.** This showed that the final model would need some additional ballast to bring it down to the required waterline, but the model floated reasonably level and was watertight. Eventually four strips of lead flashing were added to each of the horizontal members of the keel.

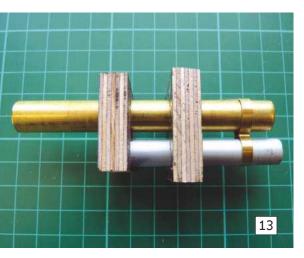


Superstructure

The first item of superstructure to be made was the main cabin and this was built up in conventional fashion from 1.5mm ply laminations. The white roof was made using a piece of Solartex self-adhesive film. One of the temporary mast substitutes can be seen just forward of the cabin, **Photo 9.** Deck hatches and companionways were all made in a similar fashion. The central three cylinder water pump was adapted from a commercial kit, but the main anchor windlass and the two sail winches were fabricated from brass wire and various scrap box bits and spare parts, **Photo 10.** The compass binnacle is an RB fittings component, made to a very high standard as are the rest of their accessories,

Photo 11.

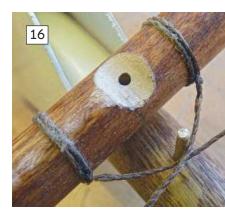
Adding the bulwarks was quite tricky as it was difficult to achieve the correct angle and there was only a narrow edge along which to apply the glue. A number of wooden blocks were made with the end face sanded to the required angle using a disc sander. These were clamped to the deck at











strategic points and the finished bulwark clamped to them to hold it in the right place as it was glued to the deck, **Photo 12.**

The final finishing of the hull was the subject of some debate, as Ariel would have been covered by either copper or Muntz metal plating below the waterline to protect the wooden planking from biological attack. We bought a trial sheet of scale copper plating to see how easy this would be to apply. Done well, this could have looked brilliant, but not done well and it would have looked awful. It seemed that it would be pretty tricky to get the plates to line up around the double curved areas of the hull so an easier compromise route was taken and the lower part of the hull was sprayed with Halford's copper metallic paint.

Masts, yards and rigging.

New masts and yards were made from birch dowel. The doublings on the masts were made by building a small jig to hold two tubes at the correct

spacing while the brass clamp that would hold the mast sections together was soldered, Photo 13. The three masts were made with the crosstrees and tops added and the assemblies painted and varnished, Photo 14. The yards were also made with the footropes attached and a pair of brass eyes used to attach the stunsail booms as shown on Ariel's sail plan, Photo 15. On the real vessel, the yards are effectively hung from the mast and are free to be rotated sideways by the sheets to allow the sails to be moved to the optimum angle. On the model, the whole mast and yards rotate as a single assembly so the yards have to be rigidly attached to the mast. This was done by filing a recess into the centre of each yard and then gluing and pinning each yard to its mast, Photo 16. The assembled joint was then bound with thread to aid security and give the impression of the real fixing.

The next stage was the really tedious one of adding all the rigging, in particular the shrouds, ratlines and backstays. Initially each mast was mounted in a small jig to allow them to be worked off the model,



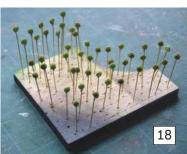








Photo 17. However, the lower ratlines were only added after the masts had been fitted in the hull. The deadeve at the lower end of each shroud and backstay was pinned to the jig at a point calculated to be about 30mm above the deck level once the mast was installed in the hull. This took a bit of measuring and working out, but the end result was fine, if slightly high. The chain plates which hold the lower deadeyes on the side of the hull were made from brass wire, soldered to loop around the dead eye. There were quite a lot of these needed, around 50 in total, so they were made and painted en-masse, Photo 18. The bottom end of each chainplate locates in a hole drilled in the side of the hull. Once all the masts had been fitted and the chainplates glued in position, the ropes linking the dead eyes were added and tied off.

Almost all the rigging was done using either Coats Terko satin poly cotton thread or J. Wenzel linen thread sold for plaiting horses' manes. There had to be some considerable simplification of the rigging, so the only additional rigging lines added were the preventer stays which are tied between each of the mosts

A new bowsprit assembly was made in the same way as the masts. This was pinned in position by two brass pins to allow the model assembly to progress, but was not glued until the final stages of build as it's a pretty vulnerable part of the model and easily damaged. The rigging which locates the bowsprit was then added, partially from thread and partially from fine link chain. The catheads which protrude through the side of the bows to support the anchor are another fairly vulnerable area of the model,

Photo 19.

The figurehead from the original model was reused in the restoration, although she got a short skirt extension made from white Milliput modelling putty with a bit of gold decoration. The decoration on the bow and stern was a cause of some deliberation as for a long time there seemed to be nothing suitable. The original model had a hand painted decoration, but it was pretty rough and ready, although Elizabeth did not think she would be able to do any better. Eventually we found some photo-etched brass vine leaves which look good, even if there is absolutely no evidence of what, if anything, was fitted to the original Ariel, Photo 20. Its highly likely that some decoration was fitted as Captain Keay's journals copied in the National Maritime Museum comment; 'There was so much brasswork that it took three to four men twelve hours to clean and oil it all around, outside and in'.

Sails

The sails were all made from a fine cotton bedsheet, and if I remember rightly, it was 200 threads per inch cotton Percale. Before each set of sails were cut out, a series of parallel lines of stitching were made to simulate the joints between the original sailcloth. The sails have been hemmed and are attached to the yards by individual loops of the J. Wenzel linen thread. The bottom outboard corner is tied to the yard below by the same method, but since the photographs were taken, Elizabeth has decided to extend these loops so that the sails can 'billow' a little more. This left the problem of what to do about the bottom corners of the lowest sails. These are linked by a continuous lenath of black thread which runs around the stern of the vessel through two small screw eyes so that as the masts rotate, the corner of the sail moving forward pulls its opposite

lower corner aft. Several rows of reefing lines were added where these were shown on the sail plan.

Sailing trials

It was expected that the model would be difficult to turn, so a rudder extension had already been planned and made. This is easy to fit and remove when the model is supported on its combined keel and stand, **Photo 21.** Trials of the rotating masts showed that about 45 degrees rotation each way was possible before the shrouds began to restrain the movement.

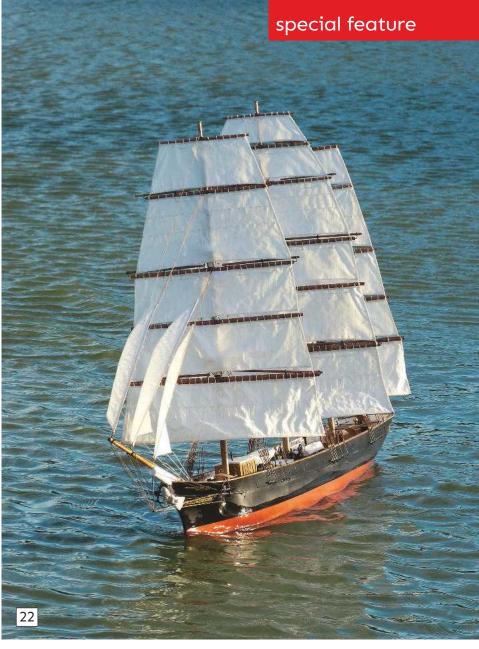
The first sailing trial took place at Goole in a very light wind one evening in June 2016. The model was stable, Photo 22, and sailed well in a straight line, but proved difficult to turn. This was partly due to our inexperience, as this was the first squarerigged ship we had sailed and it was difficult to coordinate movement of the masts and rudder. The initial set up was with the rudder control on the right hand transmitter stick side to side movement, spring-loaded to centre and sails on the left hand stick fore and aft with no spring centring, i.e. as a conventional yacht sail control. This was changed to put the sail control on the left hand stick side to side movement to make it slightly more instinctive and our ability to control the model was improved. The other handicap to turning the model was the very light wind, as even when trying to turn downwind, the model ran out of speed and the rudder became ineffective.

Further trials have now been carried out in slightly stronger winds which give the model more speed and inertia to get it around a turn. However, the pond at Goole is guite small and surrounded by high obstacles, so the wind tends to be very variable in strength and direction which make sailing challenging, even for conventional yachts. Good coordination of rudder and sail is essential and if the slightest mistake is made, the model quickly loses speed and before you know where you are, it is sailing backwards, which it seems to do quite well! It is evident that the model will have a fairly narrow wind speed window and needs room to manoeuvre. It is likely to be limited to sailing wide 'figures of eight' across the wind with the turns made downwind at each end. However, it is quite stable on the water and looks really impressive with the breeze behind it and the sails billowing, Photo 23.

Conclusion

Over the next few months we hope to gain additional practice and experience with some other more suitable sailing venues. It's not going to be a model suited to everyday use and it's relatively easy to damage in a collision, or if the bowsprit rams the pond edging. It is challenging to sail and has several experimental features such as mast rotation for sail control and the combined keel and stand which add to the interest of the model. It has attracted a lot of attention when displayed at regattas and shows and has won several prizes since its completion. It has been well worth the effort of the restoration, even including tying the 2400+ knots that went into the rigging and sails. Mind you, Elizabeth has decided that scale modelling of period ships is just too much like hard work so her next restoration project, just started, is a vintage Marblehead vacht which will be much simpler all round.

Gareth Jones - 2016





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The International Model

Colin Bishop reports from the Warwickshire Exhibition Centre

his major model boat annual fixture in November is always something to look forward to, and being located close to the centre of the UK it attracts a wide range of exhibitors and traders. As always, it is the clubs who make the show what it is and 2016 saw over 31 separate stands. Over the years the stands and the models have been progressively getting better and better, and they now provide a real feast for the model boating enthusiast. Awards for the Best Stand have also spurred extra efforts in presentation with the main contenders fielding displays which are literally reaching for the roof.

Supporting the static exhibits was a lively pool schedule organised by Steve Dean which put many of the boats through their paces, often by type for comparison such as lifeboats, ferries and hovercraft etc. There were also 'try it' sessions for the youngsters aimed at sparking enthusiasm in this upcoming generation and hopefully demonstrating that 'real hands on' beats virtual games hands down!

The third major feature of the show is of course a strong trader presence enabling visitors to view and handle a wide range of modelling products which has become increasingly important following the demise of the local model shop in favour of online and mail order shopping. Twenty Two traders attended this year, showcasing most of the things that model boaters want to see and buy, and those I talked to on the Saturday of this three day event reported good business.

There is of course a fourth feature that people appreciate at this venue and that is the excellent catering arrangements. There are no plastic sandwiches here, but well-cooked tasty food and I can confirm that the steak and kidney pie was as good as ever. An improvement over earlier arrangements is that there is now a drinks and light refreshment area on the ground floor which greatly relieves the potential crowding in the main restaurant up on the balcony.

Finally, a mention that unlike at many venues, there are plenty of chairs around the pool and elsewhere in the hall to allow those not in the first flush of youth to take the weight off their feet for a while.

Conclusion

I hope the photos give a decent flavour of the show, as one disadvantage of covering for this magazine is that while you are circulating, talking to people and taking photos, you inevitably miss a good deal of the action taking place on the pool, so I only really caught the lifeboat, ferry and hovercraft displays, plus one of the sessions for youngsters. There were many others, some



impressive and some very entertaining.

It is always a bit unfair to highlight particular models with so much superb work on display, but Paul Chilcott's six feet long Voyager of the Seas cruise ship deserves a mention due to its unusual working features. The hull is largely constructed from shaped 25mm blue foam polystyrene sheets covered in GRP for strength and the upperworks are mainly of styrene sheet. In addition to the extensive lighting, the propulsion Azipods work as per the full-size vessel and a bow thruster is also fitted. On deck the outside cinema screen uses a 2.5cm LCD screen to display a video while the Flow Rider water feature uses a pump and reservoir to create water-flow simulating its full size counterpart. This model was demonstrated on the pool along with Mick French's giant QE2 liner, but unfortunately I missed this being elsewhere at the time - such is life!

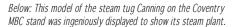
All in all, the show is an excellent advertisement for our hobby and was very much enjoyed by all to whom I spoke.



Boat Show 2016



Left: A general view of some of the exhibition area taken from the balcony. The pool is in the far section.





Above: Pride of Hythe from Linkspan Models makes a fine sight when under way. This type of working model is difficult to build successfully due to the high and inevitably heavy upperworks, but in this case its stability looked absolutely fine.





Above and left: An enormous fully illuminated working model of the cruise ship Voyager of the Seas built by Paul Chilcott with various working features (see text).



Above: Part of the 1st place award King Lear club stand.

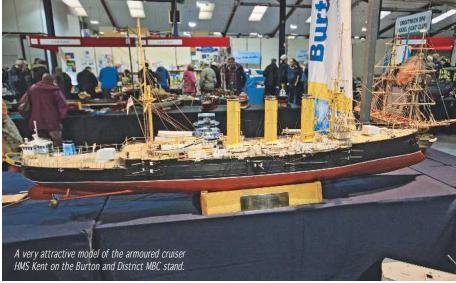


Right: Carl and Florence Tunnicliffe of Linkspan Models with their well-received new Pride of Hythe ferry kit. Price is £446 and it is a well presented kit of an unusual subject. Kits of other ferries are in the pipeline.



show report







Above: Smokey Joe, a delightfully detailed inshore fishing trawler built by Steve Dean who was in charge of the pool.

Left: Every lifeboat deserves a crew. These figures were available from the Models by Design stand.







Left: A superb Griffon military hovercraft as used by the Royal Marines exhibited on the Air Water Land Model Group stand

Below: Close up of the island on USS Kitty Hawk on the Southern Model Display Team stand. This 1:144 scale model is of conventional construction and has a number of working features. It shared the pool with a model of HMS Illustrious.





Left: Audrey-H: I think this is what you would call attention to detail. Definitely a model of character.

Right: An interesting small tug on the Bourneville MY & PB Club stand.







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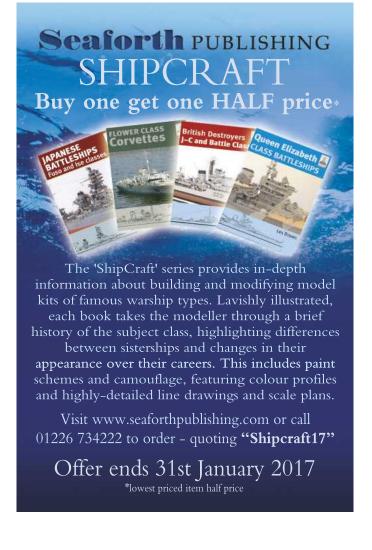
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Boiler Roon

PART Seventy Three OILS

Richard Simpson's

series on model steam plants

Photo 1 Buying Steam Oil in one litre bottles is significantly cheaper than buying it in the very small bottles that some suppliers provide. You are almost certainly never going to use it all, but it will still end up cheaper and you can always share a bottle amongst two enthusiasts.

on't you just love those titles that are short, yet encompass a huge subject way beyond the scope of a Boiler Room article? Such a topic if ever there was one is this month's subject, namely 'Oils'. As with so many subjects, particularly some of those associated with the hobby of model engineering, or specifically model steam engines, the subject in question can be so vast that it almost puts us off investigating any further as we can become almost scared of what other areas we may uncover. Just try putting 'Tribology' into a search engine and see what you get. Interestingly however as with so many such topics, if we can see through all the stuff we don't really need to worry about to get to the bits that we should consider, then life becomes much simpler. That is what I'd like to do this month and simplify this subject and help a few newcomers to see just what they need to be considering and perhaps more relevantly, what they do not

Some of the basics

For those still interested, 'Tribology' is nothing more than the science of the relationship between interacting surfaces in relative motion. This then of course incorporates friction, lubricants and everything else in the same field, so while it may

> seem a bit of a fancy term, it is very relevant to us. I was very lucky when I was at college, one or two years ago, to be attending a weekly lecture on the subject of 'Tribology'. which was presented by a lecturer who had the ability to portray a complex subject in an easy to grasp and interesting manner. As soon as he explained that a bottle of tomato sauce could be used as just an effective lubricant as any mineral oil as long as it contained all the relevant modifiers and enhancers required by the end user, he immediately had the attention of the entire class of Marine Engineers who knew exactly the value of a bottle of tomato

So the bottom line is that we know that surfaces moving together generate friction, which in turn generates ever increasing amounts of heat until such point as the heat causes the surface to break down. Anything that can keep the surfaces apart will dramatically reduce the amount of friction and therefore the heat generated, so some of the most basic properties we need from a lubricant are to keep the metal pieces apart, remove heat if required which is not really an issue for model steam engines but is more relevant to full size steam engines. and protect the surface from oxidisation. That

seems a bit simple, but we can already see that a shaft rotating in a crankshaft bearing and which rotates in one continuous direction, may well have quite a different set of requirements to a piston moving up and down the cylinder with significantly more heat involved and a reciprocating rather than a rotational motion. Already we have identified the reasons for the two basic types of oil we should be considering using for our model steam engines, these being the specific 'Steam Oil' for the cylinder and the common 'Engine Oil' for the running gear. I should say here that for 'Engine Oil', I default to conventional 'Motor Oil'. There are those who will make claims that they have been using numerous and various types of lubricant for many years with no adverse effects in many different applications, but I am simply going to describe the best oils for the jobs in hand and leave it up to you to make your own decision. There will always be an Uncle Albert who has been successfully using the aforementioned tomato sauce in his model steam puffer for the last fifty years, however I tend to think that deeper questioning will usually uncover the odd interesting unfortunate side effect that might have been conveniently forgotten. There will also be plenty of those who advocate that crankcase oil, hydraulic oil, chainsaw oil or even bicycle oil is all the same stuff in varying thicknesses, but I assure you that they most certainly are not.

Photo 2. The reciprocating and oscillating faces work at high temperatures so need boundary lubrication and consequently a high viscosity steam oil.





Steam Oil

This is more generally referred to by the locomotive gents as 'Steam Cylinder Oil' so the clue to its use is already in the name, Photo 1. Steam Oil is used in the cylinder of the model engine and so is therefore the oil we put into the Displacement Lubricator on the engine. This oil is then carried over into the cylinder by the incoming steam and serves to lubricate the internal parts of the engine such as the cylinder and pistons, the slide valves if fitted, the port faces on an oscillator and possibly the faces of a regulating or control valve, **Photo 2.** These parts generally reciprocate or oscillate and so do not form the hydrodynamic oil wedge that we consider in a rotating shaft, but they rely on what we call 'Boundary Lubrication', which basically relies on the thickness or viscosity of the oil to keep the metal surfaces apart. Consequently, Steam Oil needs to be of a higher viscosity than normal engine oils.

Steam Oils also operate inside the engine, so consequently operate at a higher temperature than you would find in a bearing for instance, so again the viscosity needs to be high so that when the oil is heated and the viscosity reduces, it still maintains sufficient of this to keep the surfaces separated. A final interesting aspect of the Steam Oil is apparent when you consider the recent increase in the popularity of domestic steam cleaning devices. Steam is actually a very effective degreasing agent and is used for the very purpose of removing oil and grease from a kitchen surface, so not surprisingly Steam Oil has to be particularly resistant to this. For this reason, it is a tenacious oil and sticks very well to internal surfaces. Even then it requires

regular replacement, which is why we use lubricators to provide the total loss oil supply.

This leads us to some of the deeper properties of Steam Oil and why we may see different grades of the same oil with different numbers attached to them. Usually these numbers refer to the viscosity of the oil, with the higher number relating to a higher viscosity. This is mainly to enable users of higher performance engines running at higher temperatures, in particular super-heaters, to have an oil that is most appropriate for the operating condition. They generally are not necessary for model engines, even those you may see described as having a super-heater, which invariably is nothing more than a steam drier. Finally, in the Steam Oils section you may well come across the terms 'Compound Oils' and 'Straight Oils' and wonder what these may refer to.

Compound Oils are basically a mixture of two or more different types of oil and may be used for instance in total loss lubrication systems, as most of our model steam engines are, where the oil might contain an emulsifier to assist in the distribution of the lubricant throughout the engine. An emulsifier would make the oil very difficult to separate in the steam separator so would have to be disposed of with the condensate. If your steam engine plant reclaimed either the oil to reuse as a lubricant, or the condensate to reuse as feed water, then the oil would not have emulsifiers in it. A Straight Oil is, not surprisingly, a single consistent type of oil of a single grade and type.



Photo 3. Normal Motor Oil can be obtained almost anywhere and you may even find you can decant a small amount from the gallon can you use to top up the car? More conveniently and slightly more expensively you can also buy it in one litre bottles and keep these specifically for model use.

Motor Oil (Engine Oil)

Motor Oil for me is nothing more complex than our normal car or motorcycle engine oil, which conform to the usual viscosity codes that we are familiar with such as a 10W/30 and 15W/40 etc., the numbers referring to the viscosity ranges they work in, **Photo 3.** These oils contain complex modifiers that have no use to us as model steam operators, but are specifically designed to operate hydrodynamically, making them the best for the rotational parts of the engine as well as offering good levels of protection. This type of oil is perfect for the external applications of our steam engines such as the crankshaft, eccentrics and piston rods etc. and can be used in bearing oil cups and bearing lubricators.

So why not use one oil?

This is by far the most common question asked and a very valid one. If first of all you consider motor oil being used in the cylinders of a steam engine, it is nowhere near viscous enough to resist the scouring by the steam as well as the temperatures involved, so will not provide a high enough level of protection and we would soon get overheating and wear. Conversely, if we used steam oil outside of the engine, because it is so thick and sticky it will actually generate a very high resistance to the shafts turning and so the engine would become quite inefficient. Consequently, the two oils we



Photo 4. A well laid out tool box will make life so much easier at the side of the pond, where you will want to quickly and easily put your hands on gas, water, tools and the different oil types you may need.



Photo 5. Much smaller bottles such as these can be kept in the tool box and then used to easily top up the syringe as needed.

Photo 6. Hypodermic syringes make oiling very easy and convenient and wrapping them in a polythene bag keeps things clean and neat in the box. It is also very easy to see which is which oil, so you can take out only the one you need at the time.



should be using in our model boat engines are a specific Steam Oil in the displacement lubricator and a Motor (Engine) Oil on the external surfaces.

And in practice?

One of the things you do need to get sorted is just how you are going to support your model boat at the pondside with such things as gas, water, oils, tools, etc. and we all have our own preferences for this. Purchasing oil in bulk is obviously significantly more cost effective, but we certainly do not want to be lugging large bottles of oil around with us for every visit, so we need to come up with a more convenient arrangement.

Personally, I prefer to use an aluminium cantilever toolbox for all my steam bits and pieces, with one of the sections being given over to oils, **Photo 4.** I have a small bottle of Steam Oil in there, decanted from the large container, **Photo 5,** which I can use to top up the syringe if necessary at the pondside. To administer oil to the model I don't think you can beat hypodermic syringes, obtainable from most model engineering suppliers or even pharmacy stores, as they make life so much easier. I keep one full of light grease, one full of Steam Oil and one, with a fine

point, full of Motor Oil, **Photo 6**, making oiling the engine externally and filling the lubricator an easy 10 minute job. Changing from one hypodermic is quick and easy, and you can maintain a separate means of filling up the displacement lubricator, **Photo 7**, or externally lubricating the engine, **Photo 8**.

In conclusion

As I said in the beginning, you can get very easily bogged down with lubricating oil theory and well-meaning opinions about steam plants, but if you keep it relatively simple and use a Steam Oil internally and the Motor Oil externally, then you really will not go far wrong. If you want to know more, I would suggest you go directly to someone in the business and ask them what oils they recommend for your purposes. One such supplier who deals specifically with model steam engines is Hallett Oils on Merseyside or MACC Model Engineering Supplies in Macclesfield, but a conversation at a model engineering show may well prove to be the most useful.

Finally, keep the tomato sauce for fish and chips as that is what it is best for, or is it?



Photo 7. Topping up the displacement lubricator is a quick and easy job if the engine is easily accessible and you can remove its cap easily. Don't use a needle on this syringe because the thick oil is very hard to squeeze through it and don't forget to remove the water with a wick as the oil displaces it.

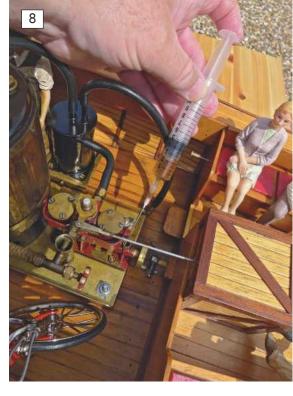


Photo 8. External lubrication is easier with a needle fitted, enabling all bearings and external surfaces to be accessed. The motor oil will flow easily through the needle demonstrating clearly the effects of the different viscosities.

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aving recently moved house, retired from paid work, and having done all the post-move DIY jobs, I found myself looking for something to do. I had retired from employment in property maintenance so am fairly handy and able to have a good go at most practical projects. I had heard of a model boat club with an outstanding record of welcoming new members based in Boston, Lincolnshire, which is near where we live, and so went to their excellent facilities on the outskirts of the town. I was made most welcome and to such an extent that I joined them, there and then. The problem though was that I did not have anything to sail, a bit of a problem if you are in a model boat club and as kit building is not my preferred choice of hobby, nor are 'ready-to-runs', a quick build plan was urgently needed.

In Model Boats magazine (July 2015) there had been an article by Andy Cope about a Springer tug and the description of his build of it looked to be well within my capabilities. Having gone to a couple of model shows, had a good look round and bought some materials, work started on a Springer using his plan and dimensions that were published in that July 2015 issue of MB.

Right: The interior of Emily & Jack, the large Springer tug. Plenty of room for the motor, batteries and electronics. A Mobile Marine Models 545 motor is used.

Large Springer - Emily & Jack

Building took three months and it sails okay. It is named in my parent's memory and the fictitious company name is made-up out of my home address. Most of the parts have been made from scratch with only things like the motor, electronics,

propshaft and propeller, crew figures and some fittings, being purchased. There was an enormous amount of pleasure in creating something from almost nothing, and near the end of Andy's article he asked the question; 'Has anyone made a miniature yet'? Well the answer is yes, because I have!







The technique of vacuum forming styrene sheet at home using homemade equipment to make car body shells for my other hobby has already been perfected. Andy's drawing was reduced to one third the intended size, which came out at around 1:48 scale, making the hull approx. 150 x 75mm (6 x 3ins), or so.

A 'plug' was made and over this the hull shell was vacuum formed. It worked really well, considering that this process does not do vertical sides and sharp corners too well. The deck, wheelhouse and all the bulwarks and covers are made from off-cuts of 1mm styrene sheet fixed together with Polyweld liquid adhesive.

The propshaft is 2mm o.d. with a small propeller and the motor was 50p from a shop that sells surplus electronic stuff. The batteries are four AA cells; the radio receiver and speed controller are from an online auction site; the rudder is brass rod and sheet soldered together, controlled by a micro servo; the figure and tyres are from garden pond shop items and the windows from clear food packaging.

The large version seemed very small when under construction, but when working on this 'Little Springer', that 'Large' version then seemed to be absolutely enormous. The small tug, Matilda Grace, is named after my granddaughter and the fictitious company name is also part of the domestic home address. Matilda Grace sails really well and shows what is possible nowadays to fit in a small model boat.

Conclusion

An interesting challenge and a talking point at the pondside when both are afloat together. There is nothing difficult about building a Springer tug from wood, although I note that a GRP hull is available in the marketplace.

Challenge completed and please enjoy your hobby - Steve Whitelock



Above: A close-up of the Emily & Jack Springer's wheelhouse.



Above: The radar rotates on Emily & Jack and this is the drive mechanism.



Above: Although small, Matilda Grace is still a practical working tug.

Boston Model Boat Club

This club is based in the historic market town of Boston in Lincolnshire, on the A52 between Grantham and Skeaness, and the A16 between Spalding and Spilsby. The marina from where the club operates is located near the River Haven close to the Port of Boston and in the shadow of St Nicolas Church, Skirbeck, one of the oldest parts of the town. Full directions are on the club's website.

Contact details:

Website: www.bostonmbc.co.uk Secretary: Nigel Baker, tel: 01205 356067

Below: Matilda Grace, the small 148 scale Springer is rather more cramped inside its hull.





Moonraker

Ray Biddle builds the Graupner kit

aving built the Robbe Najade many years ago, Ray decided that he wanted to build something similar, but on a grander scale. Mike Sandiford of Southport MBC found a September 2007 issue of Model Boats which had a revue of the Graupner Moonraker kit and that was what Ray decided he wanted. Unfortunately this kit is currently not available, so Ray tried a 'Wanted' advertisement in the Reader's Free Advertisement Section of Model Boats.

The model

To his surprise, Ray had three replies from Scotland and the North East of England. Fortunately, one of the sellers had purchased together with the complete kit, the fittings, three waterjet propulsion units and a bow thruster. That was the one he went for, but on opening the box realised that it must have been stored for quite a long time as the plastic had started to yellow and the plywood parts were warped. Ray managed to straighten the plywood by dampening and bending it in the opposite direction, and then leaving it on the bench overnight. Another obsolete item were the three shaft couplings, but stainless steel driveshaft couplings as used on model cars, fitted perfectly in the allocated space and to each propshaft and motor. Electronize made the forwards only speed controllers as a special order.

Ray used to work for BAE Systems as an electronics engineer and for that reason he purchased the electronic modules in kit form from ACTion R/C Electronics (now Component Shop). The three plastic boxes used to house the receiver and other electronics, charge and battery monitor plus the main switch box, were all purchased from Maplin Electronics.

For the motors, three Speed 700 BB Turbo Neodym have been used. All the lights have been fitted with super-bright LED's, and on the rear table is a working Tiffany lamp from the Doll's House Emporium. For extra brightness, two super-bright LED's are installed in each searchlight. The resistors for all the lights were mounted together on an electrical Veroboard.

On the water

The model proved to be very maneuverable, but of course one obvious problem was that it would not reverse. This was cured by retracting the trim tabs, thus allowing the water from the reverse buckets to flow under the hull. Being only the third model boat Ray has built, he found some aspects of the project very difficult and he even gave up on it for one year, before recommencing work by building the superstructure. However, at the end he has thoroughly enjoyed it all and is now considering further modifications and improvements.



Conclusion

It seems a shame that some of the well-known model boat kit manufacturers have either disappeared or now shrunk to a shadow of their former selves, but it just goes to show that it may still be possible to find that elusive model boat kit you desire by placing an advertisement in the free Wanted section of Model Boats. Ray's next project is to convert the Robbe Najade to brushless motor drive.

(Acknowledgement - I would like to thank Alan McGlashon for taking the photos of Moonraker and Mike Sandiford for his help and inspiration - **Ray Biddle**)



Above: Three forwards only Electronize esc's have been installed.

Right: Ray Biddle lowering Moonraker in to the water at the purpose built Southport MBC pond.



Below: A general view of Moonraker's interior - all very neat.







Above: Ray has put all the electrics into dedicated boxes for ease of maintenance and knowing 'what's what'.



Above: The motor to propshaft stainless steel couplings are from an r/c car.





Monitor Novgorod ovgorod (Russian: Ноbгород) was a having never seen a circular warship before. monitor built for the Imperial Russian The model has a total length including the Navy in the 1870's. She was one of small bulge on the hull over the rudder of the most unusual craft ever constructed 12 inches (305mm) and a beam (its regular and survives in popular naval myth as one diameter) of 11 inches (278mm). The model

of the worst warships ever built, but a more balanced assessment shows that she was relatively effective in her designed role as a coastal defence ship. The hull was circular to reduce draught while allowing the vessel to carry much more armour and a heavier armament than other warships of the same size. Novgorod played a minor role in the Russo-Turkish War from 1877 to 1878 and was reclassified as a coastal defence ironclad in 1892. She was decommissioned in 1903 and used as a store ship until sold for scrap in 1911. Length was 101 feet and beam was 99 feet.

The model

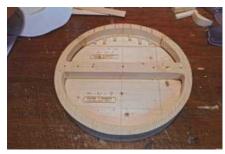
I saw a picture of the Novgorod and was very interested in building this unique vessel, is non-working, as many of mine are, and the hull is of wood, bread and butter construction, with the basic slices circular with their centres cut away, except for the 'crust' bottom piece. An extra small bulged section was added to the stern, if you can call it that, just above the rudder.

The deck is from a single piece of mahogany and a black fine point pen was used to scribe the plank lines. The turret, guns, funnels and propeller shafts were all turned on a wood lathe with the ends of the cannons and tops of the funnels drilled out. The guns (cannons) in the turret are able to elevate.

The main cabin has been made with two pieces of white Pine glued together and cut to shape. Its front and sides have been drilled for the brass port holes as well as its top (and

the deck), for skylights. These were made from 6mm diameter clear plastic rod, cut to 12mm lengths and their ends polished. They were then inserted flush with the external flat surfaces. The cowl vents have been made from two different sizes of dowel rod and the rear cabin is of 1/16 inch (1.5mm) Basswood.

The railings are nothing more than long straight pins and black sewing thread. The lifeboats have been carved from blocks of wood and all the individual parts and fittings were painted prior to assembly, wherever possible. Novgorod is displayed on a pedestal stand and attracts much interest at shows because of its unique appearance as a warship.



The basic hull is circles of wood with their centres cut away.



The deck is of Mahogany, lined to represent the planks.



The open turret with its two cannons is in the centre of this circular warship.



A starboard stern quarter view



The stern before the hull extension over the rudder was added.



Display Stand for Dorothy N

David Wagner with a novel presentation for his model

eatured in Readers' Models in
October 2016 MB, David decided he
wanted to display the model in his
home in an appropriate way and this is
the result.

The anchors that support the top platform are of plywood with ten coats of black paint to disguise the fact they have been made from this laminated wood. The top is of solid mahogany with ten coats of marine varnish applied by brush and wet-sanded between coats, a final eleventh coat being sprayed. The ship's wheel behind and above Dorothy N was made in Scotland for the S.S. Ashleaf, her last name before being scrapped in Hamilton, Ontario, a vessel that formerly plied the Great Lakes.





Bill Neate's models

Two Scandinavian Ships

ill lives in Cork, Republic of Ireland, and was interested in the Gallery by David Walter of 'Ships at Bergen' published in the July 2016 issue of MB. He has been lucky enough to sail on quite a few Scandinavian vessels over the years, as well as sailing a vacht around the coasts of that part of the world, and has noted how remarkable it is that so many of the older ships are still on active service, compared to other regions around Europe. His main interest is static models, the only problem now being a lack of window sills and shelves on which to put them. Visits, in particular to Bergen, confirmed how similar the D.S. Lyngen was to the Stord 1 illustrated in that David Walter Gallery and now in his own words are two of his Scandinavian ship models.

M.S. Stockholm - Photo 1

I have known this ship well for over twelve years. She is registered as a classic ship with the Swedish Maritime Trust and was built in 1953 for the Swedish Maritime Administration. In 1999 she was bought by the current owner and converted to carry twelve passengers and spends her summers navigating the coasts around Svalbard and still uses her original single screw diesel engine. I have also sailed on her sister ship, the Origo, and seen another, the Malmo, in Gothenburg. She is a regular visitor to Bergen on her return North in the Spring from her

home port of Gothenburg. The traditional wheelhouse has the original binnacle and steering wheel, but the controls used today are much more push button and computer orientated. I have sailed extensively around Svalbard in her and have been lucky to sail north in her from Oban, Bergen and Gothenburg. The sloping bow is typical of ships designed for sailing into ice resulting in a rather rounded hull, not the best for comfort in bad weather.

The model was not too much of a problem as the drawings were obtained from the skipper and owner. Over the years quite few photos had also been accumulated, of both the interior and exterior. With the knowledge from this of the length and breadth of the ship it was just a matter of relating them to the intended scale of the model.

It was fortunate that from an earlier uncompleted model kit there was still the hull moulding, which after shortening and re-modelling the stern, became a good representation of Stockholm. The owner of the full-size vessel has been keen to keep everything as original as possible, including the two wooden lifeboats, but there is of course now an array of 21st Century lifesaving equipment, which apart from the liferafts are not on the model. Fittings where possible have been made rather than purchased. For example, by cutting a leg off two split pins and binding them end to end with fuse wire, this makes a decent scale

copy of a rigging screw. Model supplies are difficult to find in Cork, but there is a superb craft shop and large spherical buttons make ideal fenders. The mast ladders are cut from the mesh of a redundant bird feeder and the other metal fittings are available from UK suppliers. The two Zodiac rubber boats were made from garden hose, but sadly have been reduced to one when the inflated side tubes failed to stay together.

D.S. Lyngen - Photo 2

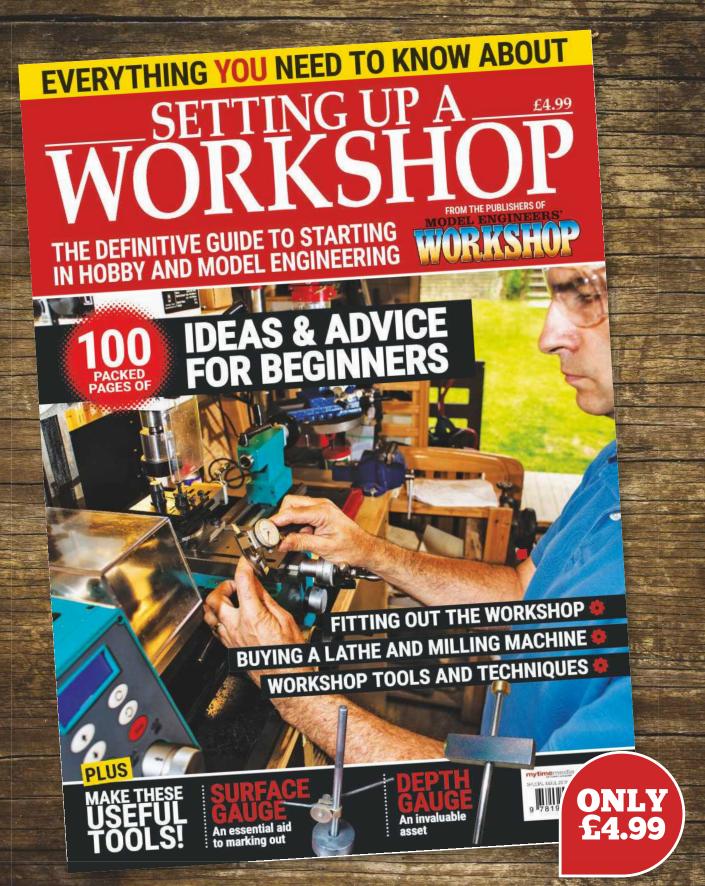
This vessel took me from Tromso to Svalbard in 1961 and a few years ago I found a half model of her in the Tromso Arctic Museum. After a year or two of research the original shipyard drawings were located and copies acquired. On the Internet there is a good supply of information such as her crew list, numbers of passengers carried and the coal burned by her original engine per hour etc.

She was built in 1931, displacing 488 tons with a capacity for 50 passengers, but commenced a chequered career very early in life, since after being ordered in 1930 she was not delivered until late-1931 due to strikes and other problems. She was lent to the Norwegian Ministry of Defence for the winters of 1935 to 1938 after she had carried passengers to Svalbard, and then lent to the Norwegian Navy in 1939 attached to a submarine division. For the war years she was commandeered by the German Kriegsmarine and in 1947 was put back into service by the Hurtigruten cruise line until when running between Tromso and Svalbard in a snowstorm, she was involved in a collision, later also suffering machinery failure and damage to her propeller and rudder due to ice. Finally, she was converted for use in the fishing industry, but apparently came to an ignominious end off Harstad. I would add that the First Class accommodation was outstanding with superb detailed decoration to the interior woodwork, although I didn't get to enjoy those facilities.

For the model, no commercial hull moulding would suit, so it was built as plank-on-frame. By laying the keel, bow and stern, the frames between were cut to size and then planking commenced. Several frames had to be remade, as it (they) didn't look right. Once the basic hull was complete and the deck installed then it was back to the calculator, dividers and a ruler to establish all the other dimensions using photographs as the basis for the calculations. Commercial castings were used for the stanchions, anchors and any other fitting that could not otherwise be made.



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Left: A Griffon 2000 scale model hovercraft. The full-size versions are used principally by military and rescue organisations.

Right: The iconic passenger and vehicle carrying SR.N4 Mountbatten Class hovercraft could carry up to 250 passengers and 30 vehicles.





Above: Not yet finally painted, but this SR.N5 Warden Class hovercraft will be familiar to many readers, first flying in 1964.



Above: The SR.N6 hovercraft is often overlooked, but makes into a nice model. It was also known as the Winchester Class and was actually the first production class to properly enter commercial service.



Above: The British Hovercraft Corporation API-88 type is still in use, operating between Southsea and the Isle of Wight. It can seat up to 101 passengers or 90 troops.

The Model Hovercraft Association

Background information supplied by Richard Bristow and Tim Stevenson

he great thing about r/c models is the broad spectrum of types that can be built, all with so much scope for modellers to experiment with and develop their own ideas. Model hovercraft, although a small sector have been around as long as there have been full size versions and before the famous SR.N1 came to prominence, miniature versions were used for experiments with the concept.

So you're thinking about model hovercraft?

With relatively few kits in the marketplace when compared to displacement boats, model hovercraft are a subject with considerable scope for builder input and problem solving, and they are great fun to operate under radio control. There are a number of sources of practical information available and the first is via our Model Hovercraft Association (MHA), its website being listed at the end. The association was formed in 2004 to bring some organisation to the hobby of model hovercraft construction and operation, which up to then had been supported by generally some isolated groups and individuals across the UK. We have a lot of knowledge within the association and are always willing to help newcomers, and on the website you can find a free to download plan, and our members have access to more elaborate model plans.

Using LiPo batteries and brushless motors it is possible now to build true-scale models with a fantastic performance, or the semi-scale racing type of craft with a phenomenal performance over water, land, snow and sand etc. To be successful, a model hovercraft must be kept light, the builder thinking perhaps rather more like an aeromodeller than a model boat constructor. This is borne out by the fact that historically full-size hovercraft have originated from the likes of Saunders Roe, notably the SR.N4 and SR.N6 amongst others utilising the aviation background of that famous company.

Models

Larger models are easier to build 'light' due to their relative scaling, volume and mass and our model hovercraft normally use bag skirts and the wear on these is nothing like that for a full-size craft. Pre-stitched skirts can be purchased for some models, thus overcoming the 'stitching' challenge for us model makers. Internal combustion engines are a viable alternative power source to electric motors for model hovercraft, but the noise generated will, as always, be a problem when used in public spaces.

Kits

There are two obvious kit producers, Palaform (website at the end) in the UK being one with a range of practical electric working models that all are nice, easy to put together and perform well. Palaform also offer an i.c. version, but once again, noise can then be a potential problem. The other supplier is American, Goldstein Hovercraft, with a wide range of kits as well as supporting information

and its models seem to perform well, again with its website listed at the end.

Alternatively, you can scratch build a model of something like the SR.N5 and SR.N6, their plans being available from the Hovercraft Museum, but you may struggle to get anything really modern such as the AP1/88 that Hover Travel currently operate. One of the leading enthusiasts in our hobby is Mark Porter who is the designer of the Griffon 2000 craft and he has made some great models with a few of his plans now being available to MHA members.

Conclusion

Please take a look at the Model Hovercraft Association Website, where you can find a plan for an easy build 'Kiddy Craft', or find us on YouTube and Facebook. In addition MHA members also get access to additional plans, including the Griffon 2000TDX and SR.N6 plans, both kindly provided by Mark Porter. Alternatively, please come and see us at one of the shows we attend annually such as Wings and Wheels at North Weald in Essex, held in June of each year, or The Hover Show at the Hovercraft Museum in Lee on Solent, Hampshire (please check the website for dates) and other events.

Websites:

Model Hovercraft Association: www.modelhover.org Palaform Ltd: www.modelhovercraft.co.uk Goldstein Hovercraft: www.gohover.com

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Marie Joseph

Scale: 1:16 Length: 870mm Beam: 150mm Designer: Andre Moreau Difficulty ' Product code: MAR2389

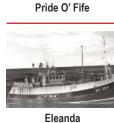


Santa Audrey

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Scale: 1:28 Length: 815mm Beam: 234mm Designer: Jim Pottinger Difficulty *** Product Code: MAR2413 WAS £18.99 NOW £17.09 + p&p



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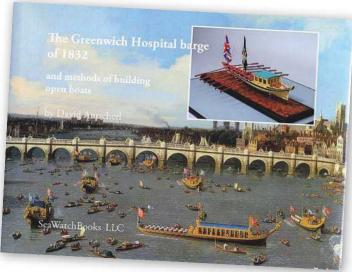
● These pages are open to you - your shop window to bring to the attention of our thousands of readers, new products - kits, books, videos, engines, R/C gear, motors, anything that could be of interest to model boat builders. Send your information initially to Model Boats Test Bench, PO Box 9890, Brentwood, CM14 9EF - or ring the Editor on 01277 849927 for more details.

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Written by David Antscherl. Hardback, 88 pages, 224 x 287mm, 135 photographs, in colour with line drawings and diagrams in black & white, plus two loose-leaf sheets of scale plans, ISBN: 978-9904041-8-7, Published by SeaWatch Books* LLC, 19 Sea Watch Place, Florence, OR 97439, USA. Website: www.seawatchbooks. com. email: seawatchbooks@ gmail.com. Tel: (541) 997 4439. This book is only available from the publisher. Price: \$45 plus \$9 Shipping & Handling US; \$20

Canada; \$30 all other countries. In the 19th Century, barges rowed by watermen dressed in livery with ensigns and flags flying, were regularly used by royalty, the Lord Mayor and the various City Guilds on ceremonial occasions upon the River Thames in London, The Greenwich Hospital Barge of 1832 would have been exclusively used on such parades by the Governor of the Greenwich Hospital, more formally The Royal Hospital for Seamen, founded in 1692 by Queen



Mary. The Governor in 1832, the year the barge was built, was Admiral Sir Richard Keats. He was succeeded in 1834 by the celebrated Sir Thomas Hardy of Trafalgar fame.

In this new book, internationally renowned period ship modeller and author David Antscherl, takes a seemingly difficult to model clinker boat, and with detailed text and a step by step pictorial guide, he covers every aspect of the build, including the tools, jigs and techniques used in the construction process, all of which makes it achievable for many ship modellers. There are two separate, loose sheets of

1:48 scale plans and the book concludes with a section on 'other methods of building small open boats', using the carvel or smooth sided method of construction. David shows how to create a plug then frame over it to build a ship's boat. Yet another superbly written and illustrated book from this 'master model maker' which I'm convinced, will be an essential reference work for anyone wishing to build models of this type of barge and open boat.

* SeaWatch Books, LLC regularly advertise in this magazine.

Book Review by **John Deamer**

British and Commonwealth Warship Camouflage of WWII Volume 3: Cruisers, Minelayers and Armed Merchant Cruisers

Written by Malcolm Wright. Hardback, 192 pages, 265 x 208mm, 800 full colour illustrations, ISBN: 978-1-84832-420-6. Price (RRP) £30. Published by Seaforth Publishing, an Imprint of Pen & Sword Books Limited, 47 Church Street, Barnsley, South Yorkshire, S70 2AS. Tel: 01226 734222, website: www.seaforthpublishing. com. Available direct from the publisher or through the usual retail outlets.



During the Second World War, navies developed low visibility camouflage, applied to both vertical and horizontal surfaces of their ships in order to reduce visibility by blending in with the sea, or to confuse the identity of a ship by obtrusive patterns.

In this new reference work (Volume Three in the series), the author, Australian maritime artist and internationally-known wargames designer Malcolm Wright, discusses the paint schemes that adorned the cruisers, minelayers and armed merchant cruisers of the Royal Navy and the Commonwealth, all depicted in detail, together with notes on the changes of armament and electronics that impacted the outward appearance of each ship.

Starting with the older cruisers, the book goes on to cover all the other cruiser classes taking in heavy cruisers and both pre-war and wartime cruisers; a large section also covers minelayers and armed merchant cruisers (AMC's)

Where possible, both sides of the ship are depicted. In some cases, individual ships are shown in the several schemes that they wore at different times during their war service. With 800 full colour illustrations, all of named vessels, this book concentrates an astonishing level of information, regarding paint colours, schemes and patterns into a single volume to provide a unique one-stop reference source.

Many paint schemes would be difficult for any reader to unearth other than with the most intensive research, which may, after all the intervening years, prove to be impossible. This is, surely, the most invaluable tool for ship modellers, naval historians, collectors, and wargamers. Book Review by John Deamer

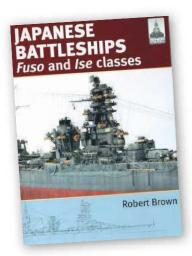
ShipCraft 24 - Japanese Battleships Fuso and Ise classes

Written by Robert Brown with plans and colour artwork by George Richardson. Softback, 64 pages, 297 x 210mm, over 170 photographs drawings, and plans in both colour and black & white. ISBN: 978-1-4738-8337-6, price (RRP) £14.99. Published by Seaforth Publishing, an imprint of Pen & Sword Books Limited 47 Church Street, Barnsley, South Yorkshire, S70 2AS. Tel: 01226 734222, website: www. seaforthpublishing.com. Available direct from the publisher or through the usual retail outlets.

This new work by maritime author Robert Brown, is devoted to the Fuso and Ise classes (Fuso and Yamashiro - Ise and Hyuga) four Japanese 14 inch-gunned battleships of two closely related designs. Originally completed between 1915 and 1918, they were radically rebuilt during the 1930's emerging with towering pagoda bridge structures that made them instantly recognisable, while the wartime conversion of the last pair (Ise 8 Hyuga) into a unique hybrid carrier-battleship configuration, compounded their strangeness. These odd features make the ships challenging, but remarkably popular, subjects for modellers.

This is the latest volume in the ShipCraft series which provides in-depth information about building and modifying kits of these famous warship types. Lavishly illustrated, it takes the

modeller through a brief history of the classes, highlighting differences between sister-ships and changes in their appearance over their careers. This includes paint schemes and camouflage, featuring colour profiles, highly detailed line drawings and scale plans. The modelling section reviews the strengths and weaknesses of available kits, lists commercial accessory sets for super-detailing of ships and provides hints on modifying and improving the basic kit. This is followed by an extensive photographic gallery of selected high quality models in a variety of scales. The book concludes with a section on 'Selected References', including: books, large scale plans and relevant websites. In short, this



book is essential reading and reference material for anyone contemplating, or in the process of, building a model of one of these unusual warships.

Book Review by John Deamer

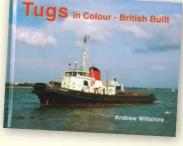
Tugs in Colour British Built

Written by Andrew Wiltshire. Hardback, 80 pages, 196 x 248mm in a landscape format, over 100 colour photographs, ISBN: 978-1-902953-80-9. Published by Coastal Shipping Publications, Bernard McCall, 400 Nore Road, Portishead, Bristol, BS20 8EZ. Tel: +44(0)1275 84617, email: bernard@coastalshipping. co.uk. Website: www. coastalshipping.co.uk. Price (rrp) £17.00. Available direct from the publisher or through the usual retail outlets.

This new pictorial album by respected maritime author, Andrew Wiltshire, is intended

as a sequel to his first book on tugs, 'Looking Back at British Tugs'*, published in 2007 and concentrates on examples of tugs completed in small British shipyards that once existed

The book features tugs built in 46 different UK shipyards, many now no longer in existence, that specialised in building vessels both large and small for the home market as well as for customers overseas, and not just the British colonies. Such was the quality of British-built tugs, that some went on to give many years of service. In 2016 a surprising number that have exceeded their 50th birthday can still be found hard at work in rivers and harbours



around the world.

The tugs are pictured in full colour, each with a caption that denotes when and where the photograph was taken, the name and location of the shipyard, the date completed and the company or organisation it was originally built for. Andrew also gives us a brief insight into the specification and career history,

including propulsion type, power output of the engine(s) (in bhp) and in some cases, the 'bollard pull' (in tonnes), together with any changes in appearance, ownership and name, concluding with its current whereabouts or, in the case of the older tugs, their final disposition.

Amongst the modelling fraternity there's always been an interest in tugs and this extremely well presented and informative book would make a welcome addition to any tug enthusiast's maritime bookshelf.

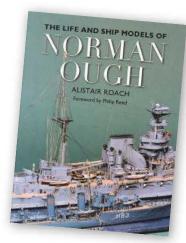
* Also published by Coastal Shipping Publications (see above)

Book Review by **John Deamer**

The Life and Ship Models of Norman Ough

Written by Alistair Roach.
Hardback, 168 pages, 254 x
195mm, over 150 b&w and colour
photographs, line drawings,
diagrams and plans. ISBN:
978-1-4738-7947-8, price (RRP)
£25.00 Published by Seaforth
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publisher or through the usual
retail outlets.

Many readers will remember the excellent article by Alistair Roach in the September 2015 issue of this magazine, which coincided with the fiftieth anniversary of the death of Norman Ough (1898 to 1965) and who is considered by many



as one of the greatest marine modellers of the Twentieth Century. His exquisite drawings and meticulously detailed warship models have come to be regarded as masterpieces of draughtsmanship, skill and realism. Indeed, more than technically accomplished, his ship models are truly works of art.

Ough lived and worked most of his adult life far for the sea in a tiny attic high above the Charing Cross Road in London. His frugal existence and total absorption in his work was regarded by some as eccentric, but he became one of the most sought-after masters of his craft. Earl Mountbatten commissioned him to model all the ships he had served in, while his model of HMS Queen

Elizabeth was presented to Admiral Earl Beatty.

Incorporating many of his original articles from Model Maker magazine and its successor Model Boats magazine, together with detailed line drawings. plans and photographs of his models, many of which are held in maritime museums and private collections throughout the world, this superb book by author and model boat historian Alistair Roach, is both a tribute to Ough's lonely genius and a practical treatise for ship model makers, while naval enthusiasts and historians will welcome his remarkable insights into the Royal Navy ships of the two World Wars.

Book Review by **John Deamer**



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OUR LASS II trawler kit inc. motor. Unboxed, £150, buyer collects. David Shears, tel: 01243 573887 (Chichester, W. Sussex). VOSPER MTB 77. Italeri kit, 24 x 6.5 inches, painted light Admiralty Grey, mounted on wood plinth & could be converted to r/c, £95 (Perspex case available FOC). Buyer collects, P. Keevil, tel: 01628 622944 (Maidenhead).

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ur seventh race of the season took us to the fabulous King Lear Lake near Leicester for the first time during the 2016 season. It was a relief to know that this large inland expanse of water was mainly free of weed, something which has caused some problems at other venues as we have moved into the second half of the season. Thanks to the efforts of Marie, Grahame and Tony from the King Lear MBC, any remaining perimeter weed was cleared from the lake prior to race day, giving ideal conditions for racing. These individuals from our host club also did an excellent job all round by erecting a temporary perimeter fence around the boat preparation area and providing the rescue

boat and other essential equipment.

Turnout was disappointing though, with perhaps the lowest number of entries seen for some considerable time. We were aware that some of the regulars had ongoing family commitments, making them unable to attend, and in some of the classes the top places for the 2016 Championship

had already been pretty much decided and we wondered whether this may have dampened the appetite of those whose final placing in the results table would be unaltered by the remaining races of the season? However, and irrespective of this, there were more than enough of us to ensure that some good racing and fun that would be enjoyed by all, which as always is the main aim of the day.

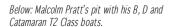
Mark Wild had volunteered in advance to be OOD and run the event, the low number of entries making his job somewhat easier. He called the driver's meeting at around 0945hrs to run through the usual key safety points, reminding members of the importance of slowing down and giving plenty of space when in the vicinity of the rescue boat. With everyone happy with the rectangular course layout, racing got underway just after 1000hrs and its highlights?

AA Class

Garry Dickson had the easiest race ever in this class as his Magnet was the only boat entered and for this reason all he had to do was complete one lap for a class win and the maximum 15 points for the championship table. He actually ran his boat with the smaller Catamaran T1 Class craft and after completing six laps, brought it in. Mark Beesley would normally have run his Cavalier in this class, but the radio gear in the boat had previously experienced interference problems and he had not had time to change it for new equipment.

A Class

All three entries in this class were powered by the popular and inexpensive ASP 46 engine. It proved to be a fairly easy win for Mike Barnes, whose Challenger 43 reached 33 laps in the first heat leaving him in first place. Both Mark Beesley and Luke Bramwell had problems in getting their boats started and running reliably. Mark Beesley's Manta Ray seemed to be just chugging along for most of his six laps before he brought the boat in to try and







Right: Mike Barnes (D4) driving a tight course with Mark Beesley's boat going wide.

Below: Malcolm Pratt prepares to start his B Class Warhawk boat.



Below: Two very different hull designs are seen here battling it out in the D Class, a red Sigma versus a white Patriot boat.







adjust the carburettor settings, although even this didn't seem to make much difference. The ASP engine of Luke Bramwell's Challenger was very reluctant to start and by the time he got it going, the first heat was nearly over leaving him with just four laps from Heat One.

With Mike's substantial lead after Heat One, both Mark and Luke agreed to abandon the afternoon's race and accept the positions based on the lap totals from the morning heat.

B Class

As Malcolm Pratt was the only person who had entered a boat in this class, this pretty much guaranteed easy championship points for him. He did a couple of laps of the course to warm up the engine and thus got first place.

C Class

This was the third nitro (glow fuel) powered mono-hulled class that had only one entry, this being the CMB 91RS powered Stratos owned by Mike Gelson. At the previous race, the gearbox in this boat had stripped the teeth off the lower Delrin gearwheel,

so this was a good opportunity for Mike to give it a good test run and bed-in the new parts. Mark Wild allowed Mike to run his Stratos with the D Class (Spark Ignition) mono-hulled boats and although it stopped once in the first heat, he enjoyed some good racing practice, achieving 68 laps in total and of course first place was once again assured.

D Class

Thankfully this popular Spark Ignition (S.I.) powered class had four very competitive boats entered and this helped liven things up in terms of the exciting race action that we have become accustomed to seeing. For Mike Barnes though, disaster struck just before the hooter sounded to start the race as the cord of the pull-start mechanism snapped at the first tug. With some significant grovelling by Mike to the OOD Mark Wild, this resulted in the other participants agreeing to halt the start of the race to allow him to replace the pull-start. This was an excellent example of great sportsmanship, although with normal entry numbers on a busier day he would have had to have retired the boat and allowed the race to continue. Once the race got underway, Mike drove his Patriot practically flat-out for the duration

Above: The rear end of Mark Beesley's D Class Apache. Note the substantial shielding of the protruding tuned pipe to avoid possible burn injuries.

Below: Ouch! See the split side in Malcolm Pratt's T2 Aeromarine catamaran following its collision with Mark Beesley's boat.





Left: Tony Bollard's AC Blast Catamaran with its lid off.





Left: B9: Malcolm Pratt's Warhawk and an easy win for him in the B Class. (Photo courtesy of Judith Beesley)





BMPRS 2016 Championship Table, late-September 2016

Top three in each so far: class & points

AA class 1 Garry Dickson 87 2 Kian Searle 51 3 Craig Dickson 45 **A Class** 1 Mike Barnes 55 2 Kian Searle 3 Luke Bramwell 50 **B** Class 1 Malcolm Pratt 90 2 Garry Dickson 36 27 3 Bernard Holder C Class 1 Mike Gelson 87 2 Ian Searle 3 Robert Daniel 15 **D** Class 1 Garry Dickson 81 2 Mike Barnes 68 3 Malcolm Pratt 48 Catamaran Class T1 1 Mike Barnes 90 2 Luke Rramwell 75 Catamaran Class T2 1 Garry Dickson 73 1 Malcolm Pratt 73 1 Mike Barnes 73 (The full table is on the website:



of both heats, keeping tight to the buoys in the process and with an equal 43 laps scored in both heats, the 86 lap total earned him first place.

Garry Dickson's MPM 31 powered Saturn, which had suffered substantial damage to the bow of the hull at the previous race meeting, had been repaired during the two week interlude. He enjoyed a good race but was somewhat unlucky to pick up a six feet long clump of weed and plant growth which got wrapped around the rudder of the boat. He had to bring it in to clear it which cost a good number of laps in the first heat, but Garry still ended in second place with 79 laps in total.

Mark Beesley's Zenoah powered Apache appeared to be running really quickly and at one point looked as though it might be a contender for first place. However, when powering over the wake of the rescue boat he underestimated the impact of the waves which sent the Apache into a spectacular somersault requiring it to be rescued and restarted. This one incident lost a lot of laps and he ended up in third place with a 63 lap total. Malcolm Pratt's



Left: Mark Wild adjusting the carb' on the OPS engine of Luke's Sprint Catamaran. (Photo courtesy of Judith Beesley)

Above: Garry Dickson's Magnet had an easy win in the AA Class. (Photo courtesy of Judith

Sigma also put on an excellent display of racing, this capable hull achieving some very impressive speeds, but in the first heat the boat appeared to spin out near Buoy Two, then went round in a couple of circles before stopping. It took some time for it to be rescued having stopped so far away from the pit area, and Malcolm ended up in fourth place with 62 laps. Nevertheless, these four boats clocked up nearly 300 laps between them, which resulted in some exciting racing.

Catamaran T1 Class

This class for all of 2016 has been pretty much a two horse race between Mike Barnes and Luke Bramwell. This day was no exception, although Mike had a relatively easy victory, his X-Cat 38 running faultlessly reaching 75 laps in total for first place. thought that Mike's ASP 46 engine was developing more power than previously and he explained that by going one notch richer on the main fuel needle, the engine was now running that little bit quicker.

Luke Bramwell presented a boat that he had not previously raced, a Sprint Cat fitted with a powerful OPS 40 engine. Infuriatingly the engine kept stopping in the morning heat and the reason was not immediately obvious until he spotted that the pressure feed silicone tubing (to pressurise the fuel

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supply) had split where it connected to the tuned pipe feed. It then split a further couple of times, before he and his father (Mark Wild), realised that the feed pipe had a sharp burr causing the problem which was then easily fixed with a file. Luke did manage to have a better afternoon heat in which he scored all of his 22 laps for the second place.

Catamaran T2 Class

The popularity of spark ignition engines certainly saved the day with a total of six boats entered in this class featuring the bigger catamaran tunnel hulled craft, although Malcolm Pratt's entry was nitro (glow fuel) powered. This Leicester venue suits larger and more powerful boats as the sizeable lake allows for a big course and plenty of room for these boats to run at maximum speed.

Garry Dickson's PMC powered Mercury was driven consistently without any incidents and achieved 76 laps in total, comfortably earning him first place. Somewhat bizarrely though, when Garry brought his boat in at the very end of the race and despite having had no collisions, he noticed that the

propeller was bent, suggesting that it had hit some debris in the water.

Mike Barnes' Zenoah 26 powered Thunderbolt gradually slowed down and stopped during the first heat. Upon recovery and removal of the top hatch, he immediately spotted the problem. The cooling feed pipe to the cylinder head had come off causing the engine to substantially overheat. He wisely allowed the engine to cool down gradually, forfeiting the rest of Heat One, before inspecting the engine again at lunchtime. Thankfully, and perhaps very fortunately, the engine had suffered no permanent heat damage and Mike enjoyed an excellent second heat, ending up with 57 laps in total and second place. The question was: Would he have achieved first place in this class if it were not for the cooling pipe mishap?

Gary Crisp raced a very imposing looking Joysway F1 Tunnel hull boat, but it stopped several times despite adjustments to the engine's settings. Although Gary's boat performed better in Heat Two, his lap total of 23 was only good enough for third place. Tony Bollard's AC Blast Cat got off to a great start with impressive speed and stability, but 15 laps



Above: Mike Gelson's Stratos at speed - the black thing sticking up is the starter belt. (Photo courtesy of Judith Beesley)

Gary Crisp's Best Boat of the Day

It's worth our while to have a quick look at this catamaran with its top removed. On the water it looks impressively realistic and you'd be forgiven for thinking that it is powered by a real outboard motor.

Photo 1:

This shows the boat from the rear starboard side, with its dummy outboard motor cover hiding the rear section of the tuned pipe. The cooling pickups on this boat are slightly unconventional in that instead of taking two feeds from small slots (or tubes) machined into the rudder blade, it takes only one from the rudder blade. You can see a second vertical brass tube going through the rudder support strut serving as the second water pick up. Also visible and just in front of the dummy outboard cover is a CNC two-part clamp supporting the tuned pipe. That is bolted, via two rubber mounts, to the transom deck to allow for a little movement and dampen vibration.

Photo 2:

This shows the front of the boat from the port side with its powerful Tiger King engine in the middle. This arrangement has what is known as a 'wrap to centre' manifold (or header), which enables the tuned pipe to be mounted right down the centre of the boat.

Have you spotted the position of the fuel tank? Yes, it is in front of the engine towards the nose of the cabin of the boat.

Photo 3:

A closer view of the Tiger King engine. This particular engine has a vee-grooved starter pulley that is visible to the right of the engine. Instead of a pull-start mechanism, a hand held electric starter is used with a vee belt





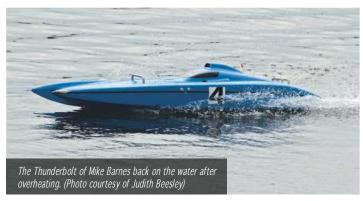
to turn it over when starting. The picture also shows the big bore carburettor bolted to the side of the engine with two hex' bolts, its fuel needle adjustment screws easily accessible to top right of the carb'. Also note the red button towards the lower right of this picture and this is the kill switch which when pressed stops the engine by means of breaking the ignition circuit.



The various loops of silicone tubing visible in this picture are all part of the watercooling system which cools the cylinder head, the exhaust port area and the connection between the manifold and the tuned pipe, so there are three water inckets in all

Gary's boat is a pleasure to see in action on the water and at the lake side.





Above: Luke Bramwell's Sprint Catamaran going well in Heat Two.

Right: Mark Beesley's Conquest running well before the collision that ended his race early. (Photo courtesy of Judith Beesley)

Below: Mark Beesley's boat (D176) being rescued after he misjudged the wake from the rescue boat!



Position Name

Garry Dickson

A Class (Morning heat only)

Mike Barnes

Mark Beesley

Luke Bramwell

Malcolm Pratt

C Class (Ran with D Class)

Mike Gelson

Mike Barnes

Garry Dickson

Mark Beesley

Mark Beesley

B Class (Ran on own)

AA class

D Class



into the race he misjudged Buoy 4, hitting it hard and full-on, stopping the boat instantly. Following rescue, he realised that this incident had damaged the Zenoah engine as the crankshaft appeared to have twisted, which was evident by the 'wonky' flywheel. It is possible that water taken onboard during the collision had entered the air intake of the high revving engine, and so causing a hydraulic lock and massive internal stress to the components.

Heat 1

6

33

6

4

2

26

43

36

34

Heat 2

0

0

0

()

42

43

43

29

Total

6

33

6

4

2

68

86

79

63

Anyway, that was the end of the race for Tony with 15 laps giving him fourth place.

He wasn't the only one who had to retire his boat after the first heat. Malcolm Pratt's Aeromarine had a major collision with Mark Beesley's Conquest at speed early into the first heat. The hull of Malcolm's Aeromarine suffered a gash in the side of its hull and its CMB 91 engine had lost compression. Also as a consequence of the collision, Mark Beesley's Conquest suffered damage to its transom mounted components, including the rudder, propeller and a badly bent strut support. As a result of this carnage, both Malcolm and Graham retired their boats with just five laps each.

Winding up the day's racing

The low turnout was disappointing, but those who did come thoroughly enjoyed the day with plenty of fun and some eventful racing. We thought that we might have insufficient people to pit for each other and crew the rescue boat, but as it turned out everyone mucked-in and helped, leading to an efficient event with no problems on the day. Thanks were given to our host club members and to Sally Dickson who looked after the lap counting with some help from me at the race control desk. The winners were presented as usual with certificates for the top places in each class and local member Gary Crisp was awarded Best Boat of the Day for his F1 Tunnel hull.

Conclusion

With only a couple of races left to run in 2016, the current Championship Table shows the current top three positions in each class and although the first places in several of the classes have already been determined, the Catamaran T2 Class in particular has everything still to play for with the top three all having equal points, so this class will go to the wire to determine the eventual winner.

Cheers for now – Craig

Malcolm Pratt Sigma Zen 21 41 62 F1 Tunnel II Catamaran Class

T1 Catan	naran Class					
1	Mike Barnes	X-Cat 38	ASP 46	39	36	75
2	Luke Bramwell	Sprint Cat	OPS 40	0	22	22
T2 Catan	naran Class					
1	Garry Dickson	PMC Mercury	MPM 31	38	38	76
2	Mike Barnes	Thunderbolt	Zen 26	16	41	57
3	Gary Crisp	Joysway F1 Tunnel	Tiger King	7	16	23
4	Tony Bollard	AC Blast Ca	Zen26 Tuned	15	0	15
5	Malcolm Prat	Aeromarine	CMB 91RS	5	0	5

BMPRS Leicester Results - 18th September 2016

Engine

West 28

ASP 46

ASP 46

ASP 46

CMB 67

Zen 28.5

MPM 31

Zen 26

RCMK 26

CMB 91RS geared

Hull

Magnet

(Ran with T1 Cats in the morning)

Challenger 43

Challenger 43

Manta Ray

Warhawk

Stratos

Patriot

Saturn

Conquest

Waverider Apache

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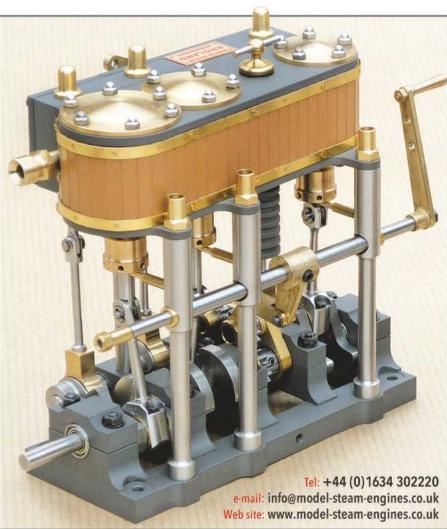
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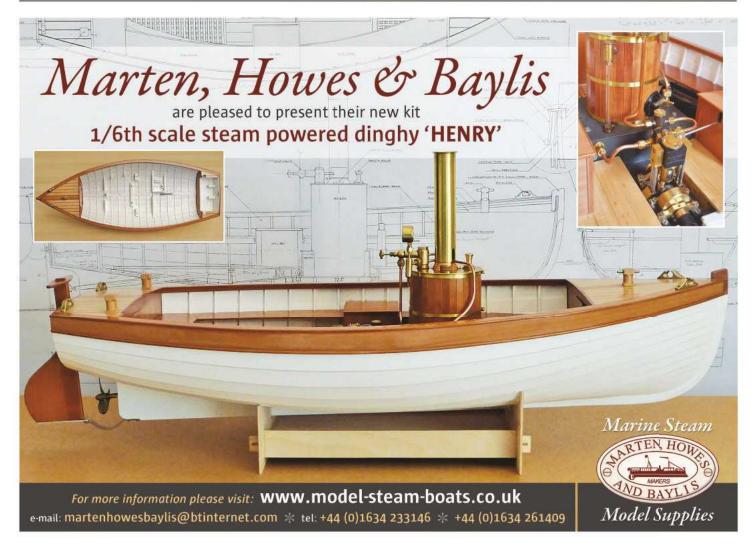


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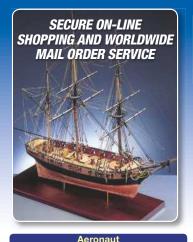
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