

**100
PAGES**

BUMPER ISSUE!

**The World's
Best-Seller!**

September 2014
Vol.64 No.766

model Boats

Get on board

www.modelboats.co.uk



PLAN FEATURE!

Botnia Marine Targa 37 Police Launch A fantastic model!

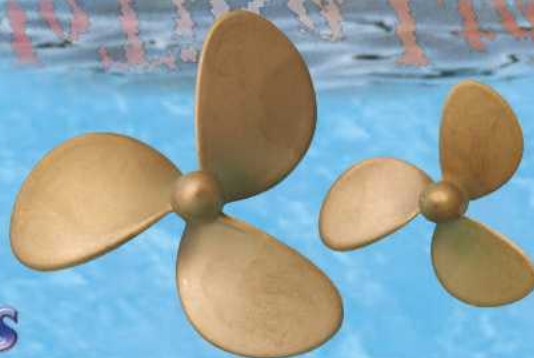




JoTiKa Ltd

**TRADE
ENQUIRIES
WELCOME!**

SCALE PROPELLERS



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

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

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

PROPELLER SHAFTS



RABOESCH PROP SHAFTS are all made from stainless steel. These high quality shafts have a large range of applications, from simple ABS electric boats through to fast electric and glow engines.

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

SEA COMMANDER



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

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

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



Address (Europe): JoTiKa Ltd., Model Marine Warehouse, Hladzor, Droitwich, WR9 7DS. U.K.

Tel: +44 (0)1905 776 073 Fax: +44 (0)1905 776 712

E-mail: enquiries@jotika-ltd.com <http://www.jotika-ltd.com>



Another one not to miss!



THE BLACKPOOL MODEL BOAT SHOW 2014

Bigger and Better than EVER!

The Norcalympia Hall at The Norbreck Castle Hotel,
Queens Promenade, Blackpool FY2 9AA

*Probably the Biggest
Model Boat Show in the Country!*

Saturday 25th October * 10am till 5pm

Sunday 26th October * 10am till 4pm



We have an
abundance of clubs,
in fact 6 new ones this
year including a whole
host of private
exhibitors on display,
plus,

the pool for sailing in,
the biggest model
boat selection of trade
for buying from, fish
and chips, a tram ride
and Blackpool what
more could you want..?



Admission: £6.00 on the door for all (*includes a ticket to win a model boat*)

2 day/weekend: £9.50. **Family tickets:** £14 (2 adults up to 4 children, children must be accompanied)

Refreshments and Food available • **FREE** Parking • Disabled access

Contact for further details: 01606 891999

Published by **MyTimeMedia Ltd**
Enterprise House, Enterprise Way,
Edenbridge, Kent, TN8 6HF
Phone: 0844 412 2262
From outside UK: +44 (0) 1689 869 840
www.modelboats.co.uk

SUBSCRIPTIONS

UK – New, Renewals & Enquiries

Tel: 0844 543 8200

Email: mytimemedia@subscription.co.uk

USA & CANADA – New, Renewals & Enquiries

Tel: (001)-866-647-9191

REST OF WORLD – New, Renewals & Enquiries

Tel: +44 (0) 1689 869896

BACK ISSUES & BINDERS

Tel: 0844 848 8822

From outside UK: +44 2476 322234

Email: customer.services@myhobbystore.com

Online: www.myhobbystore.co.uk

EDITORIAL

Editor: Paul Freshney

PO BOX 9890, Brentwood, CM14 9EF

Email: editor@modelboats.co.uk

PRODUCTION

Design Manager: Siobhan Nolan

Designer: Richard Dyer

Illustrator: Grahame Chambers

Retouching Manager: Brian Vickers

Ad Production: Robin Gray

ADVERTISING

Group Advertising Sales Manager: Duncan Armstrong

E-Mail: duncan.armstrong@mytimemedia.com

Tel: +44 1689 869 855

MARKETING & SUBSCRIPTIONS

Sarah Pradhan & Kate Scott

MANAGEMENT

Head of Design & Production: Julie Miller

Group Advertising Manager: Duncan Armstrong

Chief Executive: Owen Davies

Chairman: Peter Harkness

mytimemedia
print & digital media publishers

Follow us on Facebook and Twitter



www.facebook.com/modelboatsmag
twitter.com/modelboatsmag

© MyTimeMedia Ltd. 2014

All rights reserved ISSN 0140-2910

The Publisher's written consent must be obtained before any part of this publication may be reproduced in any form whatsoever, including photocopies, and information retrieval systems. All reasonable care is taken in the preparation of the magazine contents, but the publishers cannot be held legally responsible for errors in the contents of this magazine or for any loss however arising from such errors, including loss resulting from negligence of our staff. Reliance placed upon the contents of this magazine is at reader's own risk.

Model Boats, ISSN 0140-2910, is published monthly with an additional issue in January by MYTIMEMEDIA Ltd, Enterprise House, Enterprise Way, Edenbridge, Kent, TN8 6HF, UK. The US annual subscription price is approximately 53.40GBP (equivalent to approximately 89USD). Airfreight and mailing in the USA by agent named Air Business Ltd, c/o Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Periodicals postage paid at Jamaica NY 11431. US Postmaster: Send address changes to Model Boats, Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Subscription records are maintained at CDS GLOBAL Ltd, Tower House, Sovereign Park, Market Harborough, Leicestershire, LE16 9EF. Air Business Ltd is acting as our mailing agent.



When you have finished with this magazine please recycle it.

Paper supplied from wood grown in forests managed in a sustainable way.

For plans, hulls, binders, books, back issues and many other products, please visit www.myhobbystore.co.uk or call +44 (0)844 848 8822 (phonelines open 9am - 5.30pm GMT)

contents

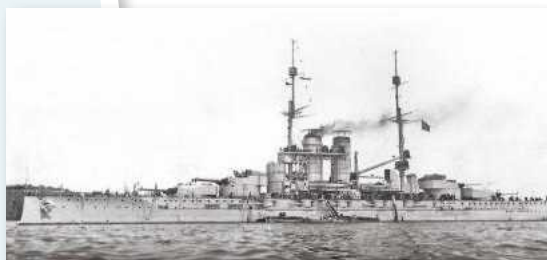
Regular Features

6 COMPASS 360

General items, what's on, comment and Marblehead model yacht news

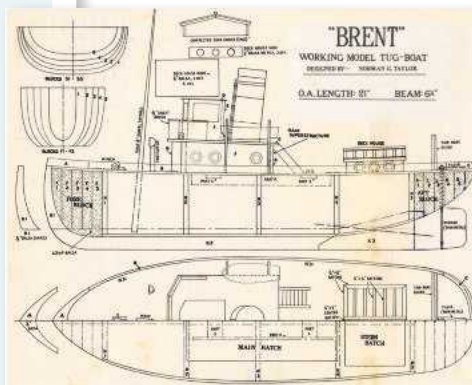
78 AROUND THE CLUBS

The Surface Warship Association plus Footy yachts are featured



22 RANGE FINDER

Dave Wooley's Worldwide Review of Warships and Warship Modelling has a further look at T35, the German WW2 large torpedo boat, and he is building two 1:72 scale Halmatic 24 rigid inflatable boat models



80 READERS' MODELS

Eris Kennedy's square rigger and a solar powered model are featured

85 TEST BENCH

New items for the modeller

40 FLOTSAM & JETSAM

John Parker looks at the written work of Norman G. Taylor

89 READERS' FREE CLASSIFIED

Your free private advertisements

44 BOILER ROOM

Richard Simpson discusses good Workshop Practice - Drilling: Part Two

90 BMRP NEWS

Craig Dickson reports from Telford

50 GALLERY

Jon Godsell presents RRS Discovery





FEATURE PLAN!

10 BOTNIA MARINE TARGA 37

Ron Rees' remarkable and exquisite working model of this purposeful craft. He explains exactly how the project developed and the resulting unique model that you can now build



32 ALVIS STALWART - THE SIX WHEELED PACKING CASE!

Ashley Needham's fantastic 'swimming' model

48 NATIONAL MODEL BOAT SHOW - 2014

Anthony Addams reports from this popular event



52 PICKET BOAT

John Elliott reviews and builds the Chylds Hall Model Shipyard 1:48 scale working model

Special Features

62 RANGE FINDER SPECIAL - PART TWO

Dave Wooley looks at Warships of the Royal Navy from 1905 to 1919



71 FLOTSAM & JETSAM SPECIAL!

John Parker researches the first two Australian submarines of World War One

74 A GLUE FOR ANYTHING AND EVERYTHING!

Ron Rees examines the Deluxe Materials product range for the model boat builder

Bow piece

This bumper issue has 100 pages and includes Part One of a major mini-series for a model of the Botnia Marine Targa 37 Police Launch, the fantastic plan being available now, from MyHobbyStore. Ron Rees has built this model from polystyrene foam to create a very light and fast scale replica, powered by a brushless motor, but it can also be built from wood or driven by a traditional brushed types of powerplant. The plan, is superbly drawn with 3D sketches and diagrams to facilitate model construction.

2014 is the 100th Anniversary of the beginning of World War One and to mark the occasion we have Part Two of Dave Wooley's critique on the warships of that great conflict and John Parker, one of our numerous Australian readers and contributors, has an excellent article about that country's first submarines of the E Class.

Continuing the theme of warships from the early part of the last century, John Elliott has reviewed and built the 1:48 scale radio controlled semi-kit of a Steam Picket Boat, recently released by Chylds Hall Model Shipyard. A small model, but great fun nonetheless, and it has proved to be able to cope very well with the average pond conditions nowadays. The Alvis Stalwart - was it an ammunition lorry or was it a boat? Well, a bit of both really and Ashley Needham's model of it, certainly swims without problems! He is a regular supporter of our unique associated model boating forum, where advice can be gained from many of our leading modellers.

We also have all the usual regular articles, and more, so hopefully there is something in this bumper 100 page issue to inspire and motivate readers to further pursue this great hobby of ours.

Paul Freshney - Editor



Compass 360

Model Boats notice board for your news

Editorial Contact - Paul Freshney

You can reach the Editor, Paul Freshney, on 01277 849927.
The editorial postal address is: Model Boats, PO Box 9890,
Brentwood, CM14 9EF.

The email is editor@modelboats.co.uk

Model Boats is Published by **MyTimeMedia Ltd**
Enterprise House, Enterprise Way, Edenbridge, Kent, TN8 6HF.

Plans Service Contact - Call 0844 848 8822

The Plans Service is expanding all the time!

Over 3000 plans for model builders of all persuasions, Aircraft,
Boats, Locomotives, Traction Engines, Steam and IC Engines -
we even do Woodworking plans.

To purchase plans, please call 0844 848 8822

See and buy all of these at www.myhobbystore.com

Midlands Model Engineering Exhibition

A final reminder that this event is being held at the Warwickshire Exhibition Centre, Nr Leamington Spa, CV31 1XN between **Thursday 16th October and Sunday 19th October 2014** inclusive. This is primarily a model engineering show, but there is some marine input and of course many of the traders are selling tools and materials that are very useful in our model boating hobby. Further information from: www.meridienneexhibitions.co.uk or tel: 01926 614101.

Southern Model Show

A final reminder that this event, in association with the Maidstone Model Flying Club and RCM&E magazine, will take place at the historic Headcorn Airfield in Kent, **13th to 14th September 2014**. There is a major model boating input with some supporting traders as well as remote controlled car racing, tanks, planes and helicopters. Their will be plenty to eat, drink and buy as well as activities for the less model-minded members of the family! Further information available from: www.headcornevents.co.uk

Flotsam & Jetsam Special - Page 71

After the feature articles of this magazine went to press, John Parker mentioned that on Australian TV News were recently shown the first pictures of AE2 as a result of a combined Turkish and Australian dive onto the sunken submarine. The web link is: www.abc.net.au/news/2014-07-03/images-captured-inside-ae-2-australias-first-wartime-sub/5554486

Seaforth Publishing

Available to all Model Boats readers is a discount of 10% for online orders. Seaforth (Pen & Sword Books Ltd.) publish many books, but recent additions include: Big Gun Monitors, Naval Firepower, HMS Hood and German S-Boats in Action. The website is: www.seaforthpublishing.com and the special code is 210408 that needs to be inserted into the promotional box. The alternative telephone number is: 01226 734555.

Obituary - Derrick Banton, 1931 to 2014

It is with great sadness that Burton & District Model Boat Club have lost one of their very first club members. 'Dekka' was a very enthusiastic member, always wanting to be involved with whatever the club was doing. He started building models at first from kits and then built from scratch with whatever materials he could lay his hands on and he always found something extra to add to his models to make them unique.

His enthusiasm for steering competitions was tremendous and recently he celebrated his 25th year of attending Stoke Navy Day as well as organising many competitions over the years for his club at Branstons Water Park and trying to encourage more people to have a go. He did his bit for King and Country as a rating on HMS Vanguard and then on minesweepers, and he often related some of his escapades and mishaps.

He was a lovable person and was always wanting to be part of whatever the club was involved in, and we could do with many more like him today to promote the hobby. We will remember the good times with him, and it will be a long time before we forget him.

RIP Dekka.

Mark Hawkins - Chairman of Burton & District MBC

Obituary - Mike Varley

Mike Varley passed away recently at the age of 84. From the late 1950's through to the late 1980's, he was Secretary of the model boat section of the Society, organising the Roses Regatta, a Lancashire versus Yorkshire event on Keighley Tarn. In 1974 he also organised, together with a few helpers, the World Multi-Racing Championships on the Tarn and also the Mini-Marathons, an annual event for all classes of i.c. powered craft. Eventually these regattas ceased due to very low water levels at the Tarn and were transferred to Rother Valley at Sheffield, then being organised by Keighley member John Barraclough and his family, but these also ceased after a number of years due to lack of interest in the sport. Mike then changed his hobby and started a model stock car racing circuit on the Society site at Marley where there was also a miniature railway, but eventually this section of the Society closed. Mike's last interest was radio controlled 1/14 scale r/c trucks, one of which was on his coffin at the funeral. He leaves a widow Margaret, a son Mark and three grandchildren - Rest in Peace.

Keith Parkin - Secretary of Keighley & District MES

Sheffield Ship Model Society's 2014 Open Day

This is being held on **Sunday 5th October 2014**, 1000hrs to 1600hrs, at Millhouses Park, Abbeydale Road South, Millhouses, Sheffield, S7 2QQ. All types of craft are welcome (sorry no i.c.) for a day of free sailing. The park is situated on the south side of Sheffield with on-road parking or pay/display parking at either end of the park. There is a pondside café, toilets and clubhouse offering battery

charging facilities. For more information please call John Blackwell, tel: 01142 748162 or check the club's website: www.sheffieldshipmodelsociety.co.uk

International Radio Controlled Model Society

Phillip Bellamy was wondering if there any of the original members of this society from the early 1950's are still around? If so, he would be pleased to hear from them! Replies please via the editorial office.

Model Boats Subscriptions

● Why not take out a subscription for **Model Boats** and never miss an issue. Phone now on 0844 543 8200 or visit our website to order online at...

www.modelboats.co.uk



Planet r/c conversion, July MB

Phillip Bellamy wrote and mentioned that the fail-safe function of the Planet r/c system, and indeed all radios, should always be checked as that can have a bearing on their safe operation. His own tests on a Planet system have shown that Channel Two has a similar fail-safe function to that of Channel One when used with the R6M type of receiver, but that is no guarantee that all sets are the same!

To BEC or not to BEC, August MB

Phillip Bellamy also wrote and mentioned that if disconnecting the red power lead from the receiver connection of an esc to enable a separate r/c system power supply to be used, an alternative method is to insert a short extension lead **between the esc and receiver** and disconnect its red lead, rather than that in the esc's own receiver plug. The end result is the same, but it might be more practical in some circumstances.

St. Albans and District MES Annual Exhibition

This is being held on **Saturday & Sunday 27/28th September 2014** from 10am until 5pm.

This will be the second year at Townsend School, High Oaks, St. Albans, AL3 6DR, and there will be even more indoor space for exhibits, ample free parking and attractively priced refreshments. Models on display from this society and visiting clubs will include steam locomotives, traction engines, stationary engines, boats, railway layouts, trucks and Meccano models. The Club Shop will have a range of modelling bric-a-brac for sale and tools, materials and model kits will be available from trade stands. There will also be free Have-a-Go model boats plus other demonstrations on a portable pond and free steam train rides. Admission: Adults £4, children £1. Website: www.stalbansmes.com
Information supplied by Alan Holt

Paddleducks Day 2014

A reminder that this is being held at Knightswood MBC in Glasgow on **Sunday 31st August**.



A fleet start and yes, they do all know where they are going!

2014 UK Marblehead Nationals



This 2014 championship event was held on the 17/18th May on the picturesque Weecher Reservoir near Keighley. Thirty three competitors arrived for the Saturday, when an oscillating S to SW wind gusting to 12 knots made B or C rig selection most important for the duration. Racing throughout the fleet was intense with six past and present radio yachting world champions in attendance, together with international competitors from France and Germany.

Saturday

At the completion of the first day after eight full rounds of A and B heats, it was the current World Champion Brad Gibson leading by the narrowest of margins on 9 points from Peter Stollery on 10.7pts, with recently crowned French National Champion Graham Bantock in third place on 19 points. The top five places showed five differing designs reflecting skipper ability of holding a clear lane out of the start with the freedom to tack on the first shift as the most important factor in the results.

The conditions were challenging throughout the day with upwind crossings at speed and distance difficult at times to judge on the

windward leeward course sailed directly away from the control area. Protest chairman David Hollom was called into action on several occasions but in general the quality of racing and rule adherence in the conditions was of a high standard and skippers took their penalty turns accordingly.

In the evening, the skippers retired to the Ilkley Moor Vaults for a fantastic meal arranged by the Keighley hosts and where GBR skippers travelling to the forthcoming World Championship event in Gouda were presented with their racing hoodies!

Sunday

This dawned with the prospect of freshening winds from the South providing the race officer, John Tushingham, with the opportunity of setting a course allowing skippers to walk its length. Once again B or C rigs were the choice amongst skippers and racing got under way at 0930hrs, with a long first beat to a windward mark with a spreader, where skippers could more easily see their machines. Boat speed and an ability to work the left-right oscillations became the key to success. To that end it was Gibson and IOM World Champion Robert Walsh who laid down a marker in Race 9 with a tight 1-2 finish. As the day progressed there was movement up and down the fleet where skippers enjoyed the fast racing on flat water, pushing their boats to the limit. Brad Gibson continued his winning form over the day, only dropping one race to Peter Stollery from

eight races sailed to go on and take the championship in fine form. Peter, after a couple of earlier hiccups by his own standards, settled down to push Brad hard for his win with improved speed, benefiting from a recent fin upgrade and some fast downwind sailing. Robert Walsh also had a consistent day to get through ahead of Graham Bantock and take a well deserved third place. Throughout the fleet there were some big movers on the Sunday, none more so than Tony Gurrier who came through to take fifth place and GBR Finn skipper David Potter who jumped from 13th overnight up to seventh, clearly enjoying the open course conditions. Of the visitors, German skipper Nigel Winkley had a solid event once again to take sixth place and French skipper Nicholas Selves did well with some very good races to finish in eighth place.

Conclusion

The competitors all thanked the Keighley race and catering team led by John Tushingham for hosting the event in warm sunshine with good winds which showed off Marblehead class racing at its best. The winners were presented with their trophies and Brad Gibson confirmed as British 2014 R/C Marblehead Champion.

Full results and a list of designs can be found on the website together with more pictures from Damian Ackroyd: <http://marbleheadsailing.wordpress.com/>
Twitter at: @Marbleheaduk
Information supplied by Brad Gibson

model Boats Next issue

The Model Boats October 2014 issue is on sale on the 12th September 2014



Skimmer 5/600



Blue Marlin

Free Plan! The premier article supports the included Complimentary Free Plan designed by Glynn Guest for the Skimmer 5/600. In addition there is Part Two of the unique Botnia Marine Targa 37 Police Launch project and the 'sinking' Blue Marlin from the hands of David Heaps!

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

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

Don't forget! The October 2014 issue will be published on **12th September 2014** price £4.50 – don't miss it! Order your copy now! Or better still why not make it your first copy in a year's subscription to **Model Boats** magazine? See our subscription offer on **Page 30** in this issue...

If you can't always find a copy of this magazine, help is at hand! Complete this form and hand in at your local store, they'll arrange for a copy of each issue to be reserved for you. Some stores may even be able to arrange for it to be delivered to your home. Just ask!



Please reserve/deliver my copy of **Model Boats** on a regular basis, starting with issue.....

Title..... First name.....

Surname.....

Address.....

.....

.....

Postcode.....

Telephone number.....

If you don't want to miss an issue



Contents may be subject to change.

component-shop

& **Action**
R/C ELECTRONICS

We have just about all that you need to power your model. From batteries to speed controllers motors to servos, plus a full range of cables, connectors, chargers, LEDs & much much more.

BATTERIES



SERVOS



MOTORS



CABLES



Our NEW 2014 catalogue is now available. We have also produced for the first time an Action-Electronics catalogue. Contact us now for your FREE copy.



Call us on **0843 2898528 / 0782 5511877**
or visit our web site at:

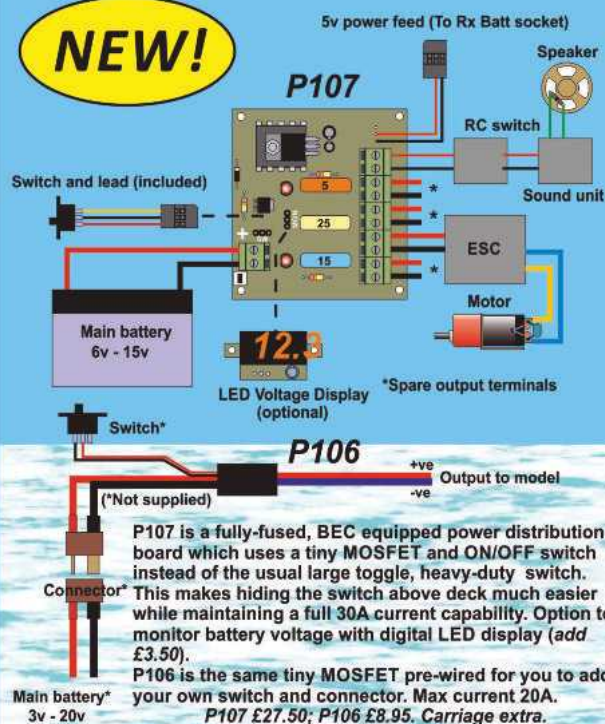
www.component-shop.co.uk

Action
R/C Electronics

1 Llwyn Bledodyn
Llanllechid
Bangor LL57 3EF, UK

Tel: 0843 2898528 (0782 5511877)

NEW!



www.component-shop.co.uk

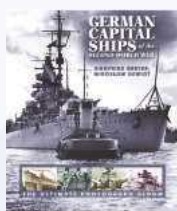
Action Electronics is part of Component-Shop.co.uk Ltd

Seaforth PUBLISHING

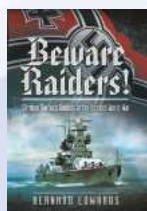
BOOKS FOR ALL THOSE PASSIONATE ABOUT SHIPS AND THE SEA



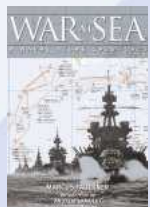
WAS: £25.00
NOW: £20.00



WAS: £45.00
NOW: £36.00



WAS: £12.99
NOW: £10.39



WAS: £50.00
NOW: £40.00



WAS: £50.00
NOW: £40.00



WAS: £16.99
NOW: £13.59

Buy your books online today at:
www.seaforthpublishing.com

Or Telephone: 01226 734222 (Quote: 247246)

ALSO AVAILABLE IN WATERSTONES AND MANY OTHER HIGH STREET BOOKSHOPS

Maritime book proposals are always welcome:

Info@seaforthpublishing.com



DEANS MARINE
CONQUEST DROVE,
FARCET,
PETERBOROUGH, PE7 3DH

2014 OPEN DAYS
12-13-14th
SEPTEMBER



1/96 scale Length= 1.4m B 385mm FULL LASER CUT KIT SEE HER AT OUR OPEN DAYS

DEANS MARINE OPEN DAYS

12-13-14th SEPTEMBER 10am—5 pm

You are cordially invited.

DEANS MARINE & PETERBOROUGH AREA MODEL BOAT CLUB will be holding open days at the **DEANS** workshop to raise funds for local charities. **This is NOT an exclusive DEANS MARINE event All model boats and boaters are welcome.**

Please come along and see what we do, what we make, study of our model boats, try them out, talk to modellers, watch the demos, ask lots of questions, **have some fun, and help raise funds for local charities.**

Boating pond, trade stands, refreshments, Demos, Shop

Botnia Marin Targa 37

Part One

Ron Rees
builds a
FAB-U-LOUS
model of this
boat as used by
the Metropolitan
Police on the
River Thames

RIGHT. Ron Rees aboard Patrick
Colquhoun II during 2013.



Back in the late 1960's, I started building model boats and put together a few kits, but as the years went by I gradually moved to scratch building from plans in all the usual materials of the time, such as wood, metal and so on. As for most of us, modelling had to make way for all the pressures of bringing up a family, work, decorating, lack of time and money, but now retired 100%, I've taken up the scalpel once again and gone back to my great love of building and running model boats.

During all that time however, technology has moved along apace and new radios, materials, hardware and even the full-size craft have changed

so much, altering the way we make models today. I, for one, embrace all the new aspects of our hobby but never lose sight of the basic craft skills that were taught to me by some extremely talented model makers right at the beginning. While it is now very easy to buy an ARTR model via the Internet, and they can be a lot of fun, there is nothing as satisfying, to me at least, than building an accurate working model from scratch with one's own hands.

I had been experimenting with Blue Polystyrene Foam, resin and plastics as well as figures and casting for a while and 'playing' with brushless motors, LiPo cells, electronics and LED lighting and



so on, but now it was time I thought to actually choose a real boat as a model subject; design and draw my own plans; work out its construction and build everything that I could by myself.

Choosing a subject

The now necessary, 'times 3' glasses mean that I can't tackle 1:144, 1:72 or even 1:36 scale detail anymore and as I don't want a Transit van and a trolley to lug around a 60lb 50 inch long GRP monster as before, so have opted to keep the models portable and 'back seat' sized, including the carrying case. I like fast models, but they also have to be of real boats (scale) so battleships and ocean liners are 'out the window' and wanted something different, colourful, with lots of detailed bits and pieces to fiddle with and make. I also wanted something that would turn on a sixpence, not ship a gallon of water when going astern and fit nicely through the buoys on a steering course!

Tough call I know, but my little torpedo boats and Fairey marine boats had ticked all these boxes, so it was the colourful and different bits I was aiming for and all of a sudden at the Thames Jubilee Pageant in 2012 there it was, a new, fast and very sporty looking police boat snapping at the packs of drunken Dunkirk veteran boats and ludicrously dressed dragon boat rowers! I had found a possible candidate, so now had to find out more!

Research

Pictures from the pageant were all over the papers and on the Internet within hours and some were printed off, but then I had to find out exactly what the craft was before I could go any further.

Our daughter is married to a police officer and through him I was led eventually to Sergeant Tristan Styles at the River Thames Marine Policing Unit based at Wapping Police Station in East London. He was extremely helpful and quite enthusiastic about my proposed project and told me they had the boat docked there, but it was a brand new version, having been delivered after the Pageant and so not exactly the same as that seen earlier.

He invited me for a visit nonetheless, so armed with tape measure and two cameras (just in case), I arrived on a freezing Saturday morning in January 2013 and kitted out with an inflatable life vest was given carte-blanche to snap away and measure until frozen stiff in the biting river breeze.

Colin Bishop had also paid a recent visit to what is now called the Metropolitan Police Marine Fast Response Unit (not the 'Thames River Police' anymore). His excellent coverage of that day was well reported in the pages of this magazine together with some great photographs. That article was accessed through the Model Boats website, storing away a few more bits of information including the fact that the police boats are tailored to their unique specifications by being refitted for service use by a company called Wessex Marine, who are based in Poole, Dorset.

The boat I was left to clamber all over on my visit, and which subsequently became the model designed and built, was the brand new Targa 37 built by Botnia Marin in Finland and delivered to the

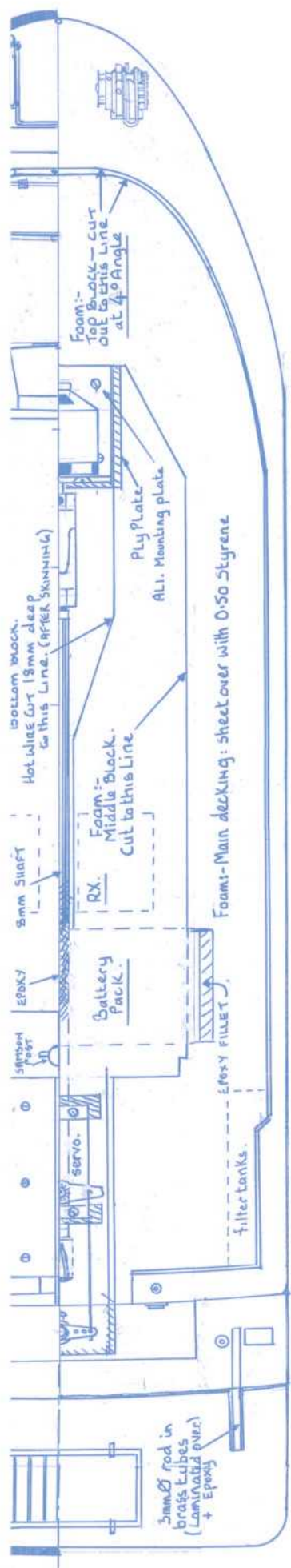
ABOVE: A Targa in the service dock.
Photo Colin Bishop.



ABOVE: The Metropolitan Police logo and mission statement as seen on the new Targa 37 boat photographed by the author.

BELOW: A general view from the stern.





police three months earlier. Named after Patrick Colquhoun, who is recognised as the principal driving force behind the founding of the mobile Police Service on the Thames and has a Wikipedia page all to himself!

There were several other boats alongside the floating dock at Wapping, including a brace of the smaller, flybridge equipped Targa 31's, but the one I liked was the much bigger and fitted to carry 12 or so armed rapid response officers and also double-up as a floating command centre. The difference in the various types is easily spotted by counting the number of side windows from four on the 31's to six on the 37 that I was looking at.

It would seem from research that the Targa range of craft are getting quite a name for themselves and being tagged by users as 'The 4 x 4's of the Seas'. They are fast becoming the patrol boat of choice for many police forces, customs and excise, as well as harbour pilots around the world, so a massive choice of colour schemes and equipment layouts are available to the avid scale modeller. A deep-vee hull with a robust, almost fishing boat style, cabin and monster power plants, they are tough and trustworthy boats with a top speed around 40 knots un-laden, Police Sergeant Styles being full of praise for them.

So now, after four months of collecting information and researching, I felt ready to start drawing up plans and working out how it could be built. Some A0 and A1 'skins' were acquired, those tracing paper sort of sheets that designers use for their drawings. I also had to start soaking and washing out some of the old Rotring ink drawing pens which had been abandoned, dirty, in their box about 35 years before! The dried glue was scraped off the old drawing instruments and set-squares and work began on my wife's sewing table.

A bit of background info'

I had left Wapping with about 120 photographs and some measurements, but I could only get physical information like this down to the water line, so needed more details of the hull before I could start.

Emails and phone calls to Botnia Marin in Finland met with no response, although I downloaded a couple of action photos from their website. Colin Bishop had produced some good detailed photos of the earlier Targa 37 being repaired in the sheds at Wapping and these were very useful. Apart from some great photos, which came back to me within two hours of request, Wessex Marine sent me some interesting info' about the company and what they do to prepare the Targa for police use.

Wessex Marine at Poole in Dorset are the main supplier of Scandinavian boats in this country and 'The Home of Targa in the UK and Ireland'. They also market makes like Marex and XO and a very nice model subject for the future is the Corsair from Italy. Wessex is a family run business with 25 years of boat building, conversion and marketing experience and I cannot express my gratitude for the helpful and friendly way they dealt with my many enquiries. David, Amanda and their son Guy as well as Caroline (David's sister) and 'almost adopted son Paul' run the company and their combined wealth of information is amazing.

David, who has been selling boats from Scandinavia for nearly 44 years gave me a run down of how they get from Finland to Dorset. The Targa's come straight

from the factory in Finland 'ready to turn the key' after testing in the Botnia Marin test lake. The boats are transported by truck from Vassa to Turku (Finland). They are loaded on a 'Maafi' (like a flatbed) and on to the ship to Harwich where Wessex collect and transport them to Poole using their own trucks.

The police require several changes and the fitting of specialist equipment which means that the new boats go straight into their works. The flybridge is removed and a new back sliding door fitted. Modifications also include the pilothouse which is reconfigured to carry up to 12 armed rapid response team members. They also move the galley from the pilothouse to the forward cabin and alter the aft cabin to carry three people (with limited headroom). As well as the structural changes they also fit the very complicated communication equipment, a helicopter television link, the Flir 360 degree thermal imaging apparatus and many other police related safety, retrieval and emergency items. To this end the Targa 37 is very much a 'custom build' command vessel and a 'one off'.

It was decided to build this model with a single brushless motor because of space, but the real craft is fitted with twin Volvo D6/370 horsepower diesel engines with Volvo DPH drives which are 'bog standard', but powerful units, giving a top speed of around 40 knots when unladen. The real craft is also fitted with bow thrusters for holding station on the busy and fast flowing Thames River. If I ever build another Targa, I might scale it up a bit and fit twin drives and the bow thruster, but for the moment I was happy attempting the basic version as described here.

Planning

Using the general arrangement drawings found online, some scaled-up sketches were drawn using a ruler and calculator before transferring them to the main plan drawings. The model began to take shape on the drawing board at 1:24 scale or half inch to the foot and a human would thus be about 3 to 3.25 inches high. This meant a finished model, including the extra-wide landing platform at the stern would be 21.75 inches long. With the real craft about 41.5 feet long overall, this was as close to scale one could get. This also means that some fittings like the bollards, inflatable liferafts, Raymarine dome, lifebelts and crew figures can be purchased by those who don't wish to make them.

From experience and testing of the Fairey Huntsman 31 (Model Boats July 2013) driven by a brushless motor, a slightly bigger 2820 outrunner motor with a Kv rating of 1250 was chosen and it was planned to be able to fit either a 7.4v two cell or an 11.1v three cell LiPo battery, which would satisfy both the scale steering builders and the speed 'nutcases', the latter being a category into which I invariably fall!

The plans, something not attempted before, meant that I would have to think carefully and plan each stage of the build if it was to work out right. In some cases, (like adding the option of conventional wooden formers and sheeted hull to the plans), I made the foam model first so I could take dimensions and cross sections from the foam blank. I had enough information to use all of the close-up pictures, and draw parts you would sometimes have to guess, on to the plans and to scale. This meant that the full detail of the cabin interior and steering console could be included.

Starting to build

This article describes the original foam built model, but experienced modellers can use the additional details on the plan to build it in wood if preferred. Anyway, this was to be another build using blue Styrofoam plus nylon covering (ladies' tights!) coated with epoxy twin-pack finishing resin and once the thicknesses were determined, 1.5 inch and 2 inch thick blocks of Blue Styrofoam were ordered from 'Technology Supplies' (contact details at the end) and a word of encouragement here now.

Please don't be put off by any pre-conceived ideas about this material. I have been building traditional wooden boats for many years and still do, but a chance to try a different approach is refreshing and this does not involve all that planking and bending and hours of rubbing smooth and filling. A Styrofoam hull is totally watertight and cannot sink, even with massive collision damage. It is relatively cheap, very easy to carve and sands beautifully. Once skinned on the outside with epoxy resin or a water based resin and a layer of fine class cloth (or nylon tights) it makes for a tough, light and rapidly built hull. It is easy to add decking and other mediums like card, styrene etc. using appropriate adhesives and it will take paint with a very smooth finish.

The hull

This was started by cutting two blocks, 24ins by 7ins wide (the sheets supplied were 24ins wide by 48ins long, so enough for several models). Of these, the two inch block was sliced into two pieces each of one inch thickness and the 1.5 inch thick block was tapered from 1.5ins at the bow down to 1.25ins at the stern. A 1/32 inch plywood deck coaming was stuck to the top sheet using R/C Modellers Glue for strength, and to guide the hot wire cutter or saw blade as this section is cut at a four degree angle, **Photo 1**. The areas to cut from each foam layer are clearly marked on the plan and a simple card half-template is useful for getting these drawn out accurately and this is where the centre line is so important.

Thin card templates were taken from the plans and the cutouts in each of the three layers were marked out using a fine felt-tip marker pen, **Photo 2**. At this stage it is important to mention that an accurate centre-line on all blocks is essential and should be redrawn whenever it is cut or sanded away as part of the shaping process as this is the main datum line and from this all measurements are taken.

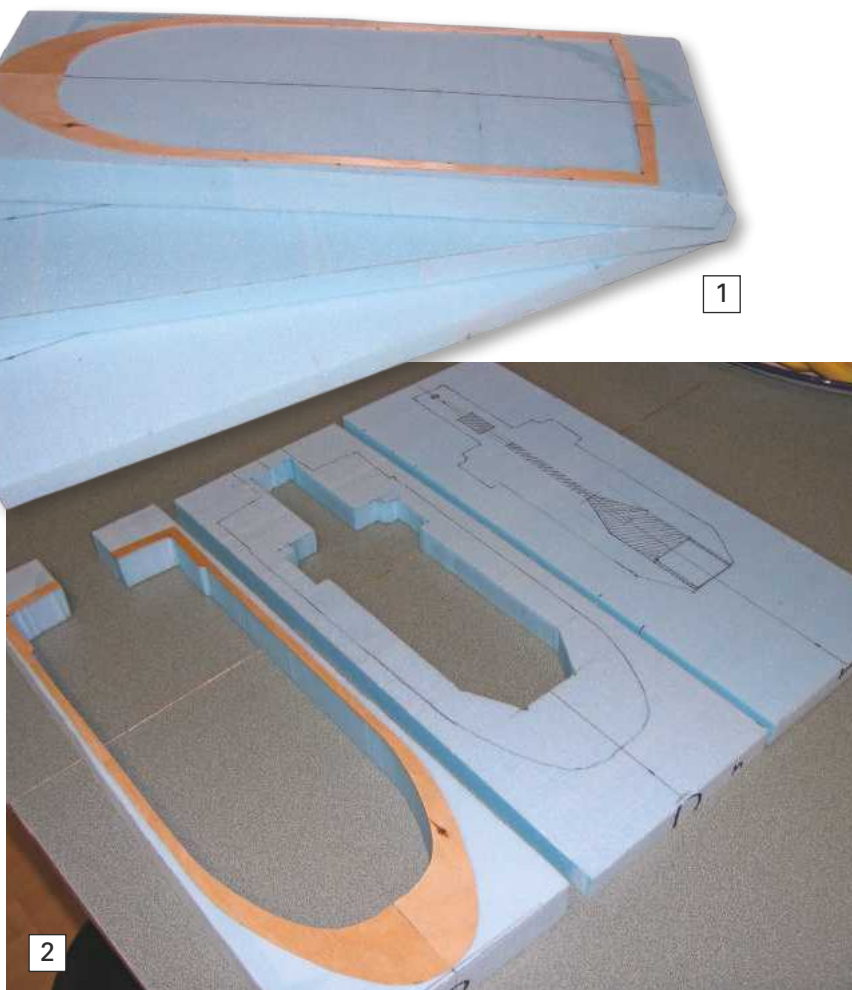


PHOTO 1. The three foam hull blocks, the top one with the 1/16inch thick plywood coaming and deck edge in place.

PHOTO 2. Using templates from the plan mark out centre lines and waste areas then cut out the middle and top blocks.

Most of the fine cutting can be achieved with a large 'hot wire cutter' because the walkways and front inside of the original slope at no more than two to four degrees. Details of the hot wire cutters used, were featured in the Model Boats Winter Special Edition of October/November 2013.

Once all the cutouts are made, **Photo 3**, line the pieces up for gluing and push cocktail sticks, broken in half and re-sharpened, into the waste areas to realign the pieces when they are smeared with glue, **Photo 4**. This really helps as the parts will slide all over the place otherwise!

A polyurethane wood glue from 'Screwfix' was used, on one side only of each joint. It is messy stuff, so cover the bench area. Spread it all out using a stiff bristle brush, spreader or thin scrap piece of styrene or plywood. Be prepared to throw away the brush and spreader and wear latex gloves. Have plenty of weights ready and waiting, as

PHOTO 3. Keep the waste pieces and please note how the middle block is cut to reflect the need for the forward seating and the hull's transom opening.

PHOTO 4. Push half cocktail sticks into the waste to stop blocks sliding around when glued.

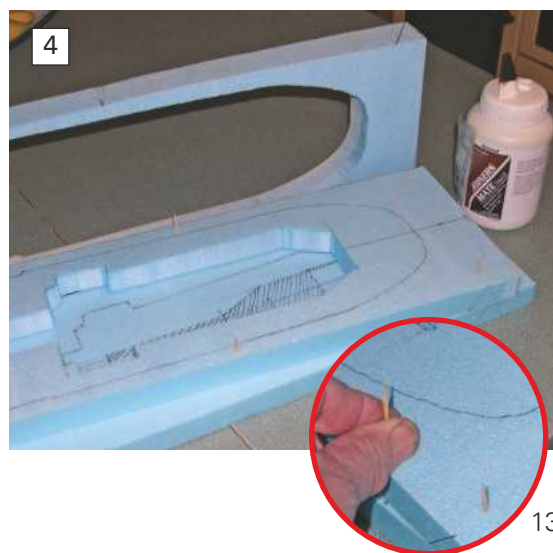
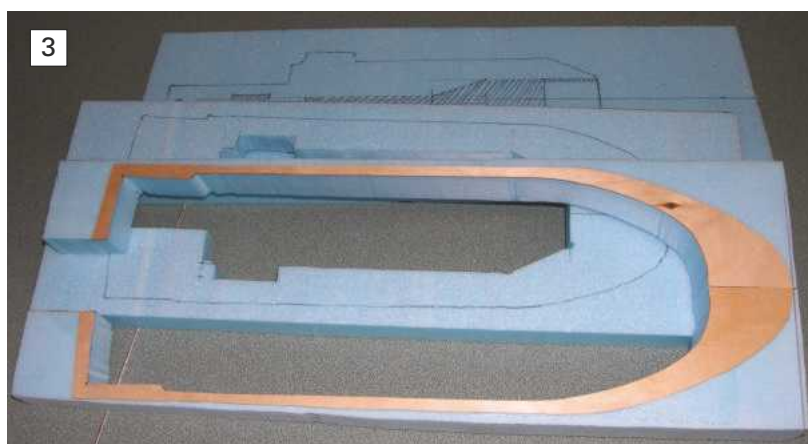




PHOTO 5. Gluing together the hull blocks. The centre lines together with locating cocktail sticks are essential to ensure everything is in alignment.



PHOTO 6. Mark out the bow angle of 60 degrees from the bottom and cut the waste away.

PHOTO 7. Carve and sand the hull to shape, use the glue lines, centre lines and templates from the plan, cut out of card to maintain the correct shape. Use progressively finer sanding sheets glued to flat wood blocks.

PHOTO 8. A slot is cut on the bow centre line and a 1.5mm (1/16in) brass rod epoxied in place.

once this glue starts to foam you only have a few minutes to get it all weighted down, **Photo 5**. Walk away and leave it in the warm for an hour at least until the foam dries hard, although the glue inside the blue foam layers will continue to foam and finally dry properly overnight.

Please also note that these foams will melt if you try to use GRP resin, contact or any other petroleum based adhesive, and white PVA and most yellow acrylic or aliphatic glues will not dry at all as they are

air drying. I have used 'Foam-Safe' Zap and activator on this foam for small items like seats, but it is too expensive to use over a large area. Five minute epoxy works well, but the polyurethane foaming adhesive sands almost as easily as the blue foam and of course, the epoxy doesn't. The first job once our glued foam block hull is dry, is to mark out an angle of 60 degrees at the bow, **Photo 6**. The stern also slopes at the same angle, but only from a line drawn across the chine up to near the top of the bulwarks, which are clearly marked on the plan. Once the waste is cut away, re-mark the centre line (again!) and prepare to sand the hull to shape.

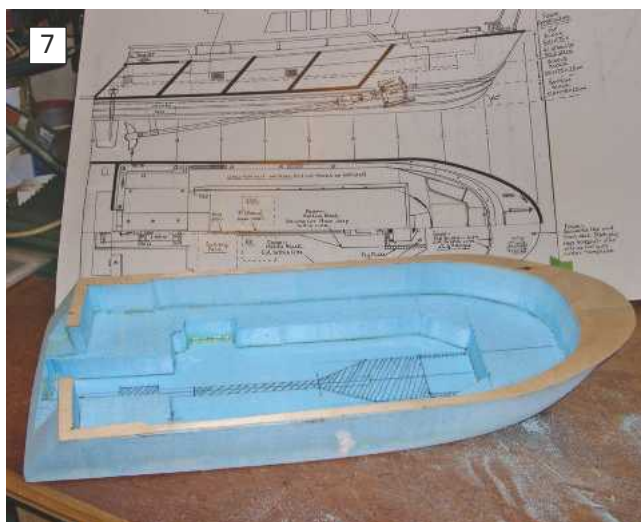
With the card hull templates ready and waiting, mark off the divisions along the hull as shown and start cutting away the foam to shape the hull, leaving a few millimetres to sand away to where the templates fit snugly. Try to keep the chine line nice and crisp and straight along the hull's length up to the point where it disappears upwards near the bows. I used 60 grit decorator's silicone sanding sheet stuck to a piece of 0.5 inch plywood and then finished-off with 120 grade. It actually takes longer to write about this than actually do the job, as the basic carving of the hull's external shape took about 60 minutes, **Photo 7**.

Cut a narrow slot up the bow on its vertical line and epoxy a piece of 1 or 2mm brass rod just below the surface, **Photo 8**. This acts as a stop when sanding down and reinforces the bow against any hard knocks that it may encounter later.

As the hull is also very easily dented at this stage, it's worth taking the time to make a wooden stand for the model, covering its sloping supports with strips of carpet tile. Most of us have the odd old carpet tile around somewhere and strips of it make good protectors against a model's hull surface.

Skinning the hull

I know it is a strange request, but at least try using an old stocking or a pair of tights here. They are cheap, even if you have to buy a new pair and when combined with the resin are remarkably strong. The main advantage though is that they will cover the whole hull in one go without any joins or overlaps. Cut off the toe and top so the material is of uniform weave and thickness. Carefully push the hull through it dry. By pulling on each end you can eliminate



wrinkles and get it to cover everything, **Photo 9**. Tie the ends together on top of the hull to maintain tension over the open hull interior, **Photo 10**. This will also give you a handle to hold and allow you to hang it all up for drying. I have a screw eye set in the ceiling with a bent coat hanger suspended from it and have this all ready before coating, **Photo 11**. One leg from a pair of black heavy (30 Denier) tights was used to do this hull which only needed the one layer.

For this prototype, EZ Epoxy Finishing Resin was used which is a two part mix (Deluxe Materials Eze Kote is a excellent alternative). It gives you about 30 minutes of working time and dries in about three to four hours, depending on room temperature. It is not cheap, but an £11.99 bottle has now done four models. It is important to 'wet' the tights right through to the foam with the resin and I tend to go just over the edge where it is to be trimmed away as when dry it makes trimming easy and neat with a scalpel blade. Any excess resin can be used to make fittings, if you have already made their masters and moulds. As you will appreciate, in idle moments previous to all this I had made a start on making some of the fittings, made the moulds and could therefore use any surplus resin to cast copies in those moulds, **Photo 12**. Waste not - Want not!

Once the resin was thoroughly cured and dry, the hull was given good rub down all over with dry 80 grit sandpaper or similar as this gets rid of all the inevitable fuzz which has now been hardened. A second coat was then applied, but now sanded smooth with some fine wet and dry sandpaper, used wet. The weave of the tights should be nearly filled by now, but it would get another coat once the chine and running strips had been added.

Fitting the chine and running strips

The chine edge strips are 1/8in square and the running strips under the hull are 1/16in square. Jelutong strips were to hand, but any hardwood would do, providing it bends okay at the bow.

The chine strips were easy to place and then the running strip positions were marked in pencil using a straight cut strip of 1mm styrene as a flexible, but straight, edge, **Photo 13**. Holding down the wood strip at the bow with a cocktail stick, a drop of medium superglue was placed on the end and allowed to set. After that it was easy to 'tack-glue' the remainder of the strip into position with the same adhesive. Once happy that they were all equally spaced, I stood the hull on end and ran a thin bead of thin (runny) superglue down the length of each. Once they were all properly glued, **Photo 14**, they were all lightly sanded before a final coat of epoxy finishing resin.

PHOTO 12. Any excess resin was poured into home-made silicone moulds for some of the fittings already prepared. Waste not - Want not!



PHOTO 9. Push the shaped hull block into a leg of a pair of tights or a single stocking. 30 denier (thicker than usual) was used on this prototype Targa model.



PHOTO 10. Tie together over where deck will be, smooth out all wrinkles and make sure no ladders or seams are over the hull's outer surfaces. Two coats of twin pack epoxy finishing resin were then applied. Leave each coat to dry and don't 'squeeze' it all too much as nylon tights/stockings will move about when wet.



PHOTO 11. It is a good idea to hang the hull, whilst the resin is curing, This is best done by making a bespoke 'hanging device' before commencing the resin application.



PHOTO 13. Having given the hull a good rub down with 80 grit sandpaper, it is time to mark the chine strike positions with a flexible straight edge.



PHOTO 14. These chine and spray rails were initially 'tacked' in place at one end then permanently secured with a bead of thin superglue down their lengths'.

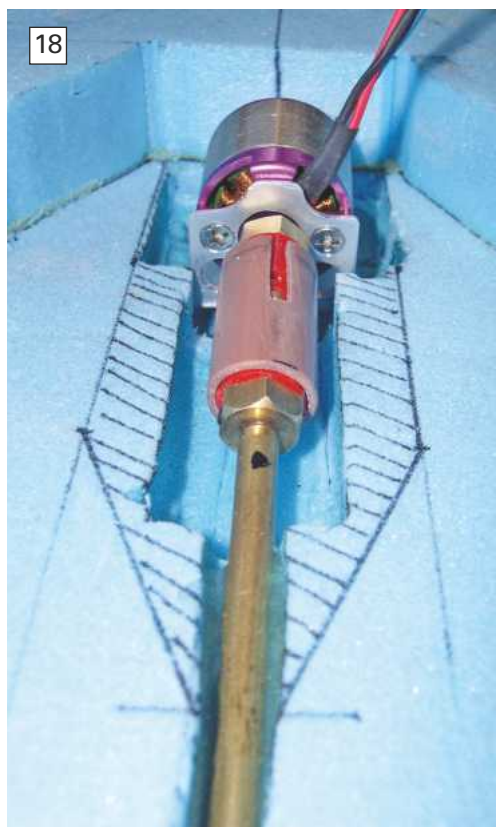
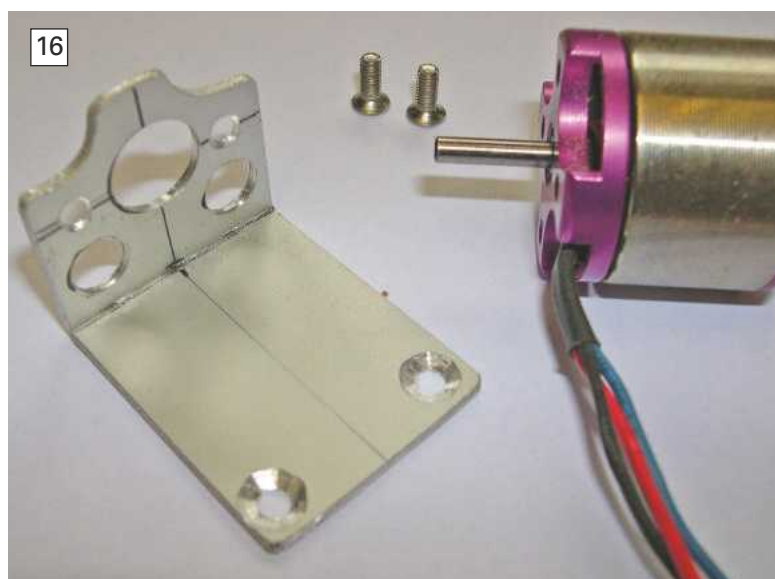
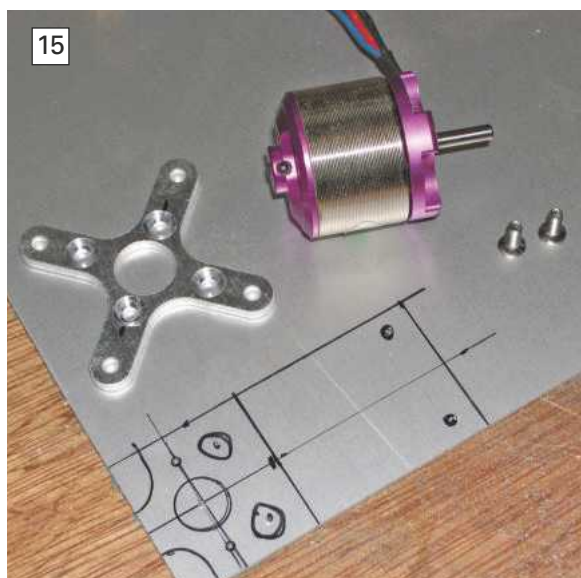


PHOTO 15. Marking out the motor mount on 1/16inch aluminium sheet using the supplied aircraft bulkhead plate as a template.

PHOTO 16. The new motor was bent to 90 degrees in a vice.

PHOTO 17. An alignment tool for the Huco style coupling is made from tight fitting scrap plastic tube which was a rocket launch tube from a box of fireworks!

PHOTO 18. The spaces for the coupling and motor were carved out with a homemade hot-wire cutter. The propshaft, coupling and motor were assembled as a unit with space beneath the motor for its plywood base plate. Some adjustment was necessary to get everything just right.

Clearance for a propeller a size larger in case a later upgrade is needed is also not a bad idea.

Once this had dried overnight, a final wet and dry rub down was applied, trying not to sand through to the wood! Before moving on to other things, a quick coat of Halford's grey primer was also applied. This helps to further build-up the base finish on the hull, but also shows clearly where there are any blemishes that need filling or sanding, as well as giving the final colour coat a good base.

Fitting the hull out with hardware

At this stage it makes sense to fit the propshaft, motor mount, servo mount etc., without any fiddly bits getting in the way. Hopefully you will still have a centre-line to work to, so each part can be accurately installed and maintain the centre

line balance and weight distribution and as it so happens, the prototype model did not require any ballast at all with the layout as shown on the plan.

Brushless outrunner motors can come with two different fitting layouts, that is to say they can be mounted on a fixed backplate (from which the power wires exit) with the output shaft extending beyond the rotating part OR still mounted the same way, but the output shaft passes through the fixed part and out through the mounting as with this motor used here. It is worthwhile checking to see if a 380/400 type of conventional brushed motor mount will fit your brushless motor as these are cheap, easy to obtain and will save you a bit of extra work. If not, then make up a 90 degree aluminium mount as shown in **Photos 15 and 16**.

These little motors are incredibly powerful and capable of mangling a coupling or wearing propshaft bearings oval within a very short time if misaligned during installation. If you do it properly, all you will get from your fellow boaters at the pondside is a, 'That goes well, doesn't it'? Praise indeed and worth all the effort.

So, to make sure the motor, coupling and propeller shaft are in alignment, it's worth making a little gadget to hold them in a straight line. The simple 'gadget' in this case is a piece of rigid plastic tubing which came from a box of Bonfire Night rockets. It is a close fit over the Huco style coupling and has slots which admit the pins on the centre brass piece. The gadget is installed over the coupling which is then attached to the propshaft and the motor and holds them all in a rigid straight line, **Photo 17**.

The whole assembly will eventually be installed in the model with the motor mount screwed to a piece of plywood. The hole in the hull for the propshaft will have been made as central as possible and an angled slope carved into the foam to accept the plywood mount. Clearance for a propeller a size larger in case a later upgrade is needed is also not a bad idea. There is a fair bit of fiddling around involved, **Photo 18**, to get it all just right.

Only when happy that it is all as good as it can be, will I tack the plywood in place with some epoxy adhesive and check it all again when dry. If still happy, then all is permanently bonded in place with 30 minute epoxy, pouring the glue under and around the plywood base and after taping the outside of

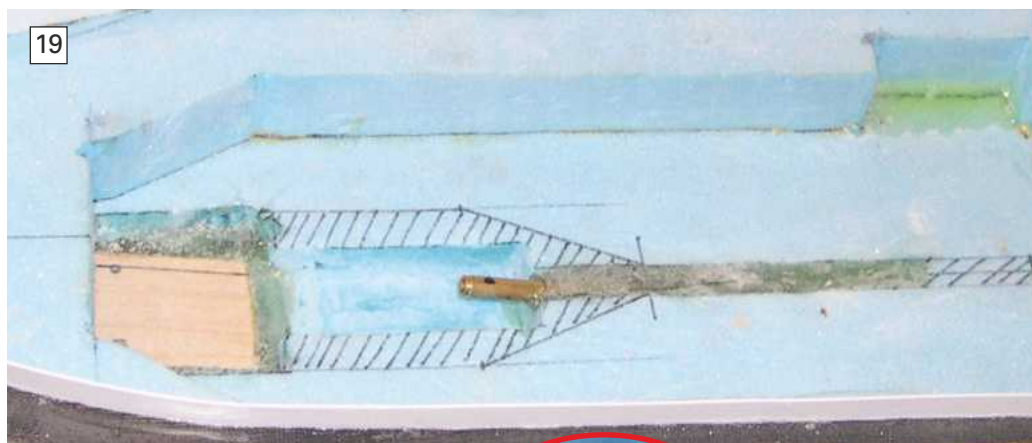


PHOTO 19. Here we have the plywood motor mount and propshaft tube glued in place.

PHOTO 20. Cut out the void for the rudder servo and glue in two plywood bearers with five minute epoxy.

PHOTO 21. Another view of the rudder servo area. The supporting frame for the covering deck is now partly in place.

the hull where the propshaft tube comes out, filling the hole in the foam around the propshaft tube, **Photo 19**.

A very small blue Hitec servo is mounted in a compartment at the stern of the model, **Photo 20**. This void was 'dug-out' using a small hot wire cutter, the servo being secured to wood bearers epoxied into the foam. A servo should always be firmly fixed by its proper screws, but not so tight that the case becomes stressed and the linkages that go to the rudder ideally ought to be at 90 degrees to the output arm when in the neutral position. The rudder should always move freely with no binding and have an equal movement in both directions.

Access to the rudder servo once this model is complete is very important as servos do breakdown, or as in the case of this model, get waterlogged and die! On that note, anything within the hull should not move around and there is a dedicated space for the battery pack. **Photo 21** is another view and you can see the start of the frame that will support the 'screw-down' deck over the servo.

As you will have read a little earlier, during trials of the part finished boat all this was not enough to stop water getting into the servo compartment and I had to subsequently carve from the opening's hardwood frame an additional 1mm, to create the height for a rubber gasket cut from a piece of bicycle tyre inner tube. Not wanting to labour this subject too much, there were a couple of other fundamental mistakes when building this prototype and while they were eventually resolved, they are worth considering.

First, is the fact that commercial propshafts, even at £10 or so each, often leave much to be desired. The screw threads on each end of the one used here were over-long and not fitted with washers - not good! Propshafts should have a minimal forwards and backwards movement and the nuts should be locked against the coupling or the propeller. A thrust washer at each end allows a little leeway and the force exerted when running forwards (99% of the model's moving time) should be born by the outer propshaft bearing and not the motor output shaft. The second mistake was to test all the power wiring connected via a 'chocolate box' type of connector block. Everything worked fine at home, but that 'block' should have been changed to 3.5mm gold bullet connector plugs and sockets, because on the first great day at the pond, a screw connection came loose and it took some time to work out what had gone wrong.

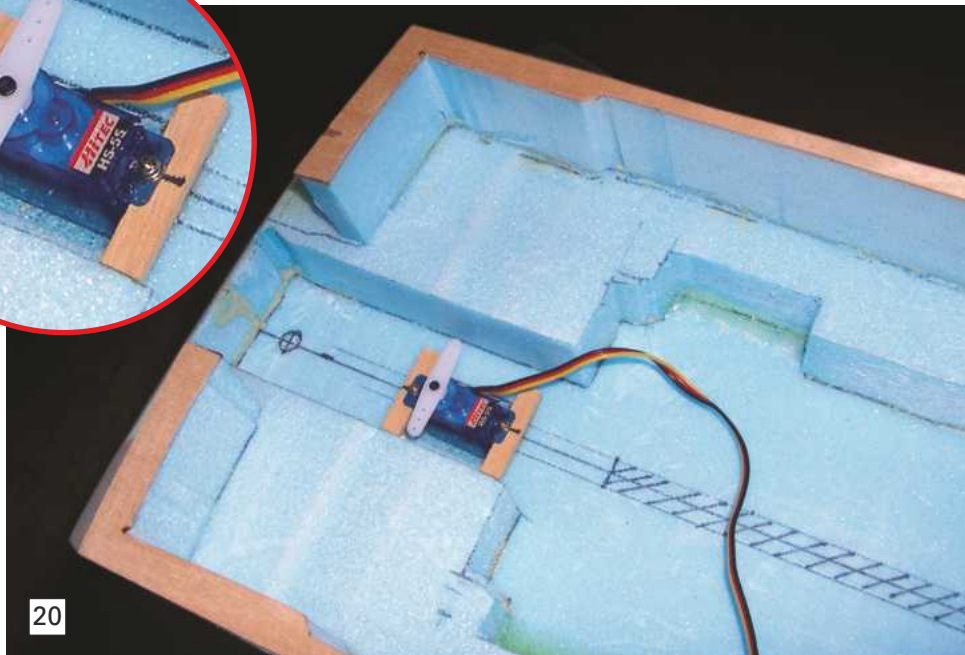


PHOTO 22. The front seat is cut from the scrap piece from the centre cutout and is not yet fixed.

22



ABOVE. A photo of the bow area of the full sized boat showing the seats/storage lockers.



PHOTO 23. At the top of the hull sides is a flange. This could be made from 1.5mm styrene or plywood just stuck to the hull's sides, but here the bottom edge was created by using a narrow flexible strip to give the flange's depth and then lightweight car body filler was applied and later sanded to shape.

PHOTO 24. Using 0.5mm styrene sheet cut to size with templates, glue these pieces to the inside vertical walls of the upper hull. Make sure these laminates stick up proud by 6mm above the deck line. You can also see the complete, initially ill-fated(!) rudder servo compartment here.

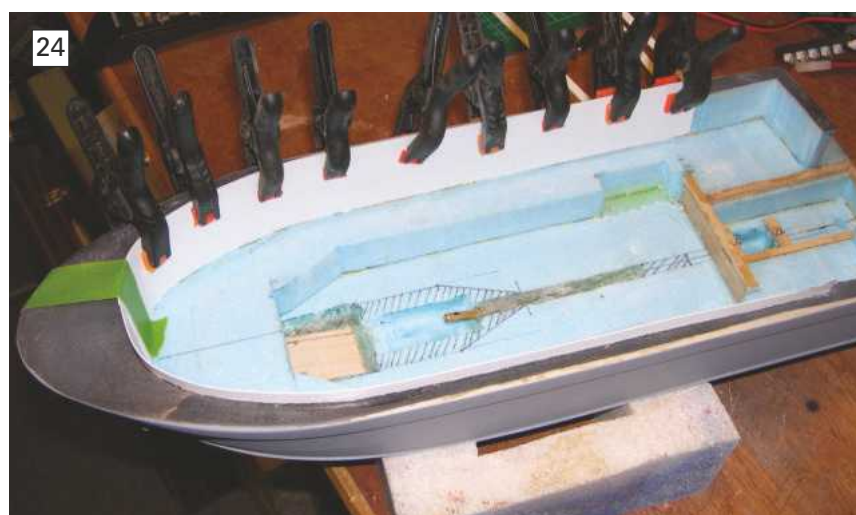


PHOTO 25. The coaming top edge which supports the handrails is now created by laminating the styrene, with the middle parts being spaced with gaps, which in due course will accept the handrail supports. Mark from the plans and glue first one piece to the extended walkway sides, followed by the other 'spacers'. Finish by a further complete strip around the outside. Lightly fill in where the coaming meets the deck to get a nice slope at the bows and sand as need be.

Front seating & storage lockers

The curved set of lockers at the bow which also double as seats, were cut from the front of the offcut of foam from the hull centre foam block, **Photo 22**. Remember, don't throw anything away! I mention this now, because we are about to get into laminating the exposed inside surfaces with styrene sheet. Deluxe Materials Super 'Phatic Glue is a milky substance that goes a long way and sticks foam to wood and more important, also to styrene. The little bottle did all the styrene to foam and wood joins on the model including all the skinning and was only a third used, so good value at the end of the day. There are some access hatches in the bow area and these were simulated by overlaying styrene cutouts onto the sides, likewise the lids on the floor lockers and seats. All the styrene to styrene joints were done with Liquid PlasWeld from SHG Models, but Deluxe Materials market a good alternative.

Hull top edge flange

At the top of the hull sides is a flange. This could be made from 1.5mm styrene or plywood just glued to the hull's sides, but here in this case, the bottom edge of it was created by using a narrow flexible strip of styrene to create the flange's depth and then lightweight car body filler was applied and later sanded to shape, **Photo 23**.

Bulwarks, decks and coamings

All the exposed foam in the well area of the boat needs to be covered, but not the very bottom where the hardware is installed and use 0.5 and 0.75mm styrene sheet for this.

The narrow top edge of the bulwark also contains the supports for the handrails and was formed by gluing three laminations of 1mm styrene together. The inner piece is the inside of the hull's actual side, **Photo 24**. The centre piece was in gapped sections that match the spacing's for the handrail supports, **Photo 25**. Finally the continuous outer piece was



PHOTO 26. Using the centre foam block cutout to help achieve the right shape, cut and trim 0.5mm styrene sheet to size, glue and weight down.

PHOTO 27. This is the sort of detail one can include in this sort of model, namely a power socket and a caravan style shower unit in the stern panels either side of the transom gate.



LEFT. Detail from the real boat showing power socket, shower controls, and the transom gate.

added, **Photo 26**, and the inside deck walkway surfaces added, using the foam block as a template. In this last picture you can see the weights holding down the styrene sheet and just discern the holes in the bulwark to take the handrail stanchions. Deluxe Models Super 'Phatic adhesive was, as already mentioned, the glue of choice for styrene to foam and a bead of PlasWeld (a brand of liquid polystyrene adhesive) run along the styrene to styrene joints where the lower sides meet the deck worked well and made everything shipshape and sound.

All the exposed interior of the hull (but not beneath the cabin in the 'engine room'), was laminated with styrene sheet to create a smooth, waterproof and ready to paint finish. Just to mention the sort of detail that can be included is the power socket on the starboard rear panel and a small caravan style shower unit (two knobs and a handset) on the port side, **Photo 27**.

The coaming around which the cabin fits is 6mm high by 1.5mm thick styrene. Later, this had to have bits whittled out of it where they interfered with parts of the cabin floor, but that was just bit of 'cut to fit' work for which I can't give specific instructions. I hope the foregoing pictures show how easy it is to make the basic foam hull fully 'fit for purpose'.

To be continued in October 2014 Model Boats.



LEFT. Detail from the real boat showing power socket, shower controls, and the transom gate.

Suppliers and useful contacts

Silicone rubber and casting resins:
Sylmasta,
website: www.sylmasta.com,
tel: 01444 831459

Blue Styrofoam board and clear casting resins and dyes:
Technology Supplies, website:
www.technologysupplies.co.uk,
tel: 0845 5670000

Heat proof silicone and white metal:
Hobbies UK,
website: www.hobby.uk.com
tel: 02087 614244

Plasticard sheet, profiles and glue:
SHG Models,
website: www.shgmodels.com,
tel: 01785 840308

LED's, resistors. Batteries:
Component Shop,
website: www.component-shop.co.uk,
tel: 08432 898528

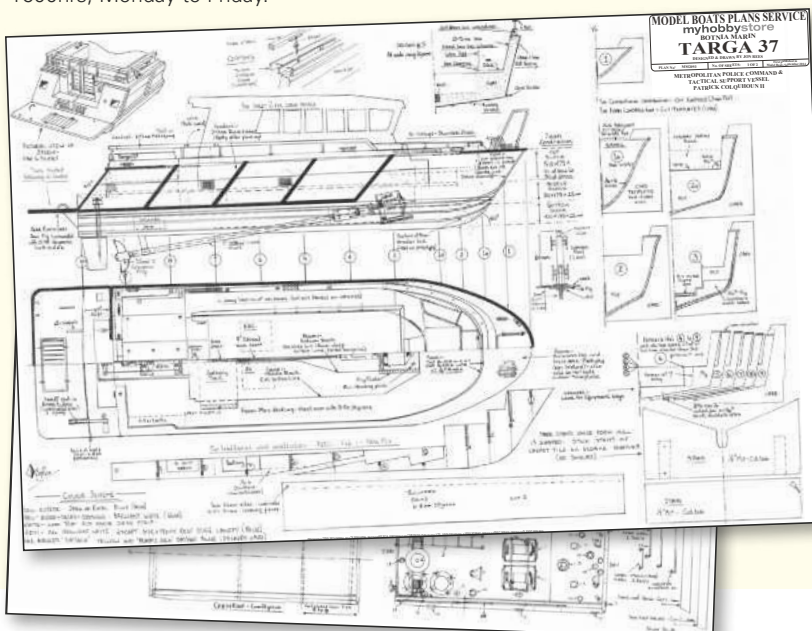
Neoprene fenders, tube, edging:
Seal Plus Direct,
website: www.sealplusdirect.co.uk,
tel: 0845 226 3345

Boat parts & bespoke printing:
Ian's Boats,
website: iansboats@virginmedia.com,
tel: 02082 526702

For fittings, stickers, photos of police boat, please contact **Ron Rees**,
email: rontheatricalprops@ntlworld.com.

Plan for Botnia Marine Targa 37

The two sheet full size plan **No. MM 2093** is available from MyHobbyStore Ltd and is priced at £12.50 + p/p as of August 2014. MyHobbyStore plans may be purchased online at www.Myhobbystore.com or please call: 0844 848 8822, 1000hrs to 1600hrs, Monday to Friday.





Tamco 2 Channel 2.4GHz Combo
Special Price!
(Includes Transmitter & Receiver)
Digital Trims!
RRP £39.99
Our Price Only £34.99!

Cirrus
3 Channel 40MHz FM Combo
Includes Transmitter, Receiver and Crystals.
Futaba Compatible
Only £19.99!

SPECIAL OFFER
Tornado 50Amp Forward & Reverse Waterproof Electronic Speed Controller. 6-12 volts fitted with tamiya plug bullet connectors and switch
Only £29.99

Receivers
FM - AM - 2.4GHz

SPEKTRUM RECEIVERS IN STOCK
AR400 4 Ch 2.4GHz £25.00
AR6210 6 Ch 2.4GHz £54.99
MR200 2 Ch 2.4GHz £35.99
MR3000 3 Ch 2.4GHz £51.50
AR600 6 Ch 2.4GHz £38.99
Planet Micro 4CH Receiver £14.99
Planet R7Ms 7CH 2.4GHz £16.99
Planet R7Ms 7CH Hard Case £17.99
Planet 6CH Receiver £14.99
Radio Link 6CH Receiver £15.00
Futaba R200 4CH 2.4GHz RX £39.99
Futaba 617FS 7 Ch 2.4GHz RX £19.50
Futaba 2 Ch Am 27mhz £21.99
Futaba 2 Ch Am 40mhz £21.99
Hitec 2 Ch Am 27/40mhz £14.99
Acoms 2 Ch Am 27mhz £12.99
Acoms GR-24 2 Ch 2.4GHz £27.00
FUTABA 6CH FM 40MHZ £43.99
TAMCO 6CH 2.4GHz RX £15.99
Saturn 6CH 2.4GHz RX £19.50
QSF 27MHz AM 2 Channel RX £8.50

Special!
400 size
Brushed motor
6V-9.6V
Only £3.99

Transmitters
2 CH TRANSMITTERS AM
Futaba & Acoms
27 OR 40 MHZ
From £15.00
ALL ABOVE REQUIRE NICADs

New In! Tornado 3300mAh 7.2v
Racing Pack, High Quality!
Only £13.00



HOWES MODELS

01865 848000
Unit 2C & 2D Cherwell Business Centre
(Part of Station Field Industrial Estate)
Rowles Way, Kidlington, OX5 1LA
www.howesmodels.co.uk
Fast mail order - Overseas postage at cost

New In!
2 Turn & 4 Turn
Winch Drum Servos
Torque: 6KG
Size: 40.5x20.2x38mm
Special Price Only
£10.95 Each!

FULL RANGE
Tamco 2.4Ghz 6 Channel Combo
Superb Quality
Only £45.00
Transmitter & Receiver
Additional RX £15.99

FUTABA 2 CH AM 27 OR 40 MHZ
SET INCLUDES
TRANSMITTER-RECEIVER,
2 SERVOS, CRYSTALS & B/BOX
ALL FOR ONLY £42.99

Futaba 4TF 2.4GHz Combo
Includes transmitter, receiver & switch harness
Excellent Quality
Only £86.99

Radio Link T4U
4 Channel 2.4GHz
Radio Complete With
6Ch 2.4GHz Receiver.
Additional RX £15.00
Now Only £29.99!

PLANET TS 2.4GHz
COMBO SET
SET INCLUDES
TRANSMITTER & RECEIVER
VERY EASY TO USE
5 CHANNEL RADIO
OUR PRICE £45.50

Special Offer
Radio link T7
2.4ghz 7 channel
Tx/Rx combo, 7 model
memory Digital trims
Only £59.99

Saturn 2.4GHz Systems

Saturns Full Range 2.4GHz Combos
X4 4 Channel £38.99
X5 5 Channel £44.50
X6 6 Channel £53.99

Planet T7
Brand new 7 Channel
Planet 2.4GHz Combo set
Only £69.99

Futaba 6J Combo Set
Ideal step up from a 4 channel system.
15 Model memory, Digital trims.
Futaba Quality at only
£135.00!

Mini/Midi 1250MG
Metal Geared Servo
Torque 6V : 3.5KG Speed 6V 0.12
Length 31mm x Width 16mm x Height 35mm
NEW IN! Only £6.50!

NEW STOCK OF POWER PACKS!

7.2 VOLT PACKS
1800MAH ONLY £7.99
2000MAH ONLY £10.50
3000MAH ONLY £13.50
3300MAH ONLY £13.00
3800MAH ONLY £14.99
4000MAH ONLY £19.99
5000MAH ONLY £24.99
8.4 VOLT PACKS
3000MAH ONLY £15.00
3600MAH ONLY £16.99
5100MAH ONLY £24.99

Lead Acid Cells

6 VOLT 1.0 AMP - £4.99
6 VOLT 1.3 AMP - £4.99
6 VOLT 3.4 AMP - £5.99
6 VOLT 4.5 AMP - £5.50
6 VOLT 7 AMP - £7.45
6 VOLT 10 AMP - £9.99
6 VOLT 12 AMP - £12.50
12 VOLT 2.1 AMP - £6.99
12 VOLT 3.4 AMP - £11.50
12 VOLT 4.5 AMP - £12.99
12 VOLT 7 AMP - £19.99
12 VOLT 8.5 AMP - £15.99
6V JELLY CHARGER - £9.99
12V JELLY CHARGER - £9.99
2-6-12V JELLY CHARGER - £14.99



Speed Controllers

MTRONIKS WATERPROOF
10 AMP 4.8-12v ONLY £19.99
15 AMP 6-12 V ONLY £19.99
20 AMP 6-12 V ONLY £24.99
25 AMP 6-12 V ONLY £28.99
40 AMP 6-12 V ONLY £48.99
RV11 4.8-9.6V RRP £57.99
OUR PRICE ONLY £24.99!!
FUSION AQUAPOWER 280AMP Only
£39.99
MTRONIKS G2 HYDRA 30AMP
BRUSHLESS £54.99

Chargers

Mains Chargers
Vector NX85 - 4-8 Cells ni-cad/ni-mh,
Variable charge rate, 0.5-5amps. Mains
operated, Peak detection. £24.99
5ive NX82 - 6-8 Cells ni-cad/ni-mh, Dual
5amp output charger. Peak detection on
both outputs. £24.99
Ethos LX41B Pro - Charge rate
0.4-4amps 1-12cells ni-cad/ni-mh
Li-Ion/Li-Po 1-4, cells lead acid 1-12volts
integrated balancing port mains or 12v
operation. £49.99

VECTOR NX85
Mains & 12v Charger
- 4-8 cell 4.8v-9.6v
- NiMH & NiCad
- Will charge 3000mAh
pack in approx 40 minutes
at 5 Amps
Our Best Seller
Only £24.99!

Howes Super Deal!

Acoms 27MHz 2 Channel Combo
acoms



Combo includes
1 x 2 CH Transmitter
1 x Receiver
2 x Standard Servos
1 x Pair of Crystals
1 x Battery Box and Switch
RRP £49.99
Our Price Only
£29.99!

Howes Special Offer Servos.

Micro Servo: Torque 1.7Kg Speed 0.14
Size 29x12x30mm Only £3.50
Mini Servo: Torque 2.7Kg Speed 0.14 Weight 16g
Size 29x12x30mm Only £4.00
High Power Ball Raced Servo: Torque 6.5kg
Speed 0.16 Weight 43g Size 40x20x40mm £7.99



SEA RIDER & WARRIOR
RTR with 2.4GHz Radio,
Battery pack & Charger
Length 420mm
High Quality Models
Our Price Only £59.99 Each



SERVOS
CARSON 3KG STANDARD - 4.99
SATURN 3KG STANDARD - £4.99
FUTABA 3003 STANDARD - £9.50
ACOMS AS17 STANDARD - £5.50
FUTABA 3010 6.5 TORQUE - £23.99
FUT 3014 WATERPROOF - £24.99
HITEC 325 BALLRACE - £11.50
FUTABA 3004 BALLRACE - £11.75
BUY 4 x 3004 FOR ONLY £46.00
SD 200 MINI - £14.30
ZEBRA/HITEC 135 Feather £5.25
ZEBRA/HITEC 135 Mg Feather £9.25
POWER HD 9g Micro £3.50
OR 4 For £13.50
MINI SERVO ONLY £4.00 (4 for £15.00)
STANDARD BALLRACED £6.50
HIGH POWERED BALLRACED £6.99
SAIL ARM, WINCH & SPECIALIST SERVOS
HITEC 785 HB SAIL WINCH
WITH FULL ROTATION DRUM
OUR SPECIAL PRICE £25.00
HITEC 765BB SAIL ARM
WITH 12 CM LONG ARM
OUR SPECIAL PRICE £25.00
FUTABA S3802 SAIL ARM
WITH 12CM LONG ARM £56.25
HITEC HS 805BB SAIL ARM HUGE
WITH 20KG TRQ £29.99

Hi Torque Servo
17kg Torque, Metal Gears
Standard Size
Fits All Brands
Was £29.99
Only £12.00!

Howes Summer Special!



Pro Boat Regazza RTR 1M Sailboat

Includes 2.4GHz Spektrum Radio
Length: 1M - Mast Height: 1.5M
RRP £264.99

We have had a batch of these models come into us with small packing marks on the main sails and can now pass on a huge discount on this model. Very limited stocks
Only £150.00



Back In Stock!
Westwood 18
Model comes ready to sail and includes Spektrum 2.4GHz radio. Superb quality. Length 480mm Height 775mm
Howes Special Price Only £125.00

Joysway Dragon Force RTR RG65 Yacht 2.4GHz

Specification

Hull Material Plastic Moulded
Mast Height 915mm
Sail Area (Overall): 22.26 dm²
Length: 855mm
Height: 1338mm

Includes 2.4GHz Radio
NEW LOW PRICE!
£135.00!



HOWES MODELS

LARGER STOCK-LOWER PRICES

Open Mon-Fri 9.00-17.00 / Sat 10.00-16.00

New Website Available Now!

www.howesmodels.co.uk

You will benefit from special offers and clearance lines first.
Also Emails of brand new items will be sent to you fast.
You do not need to order on-line to benefit from the offers. Just register!
Registration takes only a couple of minutes!

New Range Of Li-Po Batteries!

7.4v 1000mAh £10.99
7.4v 1300mAh £12.99
7.4v 1600mAh £15.99
7.4v 2200mAh £15.99
7.4v 3900mAh £31.99
11.1v 1000mAh £15.99
11.1v 1350mAh £16.99
11.1v 1600mAh £21.00
11.1v 2200mAh £17.99
11.1v 3900mAh £44.00



Receiver & Transmitter Battery Packs

4.8 VOLT PACKS
1300MAH FLAT OR SQUARE - £6.99
1200MAH FLAT £5.00
2700MAH Flat or Square £8.99
6 VOLT PACKS
1300MAH FLAT or TRI - £8.99
2700MAH Flat or Tri Only £11.75
TRANSMITTER PACKS,
9.6 VOLTS
1300 MAH FLAT - £15.00
2700MAH Flat or Square £19.99
All packs are made from AA Cells.

Brushless Motors Better than 1/2 Price!

2.5T 600 Size (6v-12v) 2.5 Turns
KV (Rev/Volt) 8000 30A
3.5T 600 Size (6v-12v) 3.5 Turns
KV (Rev/Volt) 7000 27A
15.5T 600 Size (6v-12v) 15.5 Turns
KV (Rev/Volt) 2500 15A
RRP £64.99
Our Price £24.99!

Props, Shafts etc

LARGE RANGE OF THE FOLLOWING
BRASS PROPS M4 3 BLADE
M4 NYLON PROPS 2 BLADE
BRASS SHAFTS M4
BRASS RUDDERS S/M/L
MANY OTHER SMALL PARTS STOCKED

Extension Leads

All For Futaba/Hitec
SERVO LEAD 200mm £1.00
EXTN LEAD 270mm £0.60 each
EXTN LEAD 500mm £0.80 each
EXTN LEAD 1000mm £1.00 each
Y LEAD £1.75 each
BEC RED BOTH ENDS £0.90
SWITCH HARNESS £2.25

Howes Special!

Core-RC
7.2v 1800mAh
Only £7.99
Very Limited Stocks!



AA's & AAA's

GP 1000mAh AAA £1.70 Each
1300mAh AA NiMH £1.45 Each
2700mAh NiMH
Rechargeable Battery.
Only £2.00 Per Cell.

SPEKTRUM DX5e
Includes 5 Channel AR500 Full Range Receiver Only
£69.99

DX6i
Includes 6 Channel AR6210 Full Range Receiver Only
£119.99

Special Offer!
MTroniks Viper RV11
4.8v-9.6v. RRP £57.99
Low Price £24.99

YACHT KITS

At Our Prices
T/Tiger Volans £149.99
T/Tiger Naulantia £149.99
T/Tiger Victoria £97.50
T/Tiger Entz £169.99
T/Tiger Voyager £129.99
Joysway Dragon Force £135.00
Joysway Explorer - £144.99
Surmount £99.99
Monsoon £150.00
Phantom £150.00
Pro Boat Westward £124.99
Pro Boat Regazza £239.99



VOLERE 22

Includes 2.4GHz Radio, Battery & Charger
Length - 558mm
RRP £219.99
Limited Offer
£199.99!

AQUACRAFT Bristol Bay Models



Length: 850mm
Motor, Servo & ESC Included
Requires 2 Channel Radio, Battery & Charger
Super detailed model with working lights
Our Price Only £169.99!



Robbe 1198 Paula IV Kit

£169.99 Includes Fittings
Scale 1:20 Length 790mm
Robbe 1195 Dusseldorf
£399.99 ARTR
Scale 1:25 Length 1170mm
Robbe 1196 Bussard
£259.99 ARTR
Scale 1:20 Length 900mm
Robbe 1197 Dolly
£119.99 ARTR
Scale 1:20 Length 550mm

Platinum Edition



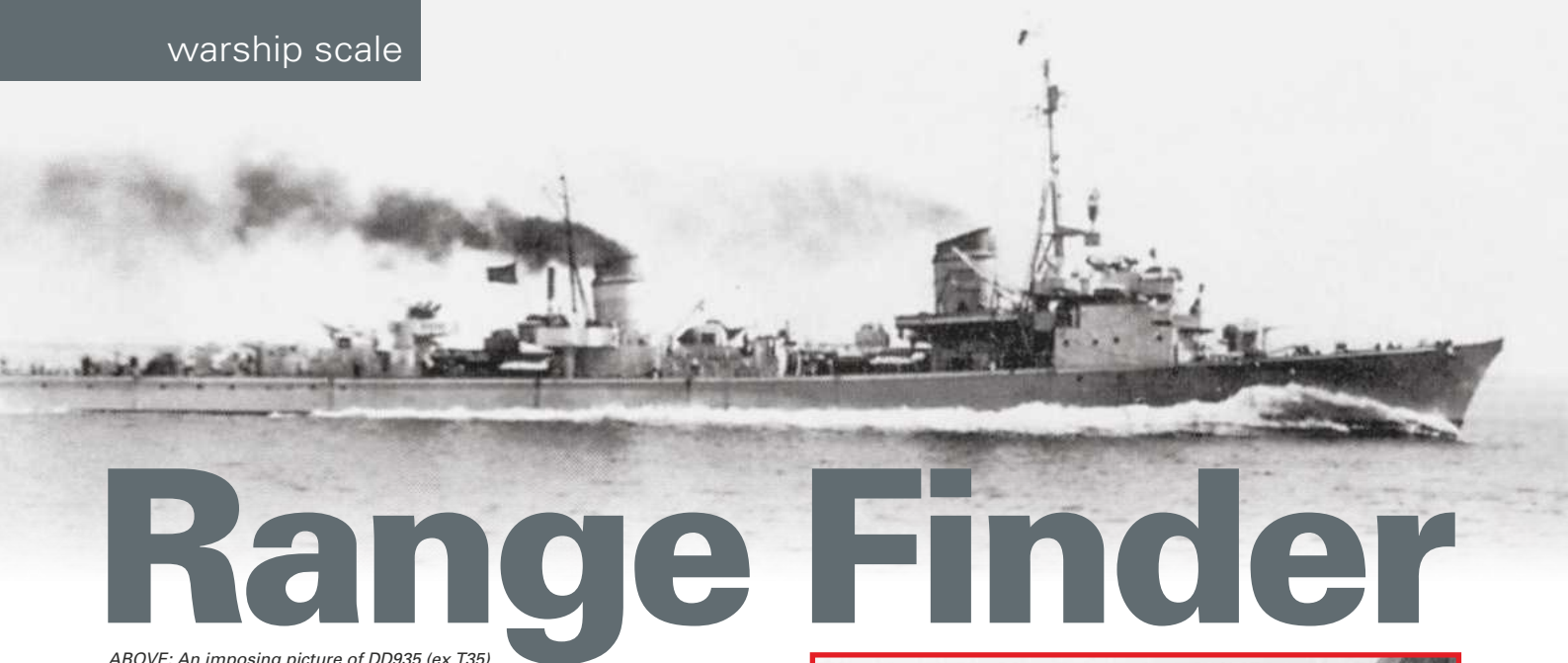
Revell Flower Class Corvette (Snowberry)

1/72nd Scale. 850mm Length
Includes Wooden Deck,
Metal Tubes & Photo Etched Parts.
RRP £119.99

Clearance only £79.99
Other Revell boat kits available
please check website for stock

Electric Motors

385 5-POLE £3.10 each
400 3-POLE £3.99
540 3-POLE £2.99
545 5-POLE £2.99
550 3-POLE £6.25
MFA RE 140 (3-6v) £2.75
MFA RE 170 (1.5-3v) £3.75
MFA RE 360 (6-15v) £4.99
MFA 380 (3-7.2v) £5.75
MFA 385 (4.5-15v) £5.75
MFA RE 540 (4.5-15v) 3 POLE £7.50
MFA RE 700 (6-8.4v) £28.99
MFA TORPEDO 800 £22.50
MFA TORPEDO 850 £22.50
Super Low prices on all MFA Motors!



ABOVE: An imposing picture of DD935 (ex T35) undergoing evaluation trials by the US Navy in 1946.



Dave Wooley
with his Worldwide
Review of
Warships and
Warship Modelling

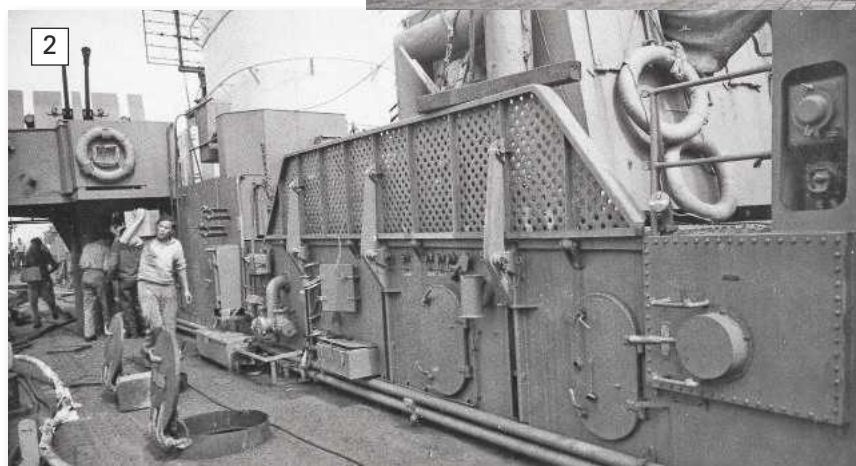


PHOTO 1. The area amidships between the two funnels includes the torpedo tubes and a single 10.5cm gun.

PHOTO 2. The arrangement that is either side of the 10.5cm guns both amidships and aft. The perforated sides fold down.

Welcome once again to our regular sortie into the world of fighting ships and this month we are having a second look at the T35, a German WW2 large torpedo boat, and are scratch building two Halmatic 24 Rigid Inflatable Boats, together with the usual Mystery Picture puzzle.

Kriegsmarine T35 (DD935) torpedo boat - Part Two

In the last issue we concluded Part One just aft of the foremast. T35 was a torpedo boat, albeit

more like a destroyer and was, apart from guns, equipped with six 53.3cm torpedo tubes in a 3 x 2 arrangement. The first three tubes were located just aft of the forward funnel as seen here on the right of **Photo 1**. Sited amidships was a single 10.5cm gun in an open backed turret. The official designation of this was SKC/32 and it was adapted for use on many other types of German warship, including the Type 35 and Type 43 minesweepers. Although this is not a perfect picture, it does convey a considerable amount of information that is helpful to the model maker.

Amidships detail

Moving aboard now, but remaining in the same amidships location, we have an excellent view of the area adjacent to the 10.5cm gun. The raised section by the side of the 10.5cm gun turret can drop down if required, **Photo 2**, but was more likely used to retain the spent cartridge cases and just visible to the top left of the picture is the starboard 3.7cm twin gun. It is a great pity there are not more of these excellent on board views which provide so much visual information for our model making purposes.

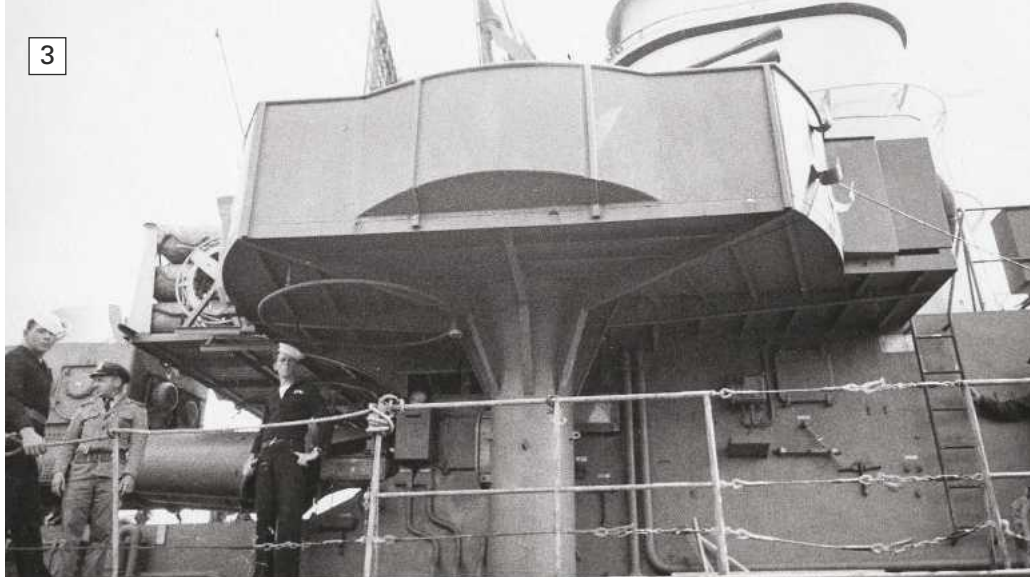
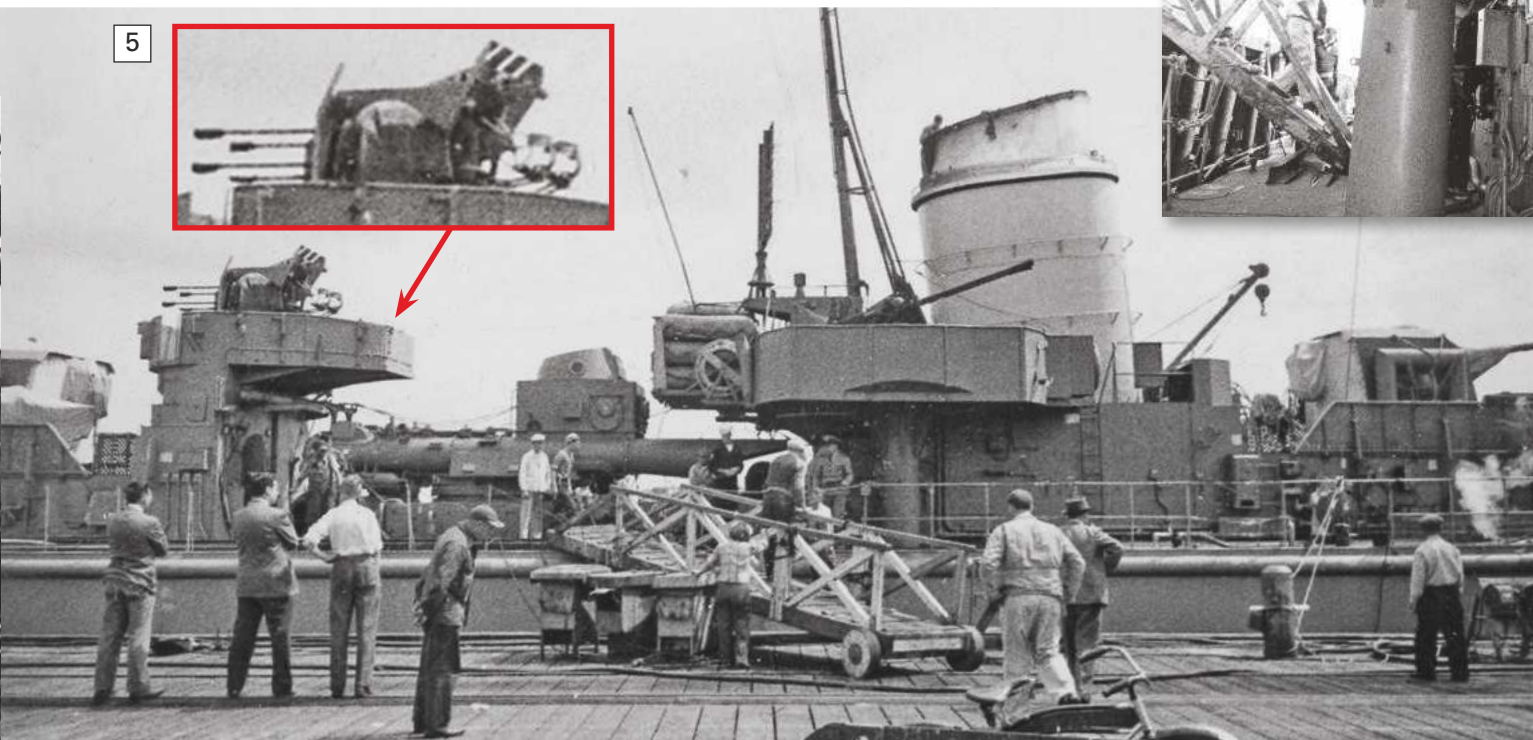


PHOTO 3. A view of the underside of the twin 3.7cm gun platform. PHOTO 4. The 3.7cm gun platform looking aft on the starboard side. PHOTO 5. A general picture of the starboard side from just forward of the second funnel to the Vierling flak gun platform aft.



Moving slightly further aft along the starboard side, adjacent to the aft funnel casing is the raised tub for the 3.7cm twin gun. **Photo 3** reveals a fair amount of the underside support framing and some of the electrical fittings beneath the platform. Also it's worth noting the types of stanchion and railings, and a further view of the underside of the gun tub is in **Photo 4**, but from on deck looking aft.

Back on the quayside, a general view of the starboard side from the rear funnel casing to further aft can be seen in **Photo 5**. Just immediately behind the funnel is the main mast, to which is attached an extended platform supporting the FuMO21 radar mattress array and to the rear of the 3.7cm gun tub beside it, are a number of liferafts, all stacked together. This picture also provides a reasonable view of the second set of 53.3cm torpedo tubes and aft of them is the raised platform for the 2cm Vierling flak gun, of which T35 carried only one. Going aboard we have a better idea of the arrangement beneath and around the starboard side of the 2cm Vierling gun platform in **Photo 6**. Within the same picture there is also a view of the rear of the torpedo tubes, but alas this is all we have as a close-up of them.

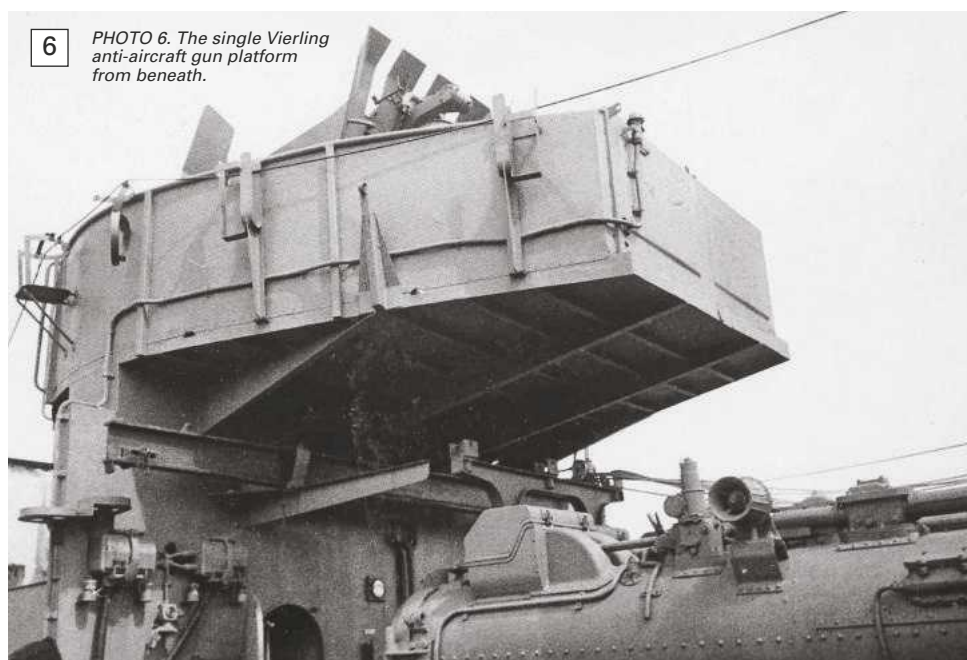


PHOTO 6. The single Vierling anti-aircraft gun platform from beneath.

PHOTO 7. This general picture helps in assessing the position of the various fittings, gun mountings fits and the aft torpedo tube arrangement.

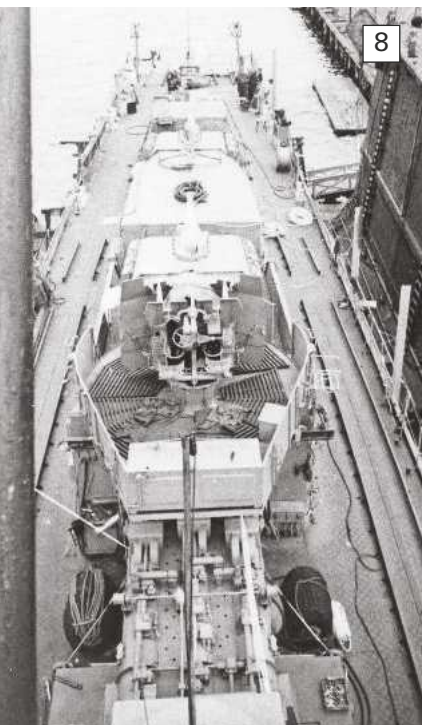
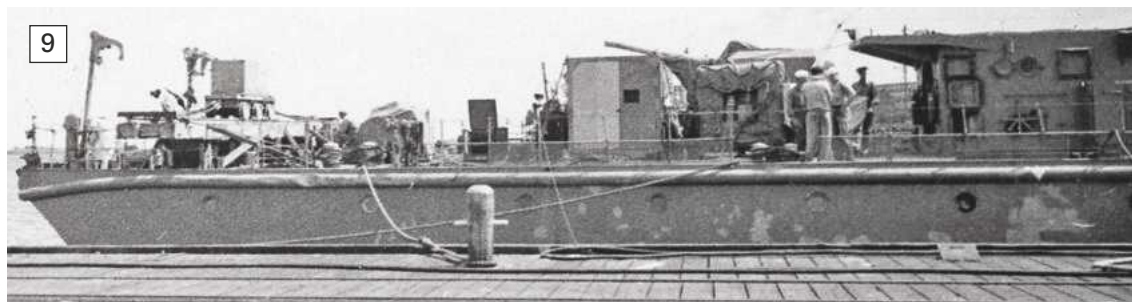


PHOTO 8. Given the advantage of height, here we are looking down from just behind the aft radar mast and viewing the inside of the Vierling AA gun platform and the location of the mine rails on either beam.

PHOTO 9. The stern part of the vessel. It's worth noting the two small cranes mounted on the transom for deploying the minesweeping equipment.



Aft detail

Once again relying on the pictures taken from the quayside, we move further aft and here are the rearmost two 10.5cm guns in **Photo 7**. What is surprising for this size of warship is just how well armed the T35's were. As a point of reference, the separation between each of the funnels is quite noticeable if you refer back to the heading picture, especially on such a relatively small warship. Siegfried Breyer in his book 'Die Deutsche Kriegsmarine 1935 to 1945', makes reference to this recognition feature, explaining that it was because each of the turbines with their associated boilers were in separate internal spaces and could be used independently of each other.

Moving on now to **Photo 8**, this is a very revealing picture. Here, the top of the torpedo tubes are exposed and it is the only picture that shows the interior of the gun tub of the 2cm Vierling weapon. Surprisingly the mine rails do not appear to continue right aft as is indicated in Siegfried Brayer's book, but terminate adjacent to the aft deck housing separating the two 10.5cm guns.

Moving right aft now reveals some sort of temporary platform running across the stern and mounted on it is a small six wheeled dolly. The reason for it being there is unknown, but immediately abaft of that are two raised arms with calipers for handling the mine sweeping gear, **Photo 9**.

Similar to other German destroyers such as the Z39 there are some similarities of layout that include the shape of the transom, **Photo 10**. Interestingly, the degaussing coil to counter magnetic mines, changes direction at the transom. You will have gathered from these pictures that T35 was actually sitting in a floating dry dock when these pictures were taken.

Deck hatches

Watertight deck hatches aboard RN warships of the WW2 period tended to be of a box section, much as they are nowadays, yet aboard T35 many of these hatches were round with a single dog for opening, **Photo 11**. The military photographer who took these pictures also made the point of taking another picture of the hatch in the open position, showing the underside of it, **Photo 12**. There is much that is



PHOTO 10. Looking at the transom on T35 and you can see its similarity to those on larger German destroyers of WW2.

PHOTO 11. A single dog latch operates this watertight hatch.

PHOTO 12. Looking at the opened deck hatch.



PHOTO 13. Bollard and stanchions as fitted to T35.

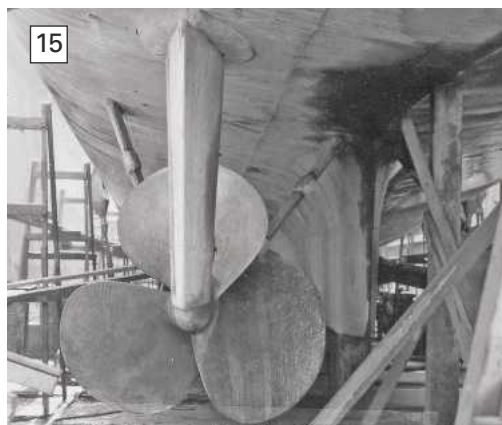


PHOTO 15. A truly excellent picture showing clearly the position of the A-frame, rudder and shape of the propeller blades.

unknown regarding the onboard detail, but the more mundane fittings such as the type of bollard, deck edge rail, stanchion design and netting are all in **Photo 13**.

Underwater detail

It is very rare that photo tours of a warship include the underwater detail, but the official USN photographer made it a priority because it can reveal so much about the hull form and the drivetrain fitted to this Elbing class of torpedo boat as for example in **Photo 14** on the port side looking aft towards where the propshaft emerges from the hull. Here the angle of the shaft and position of the A-frame can be readily determined. In **Photo 15** we have an excellent view of the rudder and its relationship to the propeller and another viewing angle of the same A-frame and its location. In addition, there is a clear and defined view of the propeller blades, their style and pitch.

Included in **Photo 16** is the A-frame again and propshaft bearing, which also includes the location of the sacrificial anodes on both it and the rudder. Our final picture concludes with a deck winch located aft and once again the detail that can be gleaned from this is can be quite useful, **Photo 17**.



PHOTO 14. Quite rare, as usually warships are not photographed beneath their waterlines.

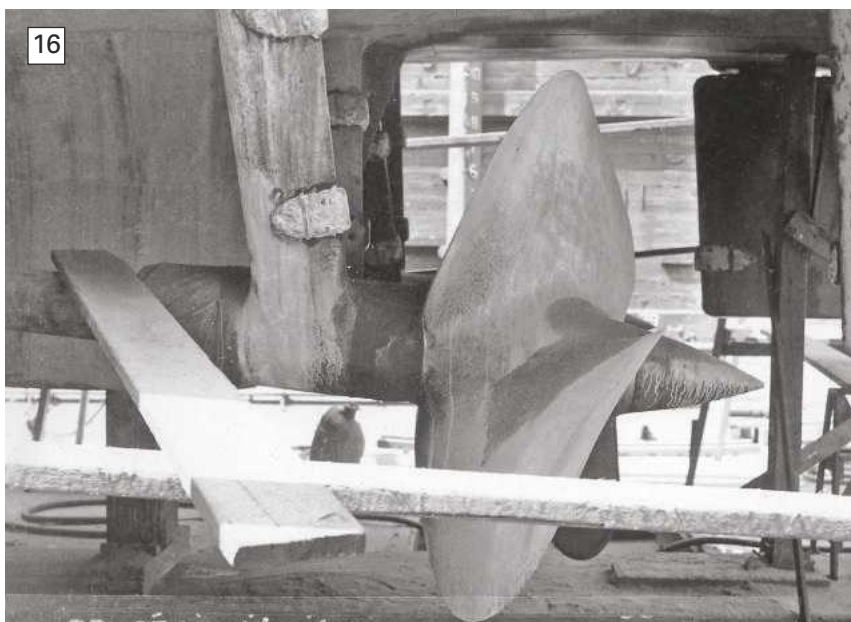


PHOTO 16. Another detail picture viewing the propeller and A-frame.

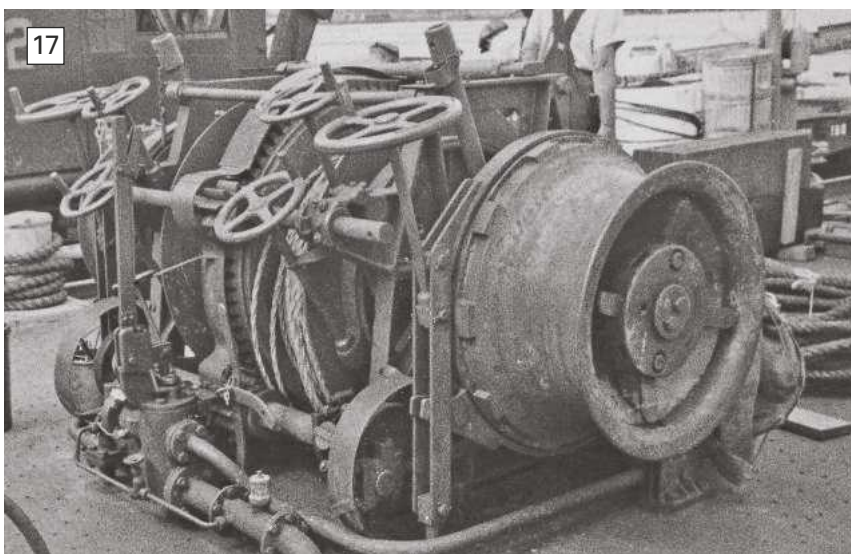


PHOTO 17. The aft mounted winch.

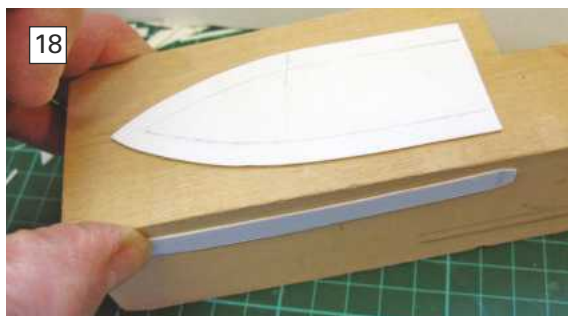
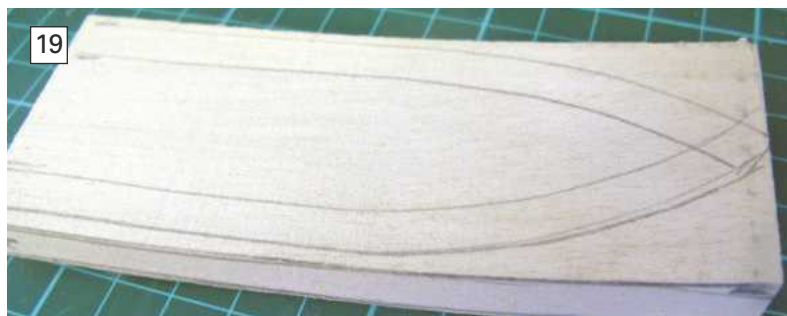


PHOTO 18. The profile shapes copied from the sketch drawing and used to mark out the Jelutong for the collar.

PHOTO 19. The side profile shape is cut first to create the shear. Here the collar is now marked in plan view with its centre marked for removal.



Conclusion

The wartime activities of these large torpedo boats was certainly varied and at times spectacular, but for some it could be grim and tragic, but there isn't the space here to cover the in-depth history of these warships. For further reading I recommend Warship Volume X under the heading 'The Elbing Class Torpedo Boat at War' by Pierre Hervieux, Pages 95 to 102, and as mentioned earlier Siegfried's excellent evaluation of the large torpedo tubes and their mountings in 'Die Deutsche Kriegsmarine'.

Drawings

It is a great pity that there were not more on-board pictures to help define accurately the basic structures and deck housings, but perhaps more do exist and are yet to be unearthed in the US National Archives. It was the brief of the official photographer to record as much as possible of the vessel as part of visual record for evaluation purposes. This all becomes more evident when viewing the official pictures of other Axis warships, once they were in allied hands after WW2.

For those modellers looking for something different, then the T35 would be an interesting project. Drawings are available from the French magazine MRB Modèle Réduit de Bateaux with plans available for the T39, but only giving the body plan in 1:100 with the plan and general arrangement in 1:500 scale. These are not highly detailed drawings and some additional research will be needed if a reasonable working model, in perhaps 1:50 scale, was being contemplated. The Elbing class were narrow in the beam and building to a large scale will help when creating a practical working model. Librairie Le Hussard - Librairie du Collectionneur, 15 Rue Cronstadt 75 015, Paris, France (Métro Convention), is a useful source of information, pictures etc., and not too expensive.

Halmatic Pacific 24 Rigid Inflatable Boat - Part One

Although the 1:72 scale model of HMS Daring is now complete (and as they say, is now history!) there was the construction of its two Halmatic boats that I thought might have a wider appeal. On a model of HMS Daring, one can of course build it with the 'shutters down' as it were, so that you cannot see inside the boat bays, and many modellers might choose that route. However, creating a model of such a small boat may at first sight appear daunting, yet in practice it is quite easy, provided one thinks

about how best to go about it. In this issue I shall show how to create the main hull tubes (or collar), and the rest of the hull using a combination of timber and styrene card and then next month complete its interior and paint the model.

Pacific 24 RIB

The Pacific 24 is in widespread current use by the Royal Navy and is designed to accommodate an aft conning position for the two crew and removable modular seating for up to six passengers. Power is provided by a single Yanmar 6LYA -STP six cylinder marine diesel engine in combination with a Hamilton HJ-241 water-jet drive located on the transom, this being capable of giving a top speed of more than 39 knots. Also fitted is the aft A-frame with its capsized reversal system, navigation lights and stern crash protection bars.

Using the basic specification of an overall length of 7.80m and beam of 2.57m, draft of 0.54m and the 500mm diameter collar, we have all the key dimensions. As always, a simple sketch can be drawn to create the form of the overall shape and the model size. There is a noticeable shear (or rise) from amidships to the bow and the pictures accumulated from numerous tours of HMS Daring and other RN warships provided most of the visual data, which is invaluable when making something like this. 'A picture tells a thousand words', is a good mantra.

Constructing the hull collar

My original thought was to construct this from styrene tube, but initial experiments proved unsatisfactory as did the use of two part Milliput to fill the joints. There are a number of good examples of RIB's and other rubber hulled boats in model form that are available from various manufacturers, but these were not quite what was wanted, either to the right scale or the specific shape. For the two Pacific 24's required, it was decided to form the collar from timber using very versatile and malleable Jelutong. If Jelutong is unavailable, then a reasonable alternative is Obechi or perhaps even a 'hard' balsawood, but the first mentioned is to be preferred.

The first task was to transfer the profile from the sketch on to cardboard or styrene sheet. This gave a semi-rigid profile which could then be used to mark out the right shape on the timber block, **Photo 18**.

It is essential that the side profile shape is cut first as this will determine the shear line. For convenience, a band saw was used, but a fret saw will also suffice. With the inner and outer lines of the collar drawn on the prepared timber the inner section could then be marked for removal, **Photo 19**.

Into action with the saw again(!), and now we have the rough outline shape of the collar with its correct shear and plan view profile, **Photo 20**. A brief note here: It may seem obvious, but when using any piece of powered machinery (or even hand-held electric tools), all

...creating a model of such a small boat may at first sight appear daunting...

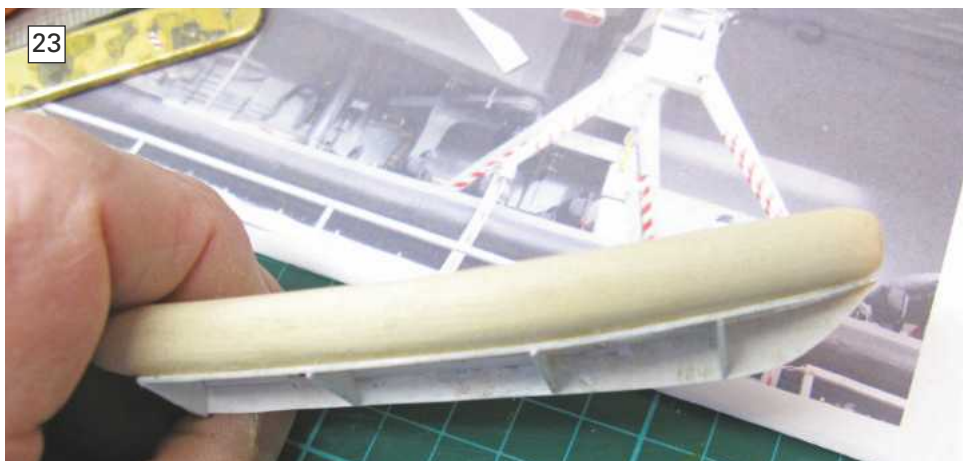
PHOTO 20. Now that the basic collar is prepared, sanding the rounded shape can begin. This part of the job actually took no more than 20 minutes or so of dusty work!





the usual safety considerations should be remembered and having said that, we can now move on!

Creating the round tubular shape of the collar is straightforward and required about 10 to 20 minutes of sanding using a medium grade of wet or dry sandpaper, used dry. A face mask is advisable when sanding Jelutong because its close grain and general softness will generate lots of dust, but it does produce an excellent result, whereas other types of timber may well require much more work and time to achieve the same thing. The bow and the aft ends of the collar need to be treated separately. The bow was gently rounded at the top and inwards at the bottom whilst the two after ends of the collar were tapered and reduced in diameter. With the collar thus formed, its base could be added, **Photo 21**. This base is extends about 50% over the collar tube's diameter.



Creating the lower hull shape

The hull as a whole does not have a flat bottom, it being vee shaped and here it is built on the flat base just fixed to the collar. Using the previously prepared sketch, the underside profile was transferred to a sheet of styrene noting that its upper edge follows the profile of the underside of the collar. Also it's worth taking into account that the underside profile, like the inner flat base, is a little bit shorter in length than the collar, **Photo 22**. With the longitudinal profile in place, each cross section piece could be fitted and again, this is very straightforward. Just mark four positions along the longitudinal profile, measure both height and width across each side from the centre and transfer the measurements to strips of styrene. These can then be cut and fixed into place and the hull bottom section will now be ready for skinning and detailing, **Photos 23 and 24**.

For skinning, 1mm styrene sheet was used, but it is useful to experiment with pieces of cardboard to refine and obtain the exact shapes required, so as not to waste any of the rather more expensive plastic. With the correct shapes thus developed,



they can be transferred to the styrene and the cut pieces glued to the formers. With the bottom now skinned the transom can be added, noting that its outer edges are shaped to follow the contours of the inside of the collar. A side strip was also added to the where the collar meets the lower section, **Photo 25**.

PHOTO 21. With the collar fully shaped, the styrene floor was added.

PHOTO 22. The centre profile piece of the lower hull was fitted and the frames cut to size and glued in place, commencing from the bow.

PHOTO 23. Each of the frames either side of the centre piece have now been added.

PHOTO 24. Ready for skinning!

PHOTO 25. After the underside was skinned, an edging strip was fixed between (and over) the collar and the lower hull.





Spray rails

These were next, their positions being marked and the rails created from Evergreen No.121 0.5 x 0.75mm strip, with the upper rails first, followed by the lower ones, **Photo 26**, and finally those that are fixed to the side strip, **Photo 27**. With all the spray rails in place, any overhangs at the transom could be removed and the underside of the hull is now complete, **Photos 28 and 29**, except for the fitting of the stern protection bars and jet drive unit, but more on that in the next issue of MB.

Sealing the collar

When you are combining wood with styrene, one always has to be careful when finishing the former, as cellulose based paints will of course react distinctly negatively with the plastic, unless one is very careful! Since the collar is timber it will need to be sealed and for this, conventional cellulose dope based sanding sealer is ideal, with two coats, **Photo 30**, sanded between each application by 400 grade wet or dry sandpaper, giving a nice smooth finish, but do take care not to over-brush it on to the styrene. After the final sanding the prepared surface is ready for the next stage in the construction process. On the centre line along the side lengths of the collar is a narrow band, with bands also fitted around the circumference of it at various intervals including around the bow. To replicate these, lengths of 3mm wide strip were cut from Tamiya masking tape and fitted to the collar as in **Photo 31**.



PHOTO 26. The spray rail positions were marked and styrene strips glued in place to represent them.

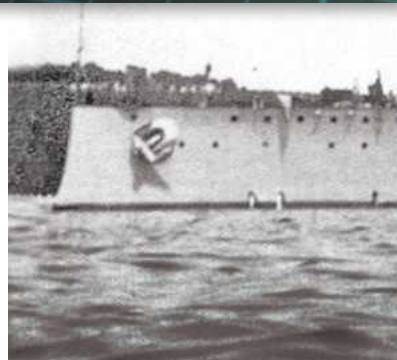
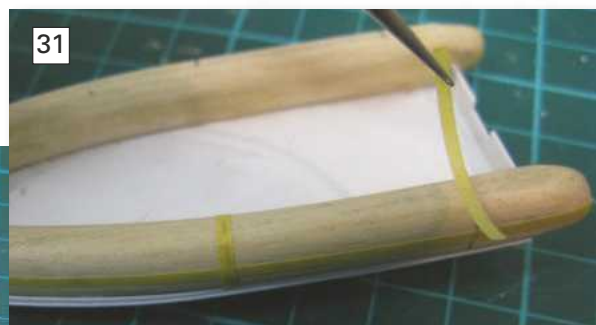
PHOTO 27. A spray rail will also need to be added to each edging strip.

PHOTO 28. The completed hull bottom.

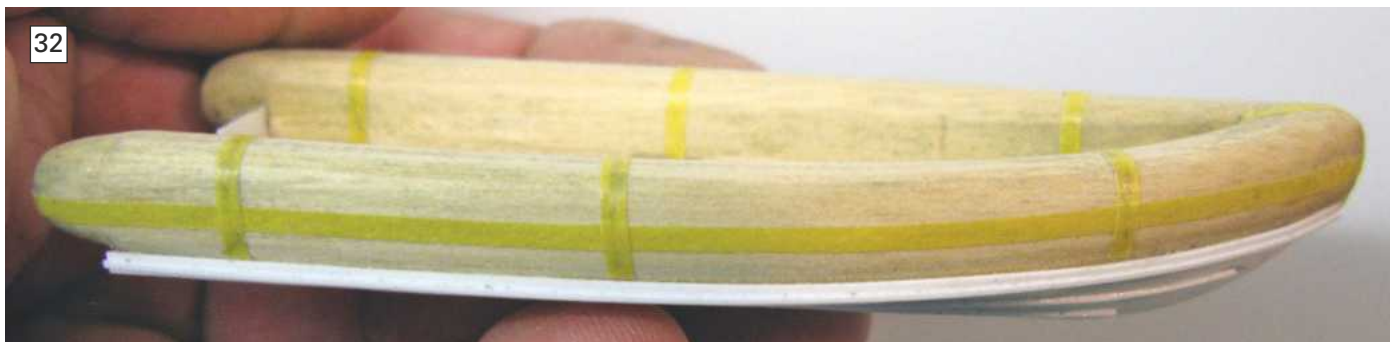
PHOTO 29. The transom is ready for the jet drive. My human hand gives an idea of the size of this 1:72 scale model.

PHOTO 30. Sanding sealer was applied to the Jelutong, taking care not to get it over the adjacent styrene.

PHOTO 31. Strips of Tamiya masking tape can be used to simulate the reinforced joint strips along the length of, and partly around, the collar.



32



With the basic RIB hull now prepared, **Photo 32**, attention could shift to constructing the interior which consists of making eight seats incorporating three different types of chair, the engine box, control console, single point lifting attachment, the aft frame with its capsize reversal system, life lines and last but not least, painting it all! This mini-project, of which two were needed, will be completed next month in the October issue of MB.

Answer to the August Mystery Picture

The clue was: A warship that definitely punches above its weight.

The picture shows the unveiling of the fast missile armed stealth corvette Tuo Jiang for the Navy of the Taiwan Republic of China (RoCN). Perhaps this 500 ton catamaran design was in part inspired by the Chinese PLAN (People's Liberation Army & Navy) massive investment in their so called stealth anti-carrier missile corvettes Type 022, NATO designation is Houbei class, 83 vessels now being in service! The state of Taiwan of course has always been very wary of its near neighbour, China.

Tuo Jiang incorporates into its design stealth features which reduce considerably its radar cross section. Built at the Lung Teh Shipyard these 60m x 14m wave piecing catamaran hull vessels are capable of 30 knots has a crew of 41 and a range of 2000 miles. They are viewed by Taiwanese Republic of China authorities as an anti-carrier missile corvette to perhaps pre-empt the enlargement of the Chinese aircraft carrier building program. Tuo Jiang is reported to be equipped with the supersonic ramjet powered anti-ship missile, but no confirmed details are currently available as to the type of gun mounted forward, but installed aft is a single Phalanx close in weapon system. As they say: 'Watch this space'!

This month's Mystery Picture, Photo 33

The clue is: A saint by any other name.

References and acknowledgements

T35 ref: Die Deutsche Kriegsmarine 1935 - 1945 Band 7. Entwicklungsgeschichte der Zerstörer und Torpedoboote by Siegfried Breyer. Warship Volume X, 1986.

Jane's Fighting Ships 1947 to 1948.

10.5cm, 3.7cm, 2cm & 20mm Vierling guns ref: Naval Weapons of WW2, Pages 248, 255, 257 & 258.

Drawings for T35/T39: MRB Modèle Réduit de Bateaux and Librairie Le Hussard, website www.librairie-hussard.com.

My thanks to **Bill Clarke** for accessing and providing this series of pictures of T35, courtesy of the US National Archive. Last month's **Mystery Picture** was an official picture from Republic of China Navy (Jane's distribution media).

My thanks to the **Captain and Crew of HMS Daring** for their help and assistance with my onboard photography and research.

PHOTO 32. The basic hull of a 1:72 scale Halmatic Pacific 24 is now ready for fitting out.

The state of Taiwan of course has always been very wary of its near neighbour...

33

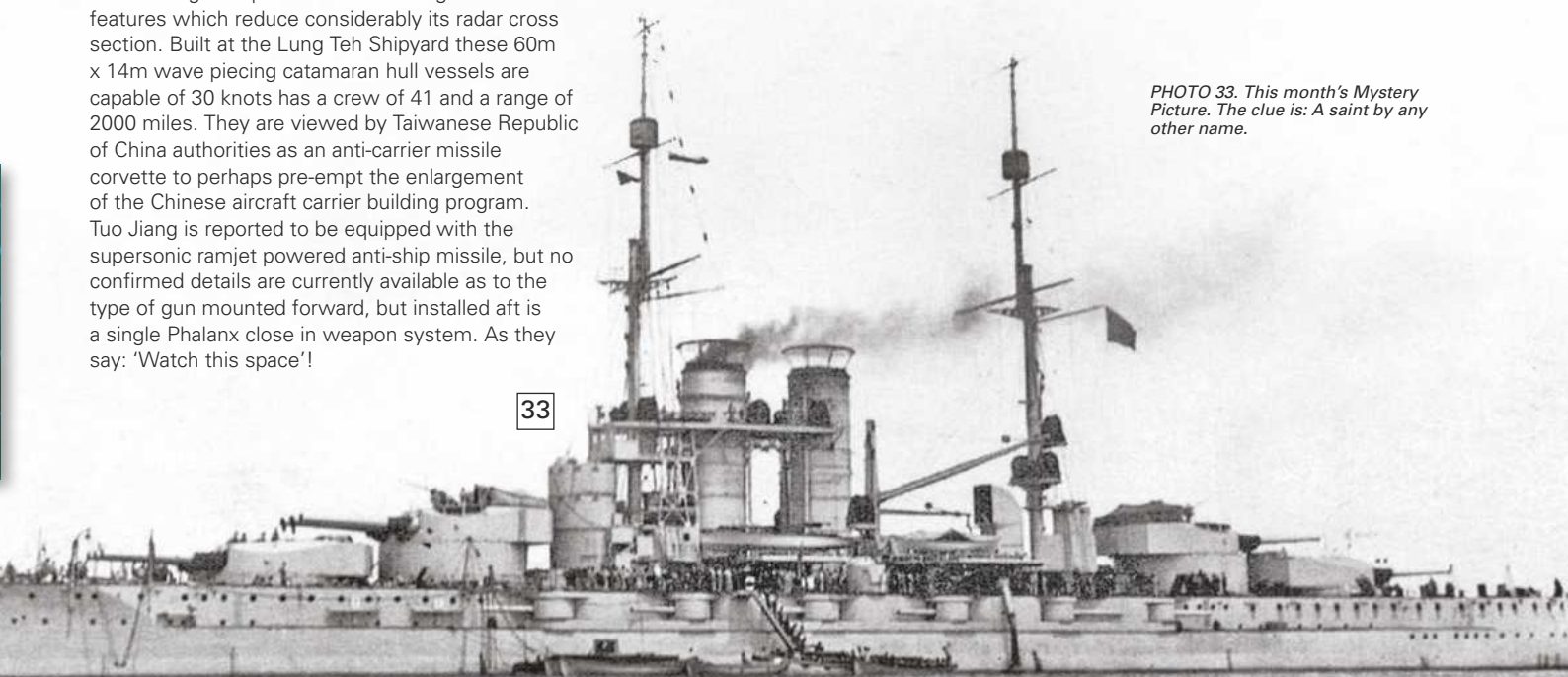


PHOTO 33. This month's Mystery Picture. The clue is: A saint by any other name.

Model Boats SUBSCRIPTION ORDER FORM

DIRECT DEBIT SUBSCRIPTIONS (UK ONLY)

Yes, I would like to subscribe to **Model Boats Magazine**

- ☐ Print + Digital: £50.00 per year
(SAVE 28% on shop price + SAVE 70% on Digital Download + FREE GIFT)
☐ Print Subscription: £41.00 per year (SAVE 28% on shop price + FREE GIFT)

YOUR DETAILS MUST BE COMPLETED

Mr/Mrs/Miss/Ms.....Initial.....Surname.....
Address.....
Postcode.....Country.....
Tel.....Mobile.....
Email.....D.O.B.....

I WOULD LIKE TO SEND A GIFT TO:

Mr/Mrs/Miss/Ms.....Initial.....Surname.....
Address.....
Postcode.....Country.....

INSTRUCTIONS TO YOUR BANK/BUILDING SOCIETY

Originator's reference 422562
Name of bank.....
Address of bank.....
.....Postcode.....
Account holder.....
Signature.....Date.....

Sort code.....Account number.....

Instructions to your bank or building society: Please pay MyTimeMedia Ltd. Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with MyTimeMedia Ltd and if so, details will be passed electronically to my bank/building society.

Reference Number (official use only).....

Please note that banks and building societies may not accept Direct Debit instructions from some types of account.

CARD PAYMENTS & OVERSEAS

Yes, I would like to subscribe to **Model Boats**,
for 1 year (13 issues) with a one-off payment

UK ONLY:

- ☐ Print + Digital: £54.00 (SAVE 21% on shop price + SAVE 70% on Digital Download + FREE GIFT)
☐ Print: £45.00 (SAVE 21% on shop price + FREE GIFT)

EUROPE & ROW:

- ☐ EU Print + Digital: £67.00
☐ EU Print: £58.00
☐ ROW Print + Digital: £67.00
☐ ROW Print: £58.00

PAYMENT DETAILS

☐ Postal Order/Cheque ☐ Visa/MasterCard ☐ Maestro
Please make cheques payable to MyTimeMedia Ltd and write code V645 on the back
Cardholder's name.....
Card no:.....(Maestro)
Valid from.....Expiry date.....Maestro issue no.....
Signature.....Date.....

TERMS & CONDITIONS: Offer ends 12th September 2014. MyTimeMedia Ltd & Model Boats may contact you with information about our other products and services. If you DO NOT wish to be contacted by MyTimeMedia Ltd & Model Boats please tick here: ☐ Email ☐ Post ☐ Phone. If you DO NOT wish to be contacted by carefully chosen 3rd parties, please tick here: ☐ Post ☐ Phone. If you wish to be contacted by email by carefully chosen 3rd parties, please tick here: ☐ Email

**POST THIS FORM TO: MODEL BOATS
SUBSCRIPTIONS, TOWER HOUSE, SOVEREIGN PARK,
MARKET HARBOROUGH, LEICS LE16 9EF.**

Please visit www.modelboats.co.uk/terms for full terms & conditions

CODE V645

**HURRY
OFFER
CLOSES
12th SEPTEMBER
2014**



PRINT + DIGITAL SUBSCRIPTION

Free Rotacraft Mini Rotary Tool Kit*

13 Issues **delivered to your door**

Save up to **28% off the shop price**

Download each new issue to your device

A **70% discount** on your Digital Subscription

Access your subscription on **multiple devices**

Access to the **Online Archive** dating back to January 2007

Exclusive discount on all orders at myhobbystore.co.uk



PRINT SUBSCRIPTION

Free Rotacraft Mini Rotary Tool Kit*

13 Issues **delivered to your door**

Save up to **28% off the shop price**

Exclusive discount on all orders at myhobbystore.co.uk

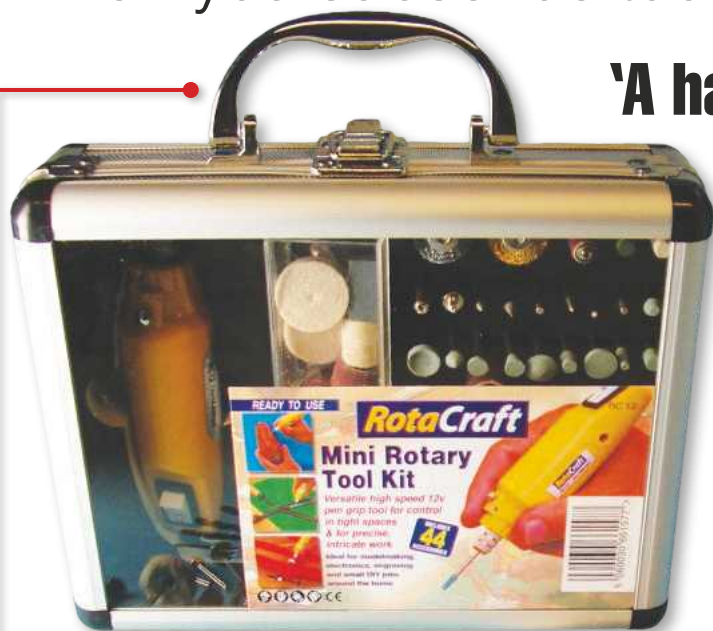
SUBSCRIBE TODAY

Receive a Free **Rotacraft Mini Rotary Tool Kit***

when you subscribe today **WORTH £34.96**

**DIGITAL
SUBSCRIPTIONS
AVAILABLE ONLINE!**

**'A handy addition to your
boat building tools!'**



Don't miss out on your chance to receive this great **Rotacraft RC12 Single Speed Rotary Tool Kit** worth over £34.96

- Single Speed 12 volt rotary tool with plug-in transformer
- 18,000 rpm
- 2.4m total length of cable
- 44 various accessories

- Instructions
- Attractive aluminium carry and storage case

TERMS & CONDITIONS:

Offer ends 12th September 2014.

*Gift for UK Print and Print + Digital Subscribers only, while stocks last.

**When you subscribe by Direct Debit.

Please see www.modelboats.co.uk/terms for full terms & conditions.



SAVE
28% ON THE
SHOP PRICE &
70% ON DIGITAL**

SUBSCRIBE SECURELY ONLINE

 www.subscription.co.uk/mdbl/V645

CALL OUR ORDER LINE

 **0844 543 8200**

Lines open weekdays 8am – 9.30pm & Saturday 8am – 4pm

Quote ref: V645

BT landline calls to 0844 numbers will cost no more than 5p per minute. Calls from mobiles usually cost more.



Alvis Stalwart

The six wheeled packing case!



Ashley Needham's model

The Alvis Stalwart (or Stolly, as it is commonly known) was a British Army forward supply vehicle, developed in the 1960's to carry supplies to fighting units. It had a six wheel layout to ensure good mobility and a built-in amphibious capability for river crossings. Let us stop here for a moment because this is the bit that of course interests us, namely the amphibious bit. My Stolly is going to be a floating only craft and I am not motorising the wheels. Experience from previous craft with wheels has shown me that although it is very nice to be able to drive around and then go into the water, the craft actually spends 99% of its time swimming and so this time I am going to build a 'What can be easily achieved' model and as usual am only building a representation of a Mk. 1 Stalwart FV620.

Staff requirements and specification?

Well, that is to say my requirements and specification! It will need wheels and unless you have suitable ones you cannot build a wheeled vehicle of any sort, let alone a Stalwart. By chance just before Christmas 2013 I saw some 90mm wheels made by Proops Brothers in bright red and advertised as trolley wheels. They were to fit a 5mm axle, have the right sort of tread pattern and best of all were very cheap. I did a few calculations and decided these wheels could be used for a model

Stalwart giving an 18 inch(ish) length (45cm), creating a nice workable sized vehicle in which to put all the radio and propulsion gear and all approx. to 1:12 scale. So that was the wheels sorted, around which the rest of the model could be planned.

Propulsive system?

Hidden in the depths of the hull of the full size version were two Dowty water-jet drive units that provided on-the-water propulsion. Just under the load platform, seen behind the wheels on each side was a bit of trunking that had a water inlet at the side and an exit at the rear. I decided to keep this trunking on both sides, but modify it slightly and make my own water-jet drive system by enlarging the trunking to allow the fitting, at the rear of the hull on each side, a ducted conventional propeller driven by a 400 type of brushed motor. By having a small bulge in the box at the rear to accommodate a Kort nozzle style of tube, which will be needed as a propeller running in square trunking would be extremely inefficient, I thought that a 25mm prop' could be fitted and hopefully that two of these would be adequate to propel the vehicle, or is it a boat? Steering would be by differential motor control with no rudders to be fitted. In-line construction of the drivetrain would allow easy access for weed clearance duties and propeller changes, an important consideration. In order to maximise thrust, the inlets would be underneath the trunking as this would allow much

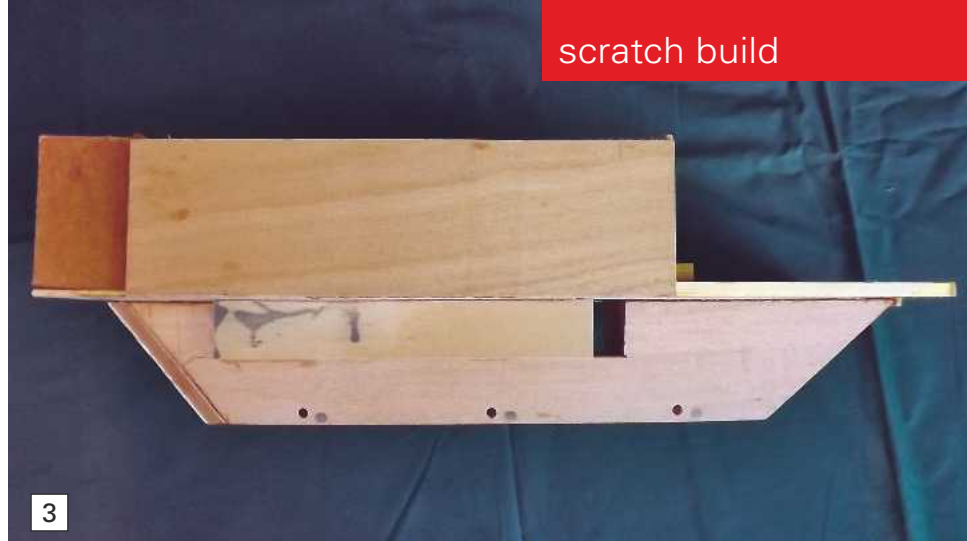
Experience from previous craft with wheels has shown me that although it is very nice to be able to drive around and then go into the water, the craft actually spends 99% of its time swimming



larger openings for the water to be sucked-in than would be available with a cut-out on the side as well as being deeper in the water.

Compromises for water operation

Although the wheels were of a good large size and had an authentic tread pattern, strictly speaking they were too wide for a Stalwart and they could not be slimmed down on their rear faces as this would then make the tread pattern look distinctly unbalanced. My 'water-jet drive units' have necessitated an enlargement of the side trunking to fit worthwhile propellers and so the clearance between the wheels and the hull sides is a bit more generous than normal. Looking at the front, the hull beneath the front cabin section has to be of a certain width to look correct in relation to the wheels, and the wheels from a side view have to be reasonably close together for authenticity. In addition, the centre hull bottom measurement was made so that a standard 7.2v NiMH battery pack could lay flat on the bottom and leave room for the r/c gear etc. In the event, there is not much spare room after having fitted the various internal items as everything has to go beneath the cab and load area. So, you can see where all this is going now, and in summary? This Stalwart (Stolly) is a bit wide, or at least too wide for its length, or too short depending on how you want



to view it! Only an expert will notice of course and it was either compromise or no Stolly, so yes, I am not building a strictly to-scale model here.

Basic construction

Construction of the hull was straightforward and started by cutting a floor out of 3.6mm plywood and then constructing the lower hull portion (the angled bit) whilst upside down, 1.5mm plywood being then used to construct the box-like trunking. **Photo 1** is of the basic parts at the start of construction. **Photo 2** is of the hull upside down taking shape and you can see the water-jet trunking now taking shape. **Photo 3** is a starboard (right hand) view of the hull with its load deck side panel in place.

Upperworks and cabin were then fitted, again in 4mm plywood. Construction of the cab from 4mm plywood involved cutting out the window openings, **Photo 4**, and later glazing them with some 3mm acrylic sheet, for which an amount of preparatory painting inside had to be carried out before final assembly. Unfortunately the windows are relatively large allowing a good view of the interior, so the acrylic was tinted with Tamiya Smoke spray paint so that I would not have to detail this area too much. Once the cabin sides had been constructed I had a rethink over the aesthetics of the centre front window which looked a bit too wide and I made the frames a bit thicker entailing some fiddly cutting, sanding and filling work; think twice, cut once!

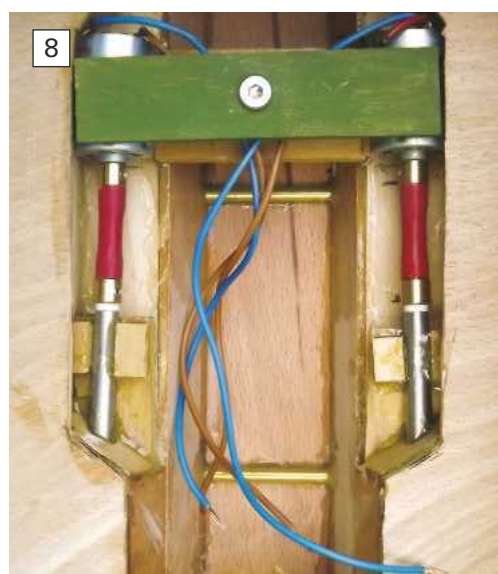
The 'water-jets' were a bit of a conundrum, but they each comprise a Speed 400 brushed motor driving a 25mm propeller housed inside a 30mm o.d. acrylic tube nozzle (26mm i.d.), a bit like a fixed Kort nozzle. **Photo 5** is of the acrylic tube of the port thruster (remember that the hull is upside down here) and **Photo 6** is of the square housing built around the starboard unit, just to confuse you!

I made the frames a bit thicker entailing some fiddly cutting, sanding and filling work; think twice, cut once!





7



8

All good stuff, nothing complicated and most important of all, it works!



9

10



11

Here in **Photo 7**, you have a side view of the inlet of the starboard unit and water will be drawn in through here and out of the orifice within the larger square housing behind it. All the drive components were fitted to the motors; the prop's were wedged in the nozzles with thin card to centre them and then the propshafts lightly fixed in place with epoxy. I removed the card and powered-up the motors using a 1.5v battery to ensure there were no problems and the rest of each duct was then sealed, more epoxy added to the propshafts and then after 24 hours, the interior of them was painted with Humbrol gloss paint for toughness.

The motors are fastened down using a simple plywood clamp as in **Photo 8**, and are wedged in place by the central wooden block to which the clamping screw is secured. All good stuff, nothing complicated and most important of all, it works!

I don't suppose this set-up is particularly efficient, however this Stalwart is not going to be a speed boat! Control would be by differential propeller operation, and so an ACTION Electronics (now Component Shop) P94 dual mixer ESC unit and power distribution board were installed. Just in case, the front edges of the water inlets were angled to allow a better water flow in reverse, but I didn't hold my breath on that one!

Looking now at the complete underside in **Photo 9**, you can see the axle tubes and my attempt at showing the suspension system. The drive shafting and other suspension components were 'mocked-up', followed later by a few small details such as the exhaust pipe, tow hooks, lights and so on. The wheels don't steer of course and are not driven, this being a 'waterborne' Stalwart only. The three axle tubes are of thin-wall brass were slotted straight through the hull bottom via previously drilled holes and once levelled and squared-up, they were secured with epoxy adhesive and the wheels themselves run on 4.8mm brass axle rods. To enhance the Stalwart look, the wheels from Proops, **Photo 10**, have been altered by adding false centres (40mm penny washers were a perfect fit!) and hubs made from various bits of tube from the bits box, telescoped and glued inside one another. These hubs are glued to the ends of the brass rods and this is all that holds the wheels in place. The wheels were initially sprayed gloss black, then matt black and the centres painted in British Army Green, **Photo 11**.

A notable feature of the drop-down load area side panels was their construction. This was arrived at by Alvis after several attempts in the development stage and they settled on flat interior panels and aluminium ribbing on the outside, giving the best combination of weight and stiffness. I was very pleased to see some 6mm corrugated styrene sheet on one model supplier's shelf and this has been used as an acceptable substitute for the ribbing on this model, **Photo 12**. To tidy the load area, a deck was made to fit in the main box to cover up all the radio equipment (3mm ABS sheet) and supports for a centre pole constructed. This pole was originally used to hang a tarpaulin on to cover the load on the full size vehicle, but here it makes a convenient handle to lift off the deck(!) and I have used a camouflage net instead of a tarpaulin, **Photo 13**.

The radio gear simply sits on top of the drive battery. Yes, it is not neat and I had to tuck all the wires in to allow the load deck to sit properly as there is no spare space at all, **Photo 14**.

Another issue was finding useable cheap figures in an approximate size to suit the vehicle's scale of roughly 1:12. This called for figures about 6 inches (150mm) tall and army figures in this size are often a bit muscle bound and generally only 100mm or so tall. As a prudent measure, the cab roof was left off until some figures had been sourced, **Photo 15**, and I also cut the cabin floor away in order to provide leg-room so that there would not be a problem if fitting slightly larger figures, depending on what could be obtained. In the event, figures 135mm tall were all that could be procured, as in this last picture, and after a bit of surgery, filling and painting, they have been installed and look just about right. Okay, they are still a bit small, but shall we say they are 'fun' instead?

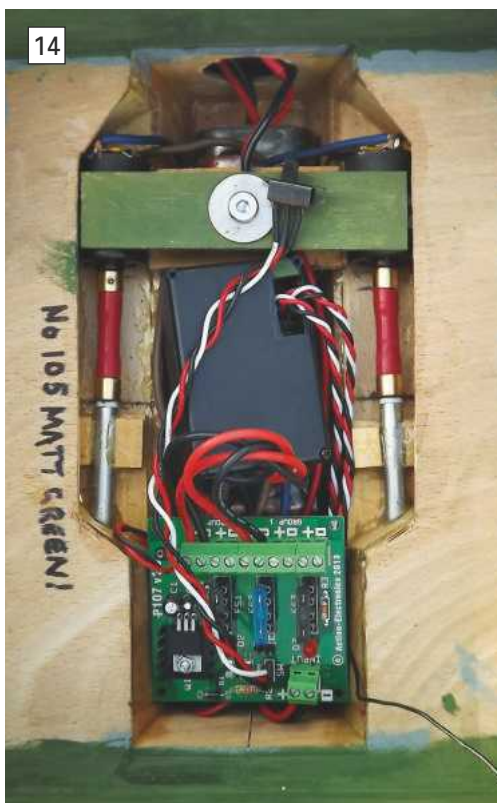


12

To complete the cabin after the driver was installed, hatches had to be made for the access holes. Since the Stalwart was never fitted with normal doors, just circular roof openings, raised strips were made that they rest on when open and a front swim-board was fitted.



13



14



15



One of the last checks before delivery to the customer was a 'swim' in their water tank facility to test the water drive units and also to see if there were any leaks.

This last item was a collapsible hinged board on the original full-size Stalwart, positioned just under the front windscreen and its purpose was to provide a raised bow and prevent waves washing up and over the negatively raked cab front. This was very important, considering there are large holes on top of the cab in just the right place for letting in large quantities of water, given the chance! Positioned as it is on this model sticking out at the front of a fairly weighty vehicle (boat?), the swim-board has been made a bit more substantial than it might otherwise be and the supporting stays are of stiff piano wire to resist the inevitable bumps, **Photo 16**. This last picture of the finished model is a bit 'staged', but does show the swim-board and its sturdy mountings.

Finishing - off

To give the required green camouflage look, Humbrol No. 105 Matt Green was used to paint the model overall and then matt black patches were artistically applied in best army fashion. As the wheels were initially a nice glossy red plastic, they were well matted with scouring powder and sprayed with Halfords Plastic Primer before receiving a coat of household black gloss and then matt black for the tyres and No. 105 Matt Green for the wheel's centres. **Photo 17** is of the completed model, again in a bit of a 'posed' picture.

On the Alvis production line, one of the last checks before delivery to the customer was a 'swim' in their water tank facility to test the water drive units and also to see if there were any leaks. Rather handily my house is equipped with just such a test facility and once cleared of yellow ducks this was filled with

water and the fully laden vehicle was floated on the surface, and did it float?

When ballasted with weight appropriate to the remaining missing equipment, there was not a leak in sight! Water was lapping nicely just around the load bed base, but this could need some adjustment with battery movement or even additional ballast depending on the forthcoming open water trials, The 'water-jet' units worked a treat and were throwing water out the back in good fashion to my great relief, so now there was only one real test left, namely the acceptance trials!

Acceptance trials and operations in the field!

Another reason the wheels were not powered is that our pond has no practical climbable slopes into the water and not even a slope to slide the Stalwart down and into it. So for its maiden voyage, it was placed carefully into the blustery swell by the jetty and after testing the radio operation, power was applied to the thrusters, and? Well all rather good actually, as the Stalwart, **Photo 18**, gathered pace quite briskly, had a very reasonable turn of speed considering it has the hydrodynamics of a brick and the manoeuvring capability was quite impressive, tight turns being the order of the day, but straight line stability leaving something to be desired. This was mostly corrected by reversing the handed propellers, so that they turned inwards instead of outwards.

Reversing was not so good, as one might imagine without proper reversing buckets over the outlets, but usefully it did reverse and could even be steered! A few runs were made to try different ballast arrangements with regards to the weight bias front to rear and to see if any improvements could be effected, but at the end of the day no extra ballast





was required. Almost an anti-climax really, as it all worked properly first time.

I usually like to expand a bit on the performance aspect, but there just is not much to add other than I am pleased with the water-jets which work really well and also the decision to have the large inlet to each of them underneath the trunking. Clearing leaves that have been ingested has been a doddle and also there is no loss of suction when the water is choppy should air get under the hull.

Garage requirements

Will it fit in your garage? No chance, that is if you are talking about the real thing which was the size of a lorry and tall with it, as the load bed was designed to be the same height as a Centurion or Chieftain tank to assist resupply. Only persons with a double garage of double height and length need apply, but thankfully the model is somewhat smaller and came out at a final 47cm long, 20cm wide and the height to the top of the netting pole is 20cm. Total loaded weight, including a 7.2v NiMH 3700mAh pack, is 2.7kg. No additional ballast has been installed, but there is an ample margin to fit some 'interest' items within the load bed. Currently the spare figures are loitering, fully armed in that section, and why not?

Conclusion

With a model such as this, when using stock items that are roughly of the right size and/or design, there will always be a bit of a compromise with regard to scale, however the alternative is to spend a lot of money or significant time and effort in sourcing exactly the right items. The wheels cost £8 for a set of eight (and you can't grumble at that), the figures were £5 for a set of four and the pieces of 1.5mm plywood and acrylic came from the bits box. Similarly, plain basic builder's yard 3.6mm ply has been used throughout and simple standard motors, couplings, tubes and prop's used for the propulsion. Other than the radio gear, which is needed whatever model you are building, the most expensive single item has been the corrugated styrene sheet used for the side panels, and this was a mind numbing £14! In retrospect, a

few changes could have been made to even up the vehicle proportions, but hindsight is a wonderful thing. So, after all this, did we use sufficient artistic licence to produce the goods (carrier)? Of course we did, an Alvis Stalwart that was not on the cheap, but built to a budget. Please note that for those wanting to see a really fabulous stonking fully functioning Stalwart, then they should obtain a back copies of MB, issues June to August 2011, and marvel at Bob Hinton's incredible Stolly that he has more recently followed in 2014 with his remarkable Gibbs Aquada.

BELOW: The Stalwart at full-ahead on both motors.



ALL GLUED

SAVE ON THIS GREAT RANGE OF GLUES!

ROKET OFFER

- ROKET CYANO ODOURLESS **£7.25** (20g)
- ROKET BLASTER **£5.85** (50ml)
- MICRO TIPS **£4.75**
- ROKET POWDER **£5.25** (40g)

Total: £23.10

Offer £20.00



FINISHING KIT

- SAND 'N SEAL **£7.65** (250ml)
- EZEKOTE **£13.50** (500ml)

Total: £21.15

Offer £20.00



SPEED EPOXY II

- 1 HOUR **£13.95** (224g)
- 20 MIN **£14.50** (224g)
- 4 MIN **£14.99** (224g)

Total: £43.44

Offer £40.00



ORDER NOW AT www.myhobbystore.co.uk

UP!



EMULSION GLUE

- SPEEDBOND (WHITE PVA GLUE) **£4.50** (112g)
- ALIPHATIC RESIN WATERPROOF/
SANDING ON BALSA **£4.75** (112g)
- R/C MODELLERS GLUE WINDOWS/
COCKPITS **£4.50** (112g)
- SUPERPHATIC GLUE WOOD TO
PLASTIC, BALSABOOD **£5.25** (50ml)

Total: £19.00

Offer £17.00



PLASTIC/STYRENE GLUE

- PLASTIC KIT GLUE **£2.10** (20g)
- PLASTIC MAGIC **£5.25** (50ml)
- ROKET PLASTIC GLUE **£5.99** (30ml)
- PIN FLOW **£9.49**

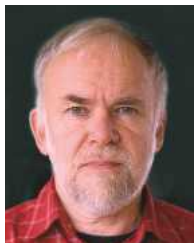
Total: £22.83

Offer £20.00



/deluxeglue OR CALL 0844 848 8822

Flotsam & Jetsam



John Parker delves into the archives

18: Ex Libris – Norman G. Taylor

Any human activity attracts a body of literature written around it. In the case of model boat construction, it is not an overly large body of literature and quite a practical proposition to collect most of the better-known book titles into your own personal library. Why human beings like to collect things in general is a question for the psychologists to answer, but a collection of books on model boats can serve several purposes. It can provide information on lost techniques, such as electro-forming detail parts, or provide contemporary information on modelling subjects that have passed into history; it can provide inspirational ideas for the next model or enable you to recreate one you made long ago; it can show the development of the hobby over the years or simply provide pleasurable nostalgic reading material.

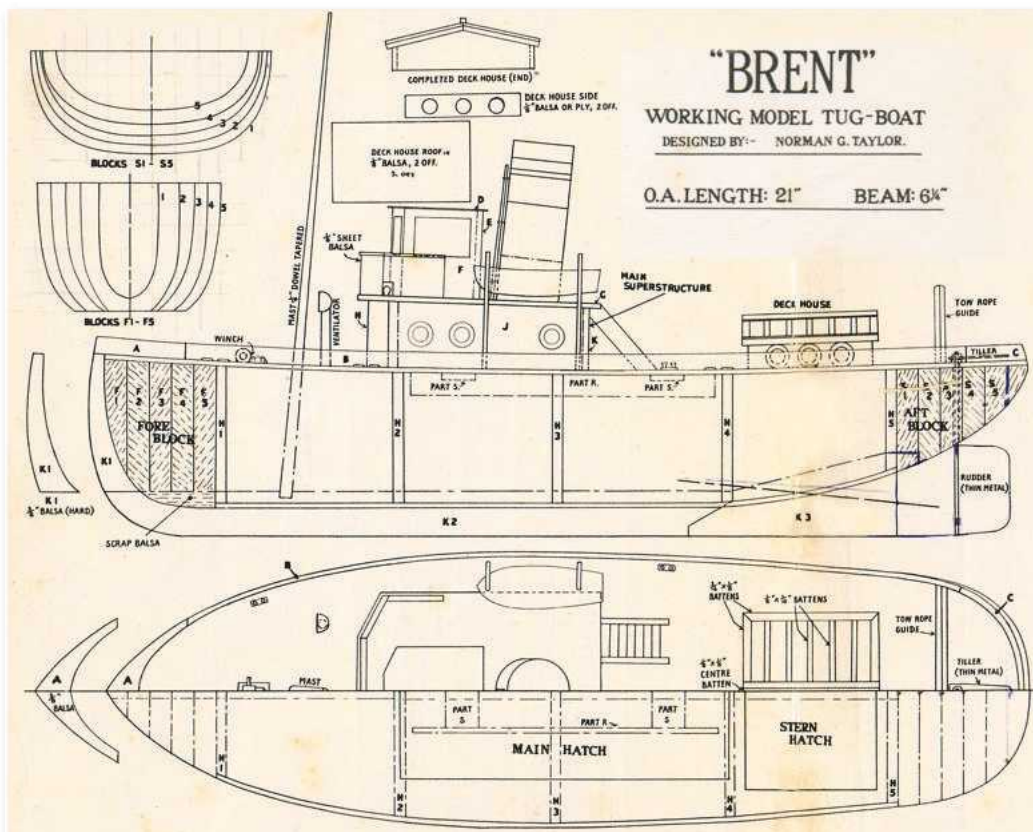
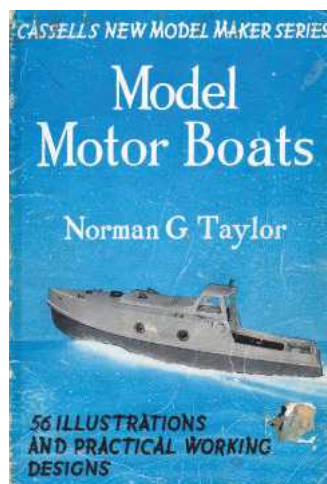
As life returned to normal in the post-war period, a number of publishers responded to a perceived demand for inexpensive hobby guidebooks. Model Maker magazine, Model Boats' predecessor, was already doing this across most facets of model making on a regular monthly basis from 1952, but there was still a need for reference books, particularly for Christmas and birthday gift giving. In 1953, the well-known publisher Cassell and

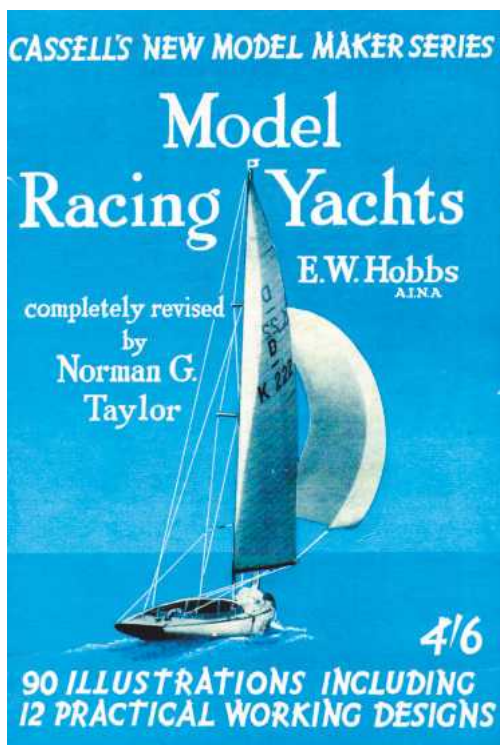
Company Limited launched their 'New Model Maker Series', small (235 x 155mm) books of around 68 to 72 pages in a uniform paperbound format that cost four shillings and sixpence each. This was only about the cost of three monthly magazines of the time, or around £5.35 in today's money, adjusted for inflation. The series grew to some nine titles covering model engineering, model railways, model aircraft and model workshops, with two titles devoted to marine modelling subjects.

Part Three, by Norman G. Taylor, was entitled Model Motor Boats and firmly aimed at beginners to the hobby. Seven short chapters cover the different types of model boats, workshop and tool requirements, motive power (steam, internal combustion, electric and Jetex), general construction and plans for four simple models; the 25 inch Clyde Mk. III sports boat, 21 inch Brent tug boat, 23 inch cabin cruiser and 33 inch air sea rescue launch. In an age before enlarging photocopyers, it would have been necessary to redraw the page-sized plans to a larger size by the time honoured grid method. This involved drawing a complete grid in pencil over the plan in the book using the edge marks provided, drawing another grid in a larger size (typically half-inch) on another,

RIGHT: 21 inch Brent tug boat plan.

BELOW: Model Motor Boats cover.



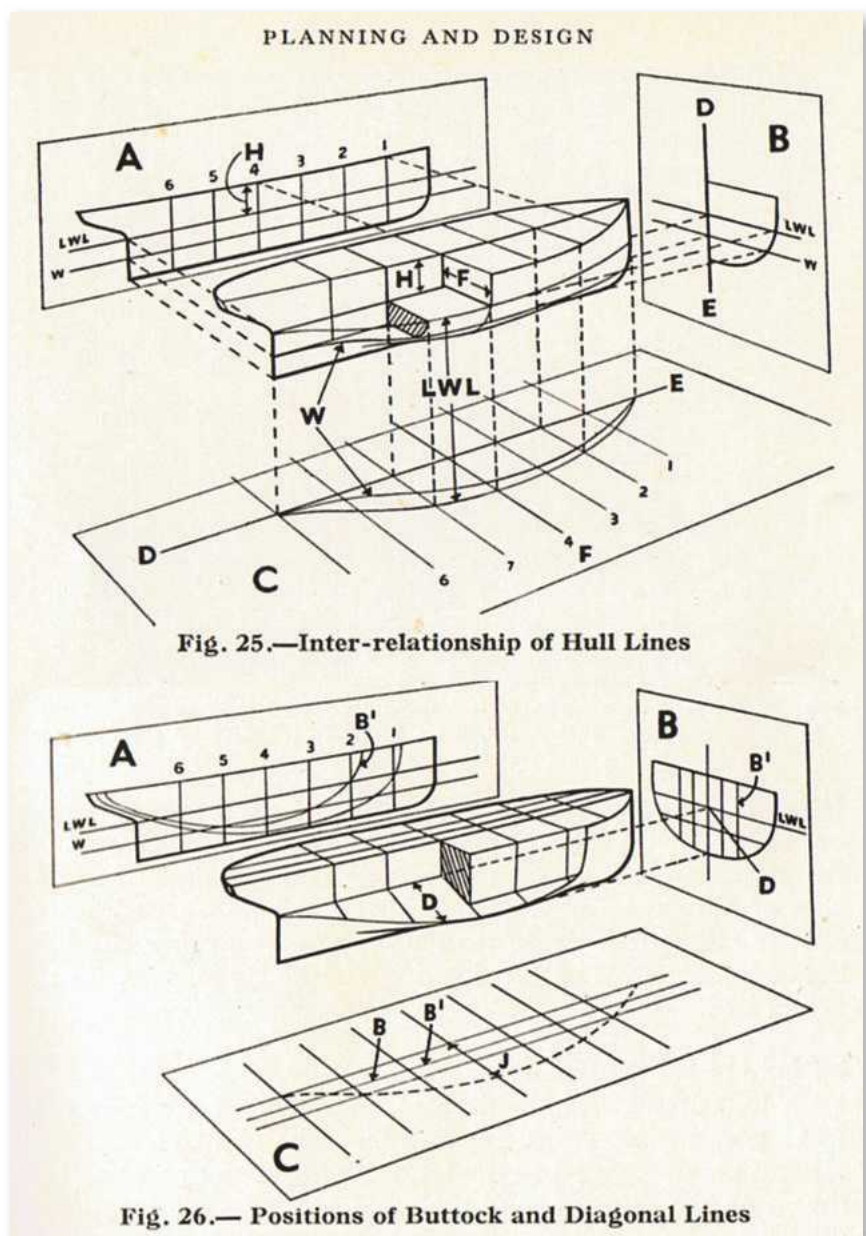


larger, piece of paper and then transferring the shapes on the plan to the larger sheet of paper by referring to nearby corresponding grid intersections. I wonder how many people, having completed this arduous process, then found they no longer had the patience or desire to make the actual model! Or if they did, how much similarity it had to the design in the book?

The two smaller models are flat-bottomed designs intended to establish basic model making skills in timber, whilst the tug boat is a planked round-bilge design in balsa and ply and the air-sea rescue boat a plywood hard-chine design for a 2cc diesel engine. There is a logical progression in complexity here as the model maker's skills improve. The 23 inch cabin cruiser model forms the cover illustration of the book, which otherwise is illustrated with only line work (no photographs). Illustrations for the chapter on motive power were provided by commercial companies such as Bassett-Lowke, E.D. and Jetex, lending a degree of partiality to what is otherwise a reasonably useful beginner's book.

Norman G. Taylor is better known for his far more comprehensive work, *Model Power Boats*. This was published by Cassell and Company Limited in 1956, three years after *Model Motor Boats* in the New Model Maker Series, which probably formed its foundation. Most libraries held a copy of this book, with pages of date stamps on its end papers to testify the demand for knowledge of its subject, whilst the author wrote in its preface that; 'In presenting this book it is my sincere hope that the advice contained herein on constructional methods, power units, design and many other matters, will be the means of recruiting many more enthusiasts to the ever-increasing ranks of model boat builders'.

Any such new recruit to the ranks of model boat builders would have found the work to be



more of a theoretical or reference work, despite the many illustrations of working models and their construction. It covers, for example, basic naval architecture and the formal process of drawing up a design, including the plotting of a curve of versed sines and a trochoidal curve; ascertaining the metacentric height, determining area and displacement by Simpson's Rule, and calculating the moment of inertia of the water-plane area using Attwood's formula. All of this in pre-decimal units, without the help of an electronic calculator! This emphasis on theory is a characteristic of many books of the time, but the fact is that you can whittle a model boat from a block of balsa without knowledge of its prismatic coefficient! The chapters on hull construction, running gear and fitting out are more directly helpful to the model maker.

Part Six in the growing New Model Maker Series did not appear until 1954, titled *Model Racing Yachts* by E. W. Hobbs and revised by Norman G. Taylor. Edward Hobbs had been the first manager

ABOVE: Understanding hull lines, from *Model Power Boats*.

TOP LEFT: *Model Racing Yachts* cover.

I wonder how many people, having completed this arduous process, then found they no longer had the patience or desire to make the actual model!

The reduced size drawings are however a poor substitute for a full-size plan

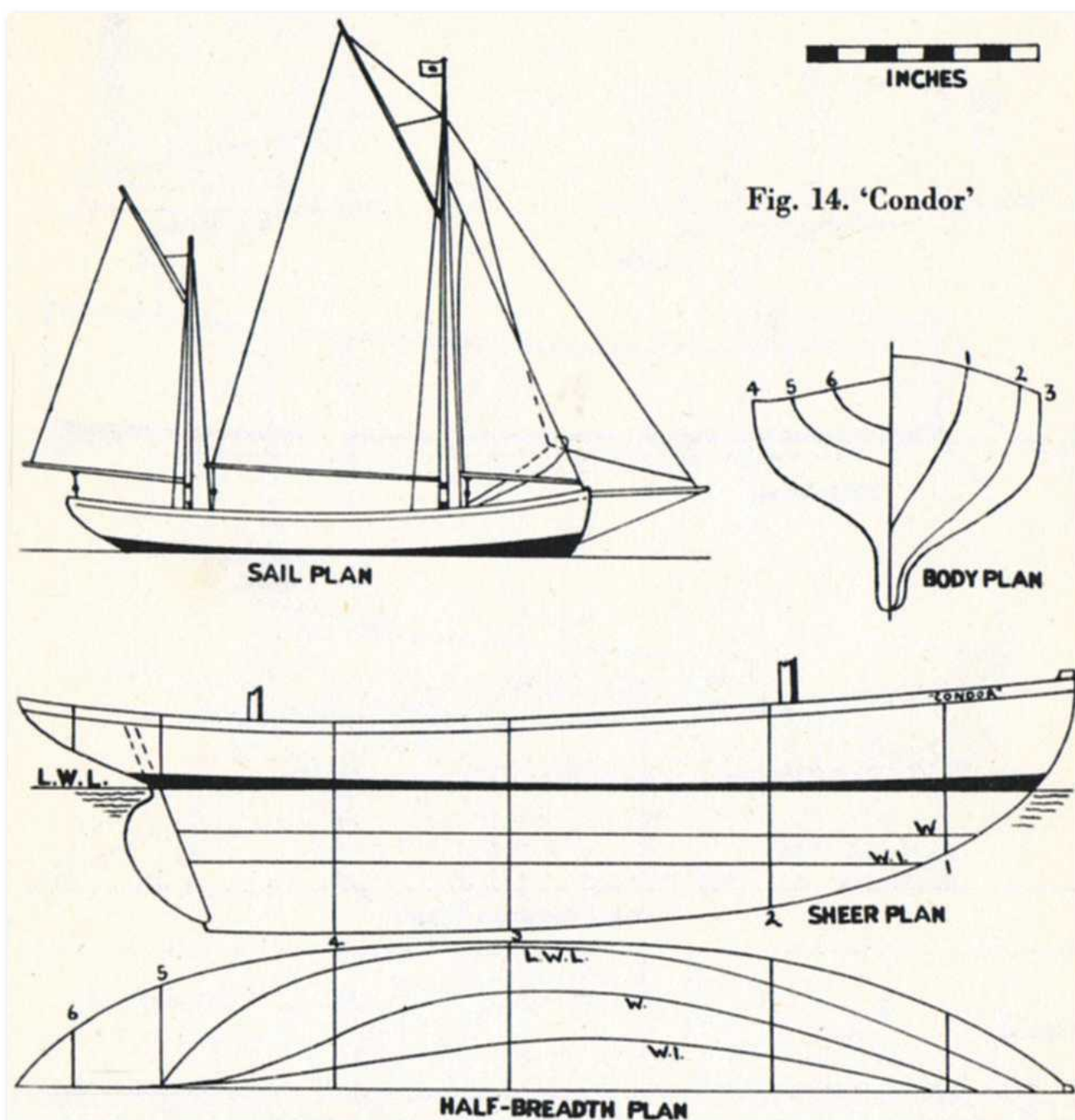
BELOW: 36 inch Condor sailing boat, from *Model Racing Yachts*.

of Bassett-Lowke's London shop when it opened in 1908, and according to Roland Fuller's book 'The Bassett Lowke Story', was 'the leading figure in the creation of the MYCA (Model Yacht Club Association)'; this would have been around 1908 to 1910 I believe. The Model Yacht Racing Association came into being in 1911, so the MYCA is distinct from the MYRA. Hobbs was an award-winning model maker and wrote two books for Cassell in the 1920's, namely *Model Power Boats* and *Model Sailing Boats*. To what extent *Model Racing Yachts* was based on the later, extracted and revised by Norman Taylor, I am uncertain. Seven chapters cover the MYA (Model Yachting Association, which the MYRA became in 1923) rating rules, sailing theory and terminology, tools and finishing, a

description of nine typical designs with drawings, and building plans and instructions for Swallow, an 18 inch carved beginner's model; Spindrift, a 48 inch rib-and-plank racing model and Day Dreams, a 19 or 38 inch long scale cruising yacht, with descriptions of the fittings required.

Within the limitations of page size and number, the book does a fair job of describing the making of a ribbed skeleton framework, the planking process, casting of a lead keel and making of the various fittings. The reduced size drawings are however a poor substitute for a full-size plan, and there is not even a brief mention of radio control in either of the New Model Maker Series books.

And Ex Libris? It is Latin for 'from the books', in case you were wondering!



The Model Dockyard



17 Tremorvah Barton
Tregolls Road, Truro
Cornwall, TR1 1NN

Mail order Only. Sorry no callers
Phone line open Mon-Fri 9am- 1pm

Tel UK: 01872 261755
Tel Int: +44 1872 261755
www.model-dockyard.com
U.K Delivery

Kits and Boat Hulls Add £9.00
Timber orders Add £9.00
Other Order value up to £50 Add £5.00
Other Order value Over £50 Add £9.00
Over £190 Free Delivery
Free delivery does not apply to shipments
weighing over 2 kilos, being sent to the
Channel Islands or Northern Ireland, Scottish
Islands, Scillies, or IOM. Delivery here will be
charged at cost.

Orders are sent by 1st class post or UPS
carrier. Large parcel deliveries to Scottish
Highland and Islands, the Isle of Man, Isles of
Scilly and Northern Ireland will be shipped by
3 day UPS carrier . Deliveries to Channel
Islands will be shipped by Euro 48 service

We ship Worldwide too

All prices correct at time of going to press but we
reserve the right to supply at the prices ruling at the
time of order despatch. E&OE

Amati Kits

Dutch Royal Yacht in Bottle 1:300 95mm	E46.93
Egyptian Ship Sature Dynasty 350mm	E77.57
Greek Bireme 480 BC 560mm	E77.57
Viking Ship Osereg 1:50 440mm	E105.14
Mayflower 1620 1:60 scale 650mm	E174.59
Chinese Junk Scale 1:100 400mm	E87.78
Xbec 1753 720mm 1:60	E155.95
New Bedford Whalerboat 1:16 550mm	E122.50
Riva Aquarama With Transmission kit	E509.57
Endeavour J Class. Wood Hull 1:80 480mm	E93.69
Endeavour J Class 1:35 scale 1130mm	E259.95

Victory Models Kits

Lady Nelson Cutter. 1:64 scale 830mm	E117.95
Granado. Bomb Ketch 1756 1:64 500mm	E261.95
HMS Fly. Swan Class Sloop. 1:64 800mm	E289.95
HMS Vanguard. 74 gun 3rd rate 1:72 1171mm	E684.95
HMS Pegasus Swan class sloop 1:64 800mm	E344.95
Mercury. 20 gun Brig 1820. 1:64 scale 800mm	E354.95

Mamoli Kits

Friesland 80 gun 2 Decker 1:75 775mm	E492.14
Mary Royal Yacht 1:54 scale 483mm	E179.18
Golden Hind 1:53 scale 496mm	E184.58
La Gloire 34 gun Frigate 1:90 840mm	E287.18
Hunter 12 gun Cutter 1797 1:72 440mm	E134.76
Rattlesnake Privateer 1779 1:64 697mm	E222.62
H.M.A.V Bounty 1787 1:64 610mm	E215.76
CSS Alabama. 1:120 694mm	E206.92

Panart Kits

H.M.S. Victory Nelson Flagship 1:78 1300mm	E395.10
Between Decks Gun Section 1:23 250mm sq.	E134.96
Open Whaler 1805 1:16 scale 615mm	E139.50
HMS Victory bow section 178 scale	E179.95
San Felipe Spanish 3 Decker 1:75 960mm	E670.00
Armed Naval Pinnaace 1800 Scale 1:16 820mm	E139.50
Royal Caroline 1749 Royal Yacht 1:72 800mm	E269.95
Diana 38 Heavy Frigate 1794 1:64 1180mm	E472.45
Snake 1797 18 Gun Brig 1:67 scale 850mm	E206.98
Snake 1797 18 Gun Sloop 1:67 scale 910mm	E260.98
Mary Rose. Tudor warship 1510. 735mm 1:80	E961.45
Agamemnon 1781. 64 gun ship 1300mm	E245.65
Endeavour. Bark 1768. 1:64 scale 725mm	E202.45
Bounty. 1789. 1:64 scale 660mm	E75.55
Sherbourne. 8 Gun R.N Cutter 1763. 500mm	E89.96
HM Yacht Chatham 1741 1:64 scale 530mm	E596.71
HM Mortar Vessel Convulsion. 1804 1:64 530mm	E746.98
Victory 1781. Nelson's flagship 1:72 1385mm	E220.48
Granado. Bomb Ketch 1756 1:64 scale 785mm	E177.12
HM Brig Badger 1778 1:64 scale 600mm	E130.46
HM Schooner Pickle 1778 1:64 scale 565mm	

Caldercraft Display Kits

Diana 38 Heavy Frigate 1794 1:64 1180mm	E472.45
Snake 1797 18 Gun Brig 1:67 scale 850mm	E206.98
Snake 1797 18 Gun Sloop 1:67 scale 910mm	E260.98
Mary Rose. Tudor warship 1510. 735mm 1:80	E961.45
Agamemnon 1781. 64 gun ship 1300mm	E245.65
Endeavour. Bark 1768. 1:64 scale 725mm	E202.45
Bounty. 1789. 1:64 scale 660mm	E75.55
Sherbourne. 8 Gun R.N Cutter 1763. 500mm	E89.96
HM Yacht Chatham 1741 1:64 scale 530mm	E596.71
HM Mortar Vessel Convulsion. 1804 1:64 530mm	E746.98
Victory 1781. Nelson's flagship 1:72 1385mm	E220.48
Granado. Bomb Ketch 1756 1:64 scale 785mm	E177.12
HM Brig Badger 1778 1:64 scale 600mm	E130.46
HM Schooner Pickle 1778 1:64 scale 565mm	

Caldercraft R/C Kits

Joffre. 1916 Tyne Tug.	E251.95
Imara. Twin Screw Berthing Tug	E458.95
Resolve. Twin Screw Admiralty Tug	E508.95
Amanarth. Motor Filie	E120.95
Milford star. Post war East Coast side trawler	E228.95
Marie Fellinging single screw steam tug	E395.95
North Light. Steam Clyde Pusher	E251.95
SS Talacca. Single hatch Steam Coaster	E251.95
H.M.T S'ir Kay Rowland Table Class Minesweeper	E294.95
SD14 general cargo ship 1:70 2133mm.	E295.00
USS Missouri. 1:200 scale	E81.24
GPM Smyd SWEY 1:200 scale 1010mm	E56.95
Queen Mary 2. 863mm 1:400 scale	E53.06
Prince of Wales Battleship 1:200 scale	E51.95
Tripitz 1:200 scale Full hull 1260mm	E49.99
Bismarck 1:200 scale Full hull 1250mm	E48.98
Revenge 1588 600mm 1:96 scale	E47.95
HMS Mercury 6th rate frigate 1779 1:96 scale	E44.95
Admiral Hipper. cruiser 1935 1:200 scale	E40.81
HMS Enterprise 28th Frigate 1:96 scale	E40.80
Grampian. Full hullied model at 1:200 scale	E30.60
Lexington. American Brig 1:96 scale	E30.59
HMS Endeavour. Captains Cook's Bark 1:96	E30.59
Santa Maria & Nina	E30.59
H.M.S. Inshewille. Battlecruiser 1907 1:250	E28.54
H.M.S. Sheffield 1:200 full hull	E28.54
HMS Repulse. Battleship 1:300 scale 806mm	E27.53

Card Models

SD14 general cargo ship 1:70 2133mm.	E295.00
USS Missouri. 1:200 scale	E81.24
GPM Smyd SWEY 1:200 scale 1010mm	E56.95
Queen Mary 2. 863mm 1:400 scale	E53.06
Prince of Wales Battleship 1:200 scale	E51.95
Tripitz 1:200 scale Full hull 1260mm	E49.99
Bismarck 1:200 scale Full hull 1250mm	E48.98
Revenge 1588 600mm 1:96 scale	E47.95
HMS Mercury 6th rate frigate 1779 1:96 scale	E44.95
Admiral Hipper. cruiser 1935 1:200 scale	E40.81
HMS Enterprise 28th Frigate 1:96 scale	E40.80
Grampian. Full hullied model at 1:200 scale	E30.60
Lexington. American Brig 1:96 scale	E30.59
HMS Endeavour. Captains Cook's Bark 1:96	E30.59
Santa Maria & Nina	E30.59
H.M.S. Inshewille. Battlecruiser 1907 1:250	E28.54
H.M.S. Sheffield 1:200 full hull	E28.54
HMS Repulse. Battleship 1:300 scale 806mm	E27.53

Iowa 1:400 US Battleship 1942 680mm	E26.52
HMS Dreadnought 1:200	E26.50
HMS Cambeltown 1:200 scale 470mm	E26.95
Normandie French Liner 1:400 scale	E26.95
Yamato. Japanese Battleship 1:400 685mm	E23.95

Hull and Plan Sets

Grand Banks Schooner 1193mm	E87.50
Victoria Steam Launch 1:12 scale 762mm	E40.45
Pilot 40. Pilot boat 698mm	E50.45
Bluebird Of Chelsea. 1:24 scale 654mm	E46.95
Forceful Paddle Tug. 1:48 1003mm	E51.49
Guardsman Customs launch 1:32 scale 571mm	E51.49
Burutu & Bajima Tug 1:50scale 768mm	E47.45
Tyne Life Boat 1:12 scale 787mm	E46.49
Smil Nederland Hull 558mm	E42.45
St Louis Belle Mississippi Steamer 838mm	E72.45
Liverpool Lifeboat 1:905mm 1:12 scale	E91.50
RMAS Moorhen Hull 1:43 scale 740mm	E51.45
Cervia, Thames Tug 1:48 scale 711mm	E71.50
Brave Borderer 1:32 scale 914mm	E86.50
HMS Warspite. Queen Elizabeth class	E154.00
H.M.S. Devonshire. Cruiser 1504mm	E134.00
H.M.S. Liverpool. Town class 1409mm	E120.00

Deans Marine Kits

LCM 1653 1:24 scale 710mm	E213.75
25ft Motor Boat 1:12 scale 690mm	E175.95
Compass Rose. Corvette 1:96 673mm	E177.65
H.M.S. Soleybay Destroyer 1945 1210mm	E306.33
MGBT7. 71 6ft BPB 1:24 920mm	E243.01
73ft Vosper Type 1 1:24 scale 965mm	E252.20
Bronington. minesweeper 1:100 465mm	E107.18
MTB 488. B.P.C. 71. 6 MTB 1:24 920mm	E272.63
Steam Yacht Medea 1904. 1:48 870mm	E138.86
Tradition. Seine net trawler 870mm 1:24	E360.92
H.M.S. Cossack Destroyer 1938 1200mm	E272.63
SS City of Truro 1:96 960mm	E356.95
Snow Gwine Screw berthing tug 1:48 580mm	E223.95
Yarra Twain Broad Cruiser 1:24 scale 740mm	E137.95

Plastic Kits

Tamara IJN Yamato 1:350 717mm	E270.95
Trumpeter USS Missouri 1:200 scale 1352mm	E249.16
Trumpeter Bismark 1941 1:200 scale 1265mm	E203.95
Italeri Schnellboot 1:500 1:35	E175.00
Trumpeter USS Arizona BB-39 1941 1:200	E160.16
Lindberg PT 109 MTB 1:32 scale 749mm	E149.95
Heller HMS Victory 1:100 scale	E149.95
Heller Le Soleil Royal 1:100 scale	E149.95
Lindberg Sea Witch. Clipper 1:96 scale 838mm	E149.95
Dragon Scharnhorst 1943 1:350 scale	E139.00
Revell Flower Class Corvette 1:72 850mm	E119.00
Italeri MTB77 1:35 scale 632mm	E99.99
Italeri PT109 Torpedo Boat 1:35 scale	E99.99
Lindberg Blue Devil Destroyer 1:125 910mm	E99.95
Trumpeter HMS Repulse 1941 1:350	E87.21
Trumpeter HMS Hood (1941) 1:350	E80.09
Academy Warspite, Premium Edt 1943 558mm	E71.19
Trumpeter USS Alabama BB-60 1:350	E271.19
Trumpeter Prinz Eugen 1945 1:350	E64.96
Trumpeter HMS Queen Elizabeth 1943 1:350	E62.29
Trumpeter HMS Belfast 1942 563mm 1:350	E62.29
Trumpeter Admiral Hipper 1941 1:350	E62.26
Tamiya Bismarck 1:350 717mm	E61.99
Revell Type VIIC U-Boat 1:72	E59.99
Tamiya Tripitz 1:350 717mm	E58.50
Tamiya HMS King George V 1:350	E49.99
Tamiya HMS Prince of Wales 1:350	E49.99

Plastic Kit Upgrades

German AA Weapons WWII 1:350	E84.00
Naval figures 1:350 scale	E72.00
Passenger ship crew figures 1:350 scale	E72.00
Naval Crew Figures German WWII 1:350	E84.00
Elched lifebelts set 1:350 scale.	E84.00
R.N Naval figures Far East 1:350 scale	E84.00
Bismarck detailed detail Tamiya Bismarck 1:350	E21.19
Tripitz (designed to be used with Tamiya kits)	E30.60
HMS Hood detail sheet pack 1:350 scale	E30.60
Admiral Graf Spee etched sheet set 1:350 scale	E24.99
HMS Repulse etched detail sheets 1:350 scale	E19.50
Prinz Eugen etched set. 1:350 scale	E22.30
HMS Repulse railings set 1:350 scale	E19.50
Prinz Eugen etched railings set 1:350 scale	E22.30
Prince of Wales etch sheet pack 1:350	E20.60
HMS Dreadnought 1907 Elched detail 1:350	E19.50
HMS Dreadnought 1907 Railing Set 1:350	E14.99
Wooden deck for HMS Hood 1:350 scale	E36.50
Wooden deck for Graf Spee 1:350 scale	E32.30
Wooden deck for HMS Repulse 1:350 scale	E34.80
Wooden deck for Prinz Eugen 1:350 scale	E34.80
Wooden deck for Admiral Hipper 1:350 scale	E34.80
DX Wooden deck & Railing for Bismarck 1:350	E37.99
Wooden deck for Bismarck 1:350 scale	E31.50
Wooden deck for Tripitz 1:350 scale	E31.50
Wooden deck for KG5 1:350 scale	E33.20
Wooden deck for Price of Wales 1:350 scale	E33.20
DX Wooden deck & Railing for Warspite 1:350	E53.80
DX Wooden deck & Railing for Bismarck 1:200	E149.40
DX Wooden deck & Etch for Missouri 1:200	E217.30
GLS Flower Class Deck & Fittings Set 1:72	E99.99
GLS Flower Class Type "C" Bridge Set 1:72	E38.40
GLS Flower Class Corvette Deck Charge Set	E38.38
This is just a selection from Gold Medal, MK1 Design, Master, Great Little Ships and Eduard.	

R/C Boat Plans

Miranda Edwardian steam launch 42in	E12.50
Will Everard Thames Barge. 1:48 scale	E17.50
Brave Borderer. 36in Vosper patrol boat,	E12.50
Enterprise/Northumbrian Coble. 27in.	E12.50
"Pilot 40 police/pilot launch 27in.	E12.50
Inchcolm. Clyde pulper 24in	E12.50
Liverpool Lifeboat. 1:12 scale	E12.50
200 Series RAF Seaplane Tender: 950mm l	E12.50
H.M.S Ark Royal: A 1:192 scale model, 50in.	E12.50
Vosper MTB - 26 1/4 inches	E12.50
Steam Yacht Grace: 44in	E17.50
Launch Out: 27 1/2in. side and pair trawler,	E17.50
P.S Tonnes Castles paddle steamer 42 1/2in.	E12.50
Joffre. Tyne Tug30 1/2in.	E12.50
St Louis Belle 1:64 Mississipp stern-wheeler	E12.50
T.B. Du Cruiser Letter: 1:44 32in. Scoot class	E12.50
200 Series RAF Seaplane Tender: 1:12 950mm	E12.50
H.M.S Kent: 1:96 scale early cruiser 58"	E17.50
Fairey Huntsman 1:8 scale 1066mm	E12.50
Cella Jane-Thames Barge 1:24 scale. 50in.	E12.50
Joffre. Tyne Tug 1:48 scale 30 1/2in	E22.50
Britannia 1893. Royal racing yacht, 1:32nd	E29.50

Pibroch A 1:50th scale Clyde Puffer, 400mm	E17.50
Osprey Scottish wooden fishing boat,500mm	E31.50
Altair gaff rigged schooner 1:32nd 1200mm	E33.50
Princess High speed luxury motor yacht 1:24th	E17.50
Constance Bowater paper freighter, 1030mm	E17.50
Boston Fury 1960 East Coast Trawler 125mm	E17.50
Waverley paddle steamer 1:685mm,	E17.50
Hoop Op Zegen Beam trawler 725mm	E17.50
Louis Holckes 1:10th French Bawler 1025mm	E23.50

Harold Underhill Plans

Cutty Sark Clipper Ship 698mm	E29.54
Marie Sophie of Falmouth 1033mm	E44.41
Lady of Avenel. Wood. 850mm	E33.30
74-Gun Two-Decker (Circa 1813 1422mm	E77.71
Lady Daphne Thames Sailing Barge812mm	E29.54
12-Gun Brig-of-War. Lines, 1187mm	E55.51
Cunard Liner Servia, 1:192 scale 850mm	E33.30
40-Gun Frigate (Circa 1790 831mm	E66.61
Valerian. Brikmah Trawler 1069mm.	E49.23
Diesel Ring Net Fishing Boat 615mm	E29.53
Three Brothers. Rye Fishing Smack. 797mm	E29.54
Muimeag. Scottish Yacht- 1612mm	E66.61
Clyde Puffer Sealight, 588mm	E19.68
Leon. Wood Brigantine 514mm.	E58.07
Iron Paddle Tug 1:48 scale 863mm	E44.40

Static Display Kit Plans

Chinese Junk, construction plans.	E7.02
Sovereign of the Seas, plans 1:78 1100mm	E16.18
HMS Fly Plan set	E26.50
Lady Nelson Cutter Plan Set	E8.86
HMS Bounty, construction plans	E13.43
French Xbec construction plans	E10.99
Vikingship, Osberg, construction plans.	E7.12
Titanic Plans set	E48.84
Endeavour J Class Plans set	E22.38
Cutty Sark, construction plans, Scale 1:78.	E31.00
La Couronne, construction plans, Scale 1:98.	E28.50
Santa Maria, construction plans, Scale 1:50.	E14.95
French Xbec, construction plans, Scale 1:49.	E14.85
Thermopylae, construction plans, Scale 1:124.	E14.85
Mississippi Stern Wheeler plan 1:50 1050mm	E34.95
Printa. construction plans 1:50 570mm	E14.85
Friesland (1:75) Drawings & Instructions	E47.73
H.M.S. Victory (1:90) Drawings & Instructions	E64.09
Yacht Mary (1:54) Drawings & Instructions	E32.73
Golden Hind (1:53) Drawings & Instructions	E32.73
Rattlesnake (1:64) Drawings & Instructions	E46.36
Royal Louis (1:90) Drawings & Instructions	E62.73

This is just a selection of over 1000 plans available

R/C Equipment

Hitec Optic 6 (2.4 Ghz) combo	E124.99
Hitec Optic 5 channel (2.4 Ghz) combo	E89.95
Mitroniks G2 Hydra15 combo	E59.99
Hi Tech Zebra 4 Channel	E56.12
Viper Marine 40	E53.22
Planet 5 Transmitter and Receiver Set	E54.99
Hi Tech Ranger 2 Channel	E20.34
FR30HX 30amp speed controller	E47.14
Viper Marine SUB 10 6-12V	E42.99
Viper Marine SUB 8 4.8-9.6v	E42.50
Viper SSR 25amp speed controller	E39.99
15VHR 15amp speed controller	E37.69
Viper Marine 25	E39.99
Viper Marine 25 Mirror	E34.20
FR12VR 12amp speed controller BEC	E33.86
Hi Tech Mega Arm Sail Winch 19.8kg/cm	E30.99
Proportional Drum Sail Winch	E30.63
Viper Marine 20	E28.99
Viper Marine 15	E22.99
Viper Micro Marine 10	E22.99
Viper Marine 15 Plug Play	E22.99
Programable mixing module	E20.34
Waterproof mixing module (w-tail)	E17.80
Waterproof mixing module	E15.70
Mitroniks EFP Multi charger	E12.14
1300ma receiver nicad battery square	E5.61
1300ma receiver nicad battery flat	E5.61
Tugging harness with charging lead	E47.40
Full range of R/C installation equipment available	

Sound Modules

E22.30	Petrol/Diesel Engine with Horn
E20.60	Machine Gun
E19.50	Steam Engine Sound
E14.99	Whooper
E36.50	Fog Horn
E32.30	Ship Klaxon
E34.80	Sub Sonar Ping
E34.80	Sub Dive Alarm
E34.80	Air Horns
E34.80	Large Ship Horn
E37.99	Large Ship Steam Whistle
E31.50	Old Steam Whistle
E31.50	Tug Boat Air Horn
E33.20	Mtroniks Diesel Canal Boat
E33.20	Mtroniks Multivibrator Diesel

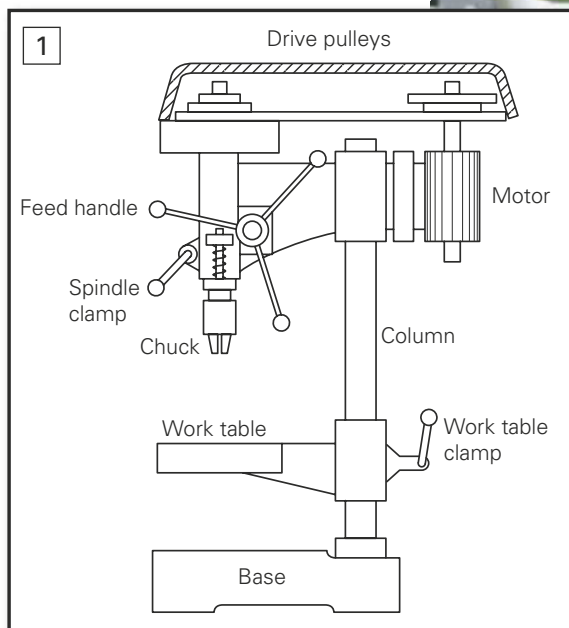
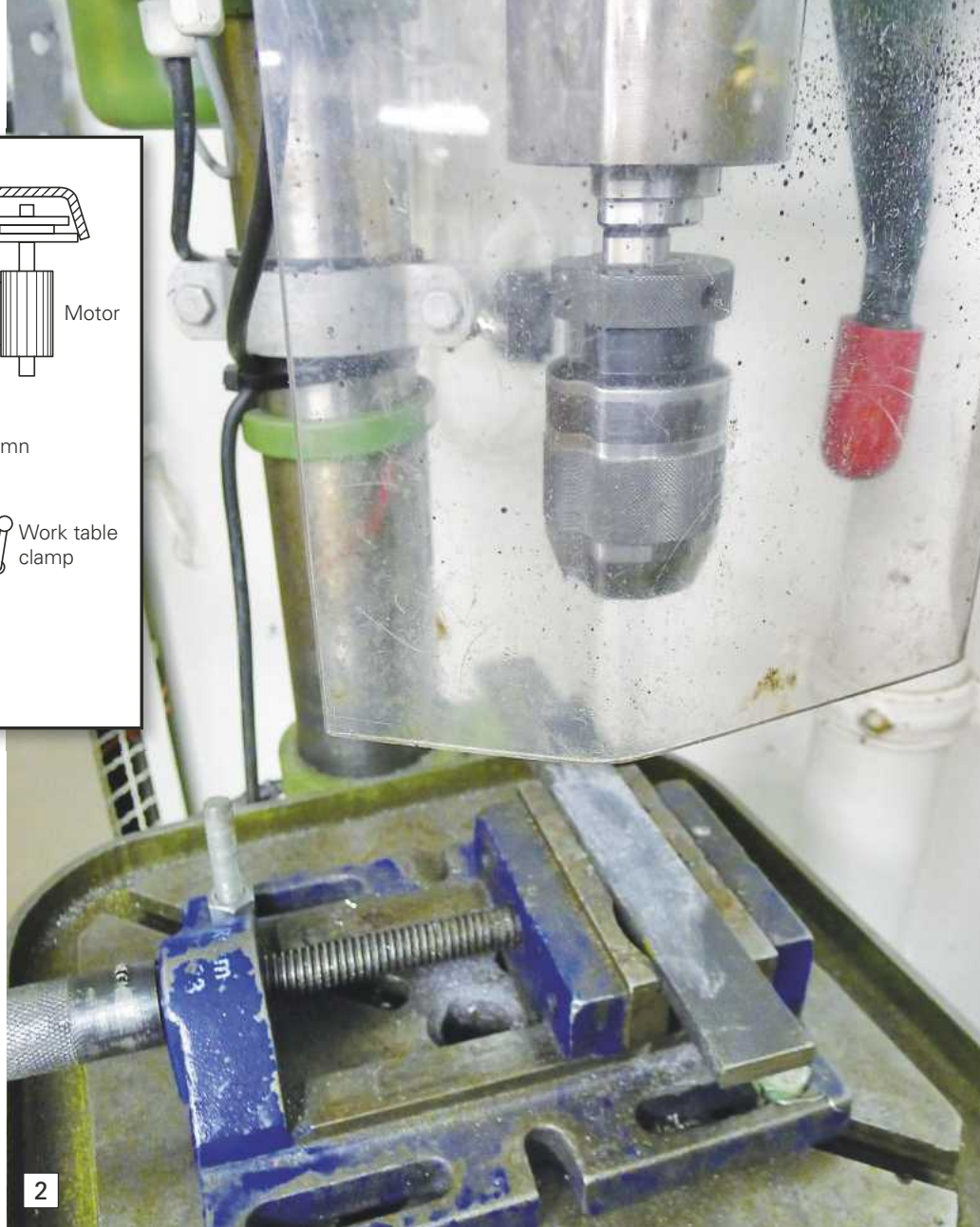


PHOTO 1. The basic nomenclature of a pedestal drill showing the most important parts and handles.

PHOTO 2. The job should be secured in a vice and the vice should be secured to a work table. Failure to do this could result in a drill catching and throwing the job and vice across the room.



Boiler Room

Part Forty Five: Workshop Practice - Drilling: Part Two

Richard Simpson's
series on model
steam plants



Last month we started to think a bit about drilling holes and discussed the different drill bit types and marking-out the job. Now we are going to prepare the set-up for a safe drilling operation and make a nice neat, squarely cut and accurate hole. Although we may be considering a number of different types of drilling machine, we should still be considering some form of pedestal drill with similar operating functions as shown in the diagram, **Photo 1.**

Preparation

To start with, ensure that the power is OFF the drilling machine. Turn it off at the mains or pull out the plug, but whatever you do, please ensure that the drill cannot turn while you get things ready and if you remember one thing from this article, please let it be to secure your work before drilling! By

this, I don't mean simply put the job in a hand-held vice that tends to serve no other purpose than to increase the mass, momentum and destructive power of the projectile that then flies across your workshop! What I mean is to secure the job in a vice that is then secured to a fixed table, **Photo 2.** I realise that we do not all have access to a proper drill press, however you should have some means of drilling a vertical hole into a secured job. I am lucky enough to have a milling machine for most of my drilling, however before that luxury I used to put my trusty old Black and Decker tool into an aftermarket drill press, which incorporated a base to which the hand vice could be secured. I cannot strongly recommend enough that you always have the drill secured in some form of stand and the job secured in a fixed vice. If we have that sorted out, then we are in with a good chance of success.

To locate the job in the vice it is essential that

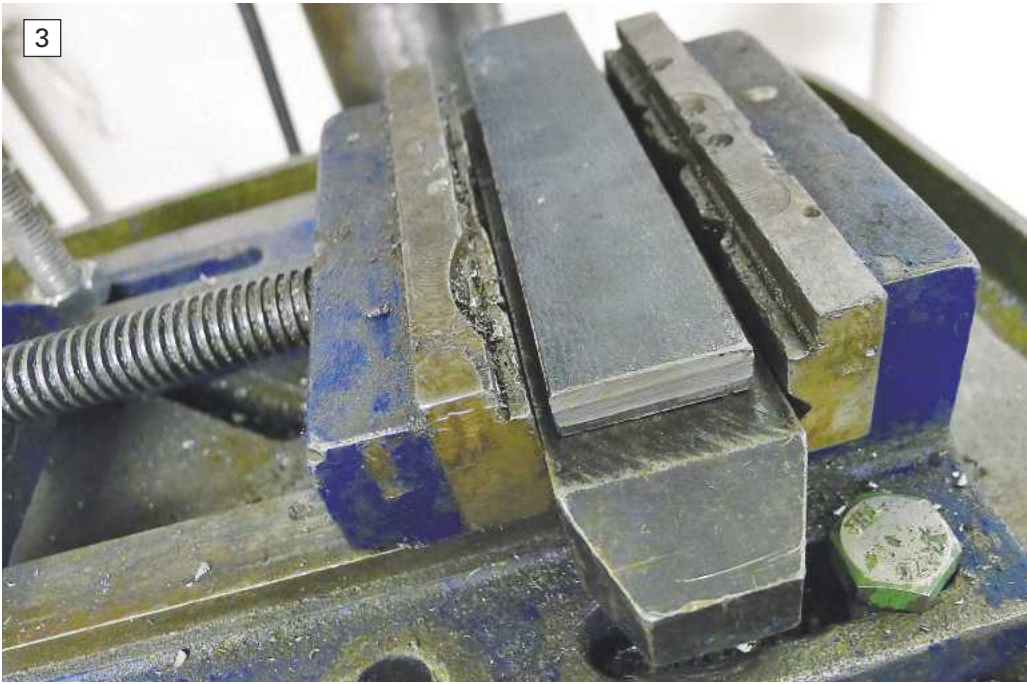


PHOTO 3. Slightly exaggerated, this job has been placed on a packing piece, which is too large for the purpose. Consequently the vice will only hold the packing and not the job.

the surface is perpendicular to the drill, so you may need to 'pack' the job in the vice, but take great care that the vice is still holding the job and not the packing; i.e. the packing must be slightly narrower than the work piece and not, as is shown in **Photo 3**, where the vice will only hold the packing! Also bear in mind that when the drill bit goes through the job, you don't want it to continue through the base of the vice. Either arrange the job so the drilling is going to take place outside the vice, or better still, it is right in the middle so the drill bit will exit into a clear void underneath.

just bear in mind to use a higher speed for a smaller diameter drill bit.

Drilling

So let's drill the hole! Put your goggles on before you even put the power on the drill as swarf and rubbish can still fly off the chuck before you touch the handle, so have your eyes protected, even before you power-up and press the ON button.

Particularly hard materials such as stainless steel may require a coolant, but I tend to think that

Put your goggles on before you even put the power on the drill as swarf and rubbish can still fly off the chuck before you touch the handle, so have your eyes protected, even before you power-up and press the ON button.

Select the drill bit

In most cases I would advocate initially using a pilot drill, for a couple of good reasons. First, you still have the back door open if you make a mistake and you need to adjust the position of the final hole and second, it is easier to control a smaller drill and get a nice accurate small diameter hole for the main drill to follow. When the bit is secured in the chuck, lower the chuck towards the surface of the job then manoeuvre the job by moving the vice and the table until the centre punched mark is below the drill bit. Lower the drill bit until the tip of the bit just touches that centre punch mark, then rotate it by hand, **Photo 4**. The bit should scratch the edge of the centre-punched mark evenly all around it ensuring the drill is actually perfectly centred over the mark. When it is perfectly located, tighten down the securing arrangement for the vice and lock the table clamp and check that the drill bit has not moved.

If you have already drilled a pilot hole and have now fitted the main drill, the process of centring is exactly the same, but you are looking for an even mark around the edge of the pilot hole that the main drill cutting edge creates when you rotate it by hand.

So you should now have the drill bit centred perfectly over the centre punch mark, the job is secured in the vice, which is secured to the base and you have looked up the speed needed to spin the drill to cut the hole. There are engineering tables for such niceties, but as many of us may be using a pistol drill with at best only a few different speeds,



PHOTO 4. To get the drill bit in the perfect position rotate the chuck by hand while applying very gentle pressure. You should see an evenly marked centre punch mark when you lift the drill bit again. When you have the position perfect, lock the vice and lock the table before a final check.



PHOTO 5. Just the right amount of pressure should generate the same swarf from both cutting faces without generating too much heat at the bit. Steady and consistent pressure will help to ensure a neatly drilled hole.

the best method of cooling for model engineering purposes is to not generate the heat in the first place. Coolants are messy in a hobby workshop and using oil is usually to cover up something else that is wrong, such as that the drill bit isn't sharp. So let's concentrate on getting as close as possible to the correct rotational speed and then an appropriate feed. I still think that many modellers do not pay enough consideration to the rate of feed they are putting into the cut, or in this case, it is nothing more technical than how much pressure you are putting on the handle and therefore the cutting faces. Some materials such as brass generate a chip, whereas some such as mild steel generate either a chip or a length of swarf, but the important consideration is not too much, but a nice consistent pressure that generates the same amount of swarf from both cutting faces, **Photo 5**. Don't make the mistake of backing-off so much that the process takes far too long, as heat generated by the edge of the drill bit rubbing on the sides of the hole as well as removed swarf and chips also rubbing on the sides will start to generate excessive temperatures. The pressure should be just enough to create consistent and an even chip or swarf generation, so the hole is drilled quickly and effectively, but without using too much downwards pressure.

Another consideration during drilling is just what is happening to the swarf that is being created at the drill bit tip. In shallower holes, this is usually not too much of a problem, but when we start drilling deep small diameter holes we must ensure that the tip of the drill bit remains clear of swarf or chips. If we don't 'clear' the tip by frequently

removing the drill bit from the hole, then the swarf being generated will build up and start to compact at the bottom of the hole. This will very quickly start to create friction on the sides of the hole and cause overheating. In extreme cases it can actually compact and prevent the pressure of the handle being effectively transmitted to the bit and severe overheating will then occur very quickly.

It all sounds a bit confusing, but at the end of the day this is where experience counts. Once you have the idea of just how the right amount of pressure 'feels', then you will be able to become more consistent on the quality of the drilled holes you create.

Experience will help you to feel the pressure on the drill handle relax as the bit starts to emerge below the job, at which point it is time to ease-off the pressure on the handle and breakthrough in a gentle and controlled manner. Backing-out the drill should then give you a nice neat hole in just the right place and just the right size, **Photo 6**. Turn off the power again before removing either the job or the drill bit and be prepared for them both to be warm or possibly quite hot, if your feed rate was a bit high.

Conclusion

As usual there is more to this than we can squeeze into a short monthly column, but we have looked at the most important points. Further reading is of course available in many engineering related text books and online, but do bear in mind safety and planning and you will be surprised at how your drilling improves.

Just a final thought now: Drilling in general is quite under-estimated whether we are drilling metal, plastics or wood and more thought put into drilling around the model during construction is extremely beneficial. I always have a vernier calipers to hand and measure parts for any required drilling to ensure I drill for the best fit. Handrails and any other deck fitting should, wherever possible, be drilled with the drill bit held vertically, but whether you are using a pin vice or a hand-held drill, please endeavour to ensure that the drill is perfectly vertical before drilling.



PHOTO 6. When you finally back-off the drill bit, you should be left with a neatly cut hole that is uniform in diameter and in just the right location. Heat generation should have been minimal, but the drill bit and the job could still be quite warm for some time afterwards.

**MODEL BOATS
ONLINE!**

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

www.modelboats.co.uk

Website content includes:

- A Gallery which features photo albums of models, including some under construction by Model Boats readers and being updated as they progress.
- A Forum that has sections for: Beginners, General, R/C and Accessories, Static, Kits, Scratch build, Steam, Vintage, Events and Chat.

- A Features area that has sections for: Build Features, Kit and Product Reviews, Hints, Tips and Technical, Show and Regatta Reports and General Interest Articles on Model Boating.

- A Link to www.myhobbystore.com which has over 3000 plans available and numerous modelling items, books and kits. These can all be purchased online.

**TRADE
ENQUIRIES
WELCOME**

JoTiKa Ltd



VERTICAL

Weight, empty: 590g (20.8oz)
Water capacity, steaming:
approx. 125ml (4.2 Fluid oz)
Start up time from cold:
3 minutes
Width, including burner &
steam valve: 115mm (4.53")
Total height:
200mm (7.87")



Miniature Steam

2" Centre Flue Marine Boilers



HORIZONTAL

Weight, empty: 680g (24oz)
Water capacity, steaming:
approx. 150ml (5 Fluid oz)
Start up time from cold:
3 minutes
Width, overall: 65mm (2.56")
Length, including burner:
155mm (6.1")
Total height: 137mm (5.39")

Designed to be fitted into RC boats with a beam of approx. 150mm (6") & length of up to approx. 750mm (30"). These gas fired 2" horizontal and vertical boilers have been specifically designed to meet the needs of the RC boat modeller. Both boilers are very powerful and efficient steam generators thanks to the use of a highly efficient cast ceramic burner coupled to the spiral arrangement of the multiple cross pipes in the fire tube. With a startup time, from cold to the maximum working pressure of 40psi (2.75 bar), of approximately 3 minutes and with an approximate running time (at 40psi) of 20 minutes per fill, they are ideally suited to powering a 11mm bore/stroke single cylinder engine or a 8mm bore 11mm stroke twin cylinder engine. Both boilers have unique mounting systems which enables them to be installed in any convenient location within the boat hull.

"Miniature Steam" boilers are fabricated from copper and copper alloys and are designed to be run on 70% butane gas. Each boiler is hydraulically tested to twice working pressure (80psi) and comes complete with a test certificate. Pressure gauges and fittings, as shown, are supplied as standard.

**EXCLUSIVE
EUROPEAN
DISTRIBUTOR**

JoTiKa Ltd., Model Marine Warehouse, Hadzor, Droitwich, WR9 7DS.
Tel: +44 (0)1905 776 073 Fax: +44 (0)1905 776 712
E-mail: enquiries@jotika-ltd.com <http://www.jotika-ltd.com>



Working Plans for Model Construction

The Entire Sailing Ship & Power Craft Series
of Authoritative Drawings

By Harold A. Underhill, A.M.I.E.S.

PUBLICATIONS FOR MAKING MODELS

- * Plank-on-Frame, Vol. I
- * Plank-on-Frame, Vol. II
- * Mast and Rigging
- * Deep Water Sail
- * Sailing Ships Rigs and Rigging
- * Sail Training and Cadet Ships

Illustrated list of 70 Sailing Ship Designs £4.00
Illustrated list of 35 Power Craft £4.00

Please write for further information and catalogue to:

Brown, Son & Ferguson, Ltd.
4-10 Darnley Street, Glasgow G41 2SD

Telephone: 0141 429 1234
Email: info@skipper.co.uk
Fax: 0141 420 1694



www.skipper.co.uk



METCALF MOULDINGS

1 Wentworth Cottages,
Haultwick, Dane End, Ware, Herts. SG11 1JG
www.metcalf-mouldings.com

MT. AVENGER/HIBERNIA

Model Scale 3/8" to 1ft. (1:32nd)
Model Length 45" • Model Beam 12"
Displacement +/- 41lbs.



£385.00
+£10.00 U.K. P&P
(Overseas @ cost)

We have now upgraded our
kit of the Motor Tug AVENGER

As before she features GRP Hull, Superstructure,
Engine casing, Wheelhouse & funnel. Printed
plastic detail sheet and new CNC cut sheets
for deck beams, decks etc. Over 500 white
metal fittings, all dowel, brass rod & tube etc.

Replica 1913

Pond Yacht MOONBEAM

52" o/a x 11" bm x 20lbs. displ.

GRP hull, CNC cut deck beams,
printed ply deck, all timber strips
and hardwood dowels for mast etc.
Very comprehensive drawings and
instruction manual make for an easy
build kit that really does sail well.
Digital construction disc available on request.

£270.00
+£10.00 U.K. P&P
(Overseas @ cost)



See you at Blackpool 25/26th October
and The International Model Boat Show
@ The Fosse 8/9/10th November

Tel/Fax/24hr. Ansaphone: 01920 438686



MAIL ORDER SPECIALISTS

email: metcalf.mouldings@virgin.net

Information sheets & photo CD's available for all our 6 full kits on request





The National Model Boat Show April 2014



Anthony Addams
reports from Coalville.

TOP: This AFOR (A For An Alien!) is a 'Water Born Patrol Officer'!

BELOW: The prize giving ceremony on the second day of the show.

This was even better than in 2013, the leisure centre being filled with 14 model boat clubs and 21 trade stands and a good attendance. Mark Williams from A Model World is the event promoter, but not to be forgotten are the model boaters' who volunteer to do the leg-work and help with setting-up. A feature of the event is the informal judging of models with some 20 or more prize plaques to be won.

Models and clubs

The modeller of the show this year has to be Bill Jefferson who won three prizes, each for a different type of model. On the Hull Model Boat Group stand, Bill displayed five very different large models and all scratch-built to top-notch standards. All were notable, but it is worth mentioning in particular his fully operational camouflaged German landing craft that was inspired by archive film footage from The World at War TV Series which showed German landing craft preparing for Operation Sea Lion.

A very different model was of a craft from a distant planet called Naed. This prize winning AFOR (A For An Alien!) is a 'Water Born Patrol Officer' and it emits weird sounds whilst the lights flash and we mortals are told it communicates through Bilingual Universal Recognition Patter, aka BURP!

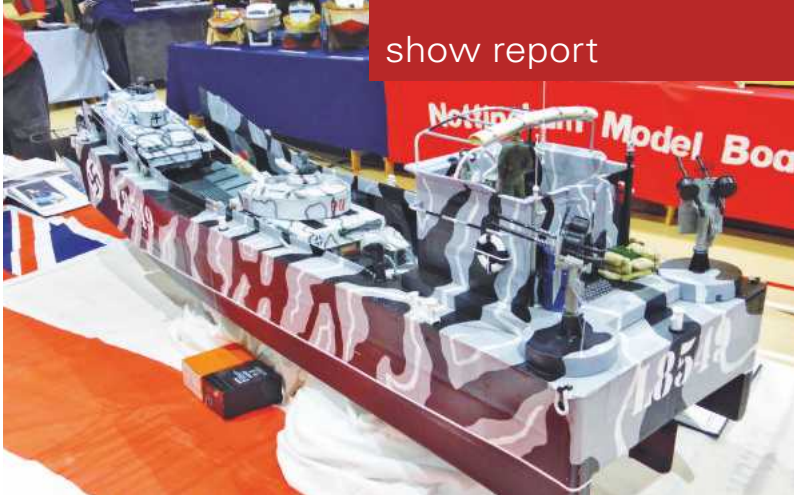
Dad's Army on the UK canals became a reality with Gerald Tough's converted WW2 narrow boat, complete with camouflage and a three inch 20 pounder gun mounting. Apparently, 50 such boats were actually converted for the War Ministry. Gerald has also created an r/c swan that is so effective, sightseers have thrown sandwiches to it!

Period ships were not forgotten and Mick Knowles had his superb HMS Snake 32 gun frigate on display and Richard Harris had his fine model of





ABOVE LEFT: Mick Knowles' superb HMS Snake. ABOVE RIGHT: Bill Jefferson's fully functioning r/c controlled German landing craft, was inspired by archive film footage from The World at War TV Series and on board it are two 1:16 scale tanks.



ABOVE LEFT: Nottingham MBC had this intriguing diorama of a wooden boat under construction by various craftsmen, here depicted as cardboard cut-outs. ABOVE RIGHT: Gerald Tough's converted WW2 narrow boat for Dad's Army. Fifty such boats really were converted for the local defence volunteers.



HMS Victory. Richard also brought along Gunboat No. 5, originally purchased from an antique shop, all these models demonstrating the best of British period ship model making skills.

On the Nottingham MBC stand there was an intriguing model of a wooden boat under construction by various craftsmen, they being depicted as cardboard cut-outs, a diorama that you could not avoid stopping at and examining.

Adrian Abbott's scratch built Fairmile D MTB 801 fought off dive bombers and enemy ships on my own Daventry MBC stand. Its two 6pdr guns rotate, the barrels flash with realistic sound effects, as do the Oerlikon guns. Two years in the making thus far, this superb model is still not complete.

Remarkable detail in miniature is now possible with 3D printing, allowing the smallest of components to be made and fitted together to allow their operational movement and the not yet 100% complete HMS Campbelltown Type 22 frigate by Reg Preece showed what is possible with this new technology.

This show would not be complete without Tony Olliff, a long time top-class model maker, who had his collection of award winning lifeboat models, and he collected a well deserved award for them.

Trade support

Alan Horn from Nottingham is successfully meeting a current demand for J-class yachts, the hulls and fittings being at very reasonable prices. The yacht's hull lines are so elegant and the keel design minimises the possibility of getting caught by weed on the pond, so a win-win for the scale yachting enthusiast!

Mike Allsop displayed his vast range of different sized flags and ensigns and I also liked the Bob-A-Bout Footy Yacht on The Vintage Model Boats Co. stand, this kit being recently reviewed and built in

the May 2014 MB. Where would we be now without Keith Jewell of Modelling Timbers, who was retailing his astounding range of wood in different sizes and types, but also 100's of fittings in all shapes and sizes. Also, Adrian Clutterbuck (Adrian's Marine Figures) took over the George Turner range of resin cast figures that provide the essential touch of realism to our models and he does good trade at shows such as this. There were of course other well-established traders present so one could buy most of the essentials to pursue our hobby.

Conclusion

A good show, roughly in the centre of the UK, held at the beginning of the prime model boating season and well worth a visit as it has become more established annually.



Reg' Preece's HMS Campbelltown incorporates 3D printed parts such as this radar tracking device.



Alan Horn's superb J-class yacht hulls and fittings are selling well.



RRS Discovery



This ship is a British Royal Research Ship operated by the National Environment Research Council (NERC).

RRS Discovery was built in Aberdeen in 1962 and named after Robert Falcon Scott's 1901 ship, RRS Discovery. She has berths for 28 scientific staff, and the ability to spend up to 45 days at sea. Her last major overhaul was in 1991, when a new superstructure and power plant were installed and her hull lengthened by 10 metres.

RRS Discovery carries out oceanographic and marine biology research from the National Oceanography Centre, Southampton and operates as part of a fleet maintained by the NERC National Marine Facilities Division together with the larger RRS James Cook. All information from the public domain. ●

Principal particulars

Class and type:	Royal Research Ship
Gross tonnage:	3008 tonnes
Displacement:	4378 tonnes
Length:	90.0 metres
Beam:	14.0 metres
Draught:	5.52 metres (full load)
Installed power:	3716 kW
Propulsion:	Diesel electric system
Bow thruster:	360 degree azimuth unit
Max. speed:	12.5 knots
Endurance:	55 days
Crew:	9 officers; 13 crew; 28 scientists



Picket Boat



John Elliott reviews and builds the Chylds Hall Model Shipyard semi-kit

PHOTO 1. Kit contents.



This is a semi-kit of a twin funnel steam picket boat that was recently sent to MB for review.

Chylds Hall Model Shipyard is run by Steve Pickering, a well known and highly skilled model warship builder. The kit, **Photo 1**, includes a high impact polystyrene vac-formed two part hull, main deck structures, motor mount and deck support

beams (a total of 12 components), colour printed plastic sheet deck, deck edge, keel and bow reinforcing timbers. Also included is a complete 68 component resin cast fittings set, all on a single base moulding sprue including the rudder servo mount. Running gear supplied includes a propeller, propshaft, brass rod rudder post, tiller and A-frame material. Documentation comes as a research photo sheet together with a computer disc showing construction in 80+ photos and building notes, with tips and suggestions.

The finished model measures 335mm long by 67mm beam and has been designed to function with a two channel r/c system, the rudder being operated by a mini-servo. It can be powered by a miniature electric motor or a standard servo motor which is not supplied with the basic semi-kit. The following additional fittings are available separately and were supplied with the review model:

A 3pdr QF gun
Miniature electric motor and flexible coupling
Lime stripwood deck planking pack
Acrylic deck caulking

Although this is a semi-kit, there are not many extras you will have to purchase and I will list them as I go through the construction process, but it is not a 'step-by-step' build kit in the conventional sense. It does of course build into a very small r/c model to 1:48 scale, but apart from its size, does not require special skills to construct.

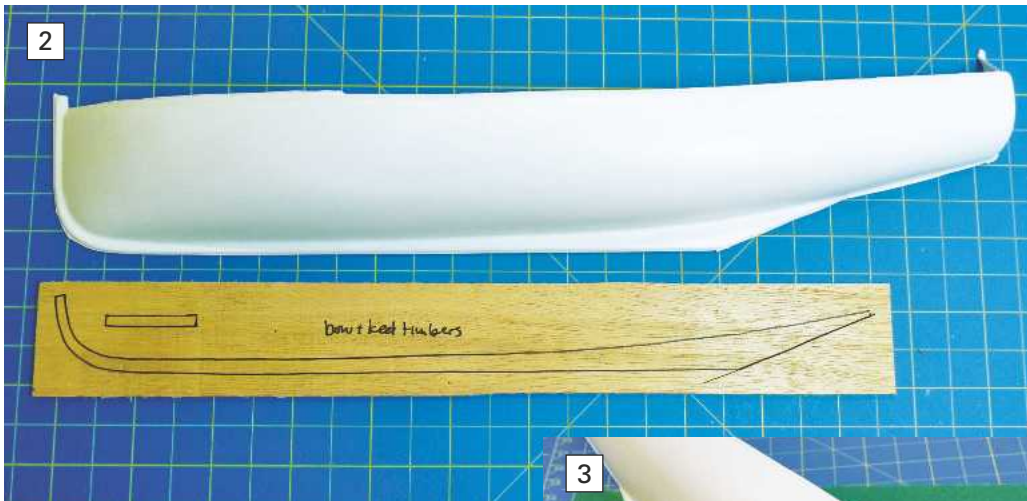


PHOTO 2. A half-hull section removed from its moulding sheet, and also showing the keel pieces.

PHOTO 3. Sanding down a half hull on a flat sheet of abrasive paper. Don't overdo it!

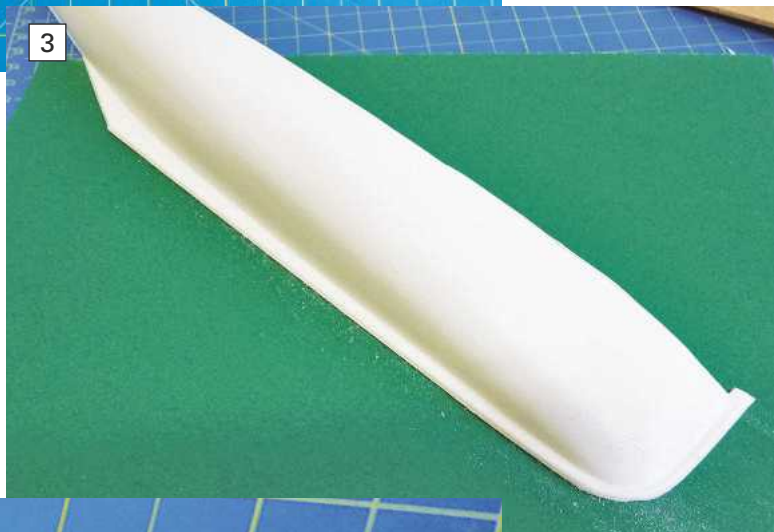
PHOTO 4. The forward raised bulwark was removed and this depends on which version you wish to build.

PHOTO 5. The hull halves and the sandwiched wooden keel are all clamped and glued together.

Getting started

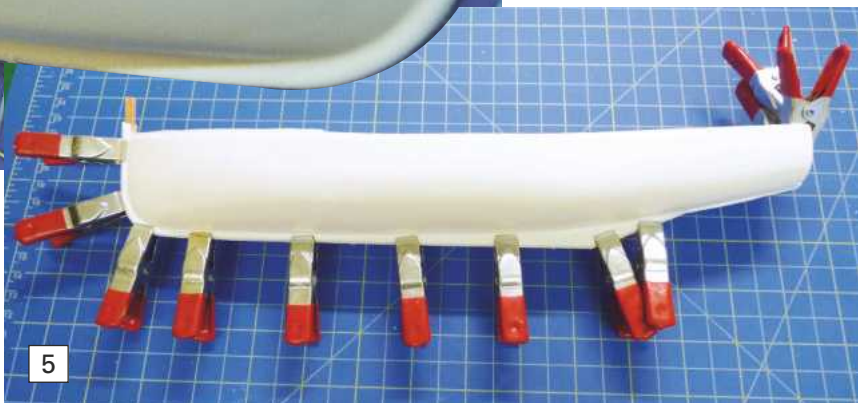
Reading the instructions and hints on the printed five A4 pages is a good idea(!) and the photos give a great guide to the construction process and many location measurements are shown, so there is nothing too difficult here for the average modeller.

Starting with the hull, its two halves were cut from their vac-moulding carrier sheets and the wood keel pieces were cut and tested for fit, **Photo 2**. To ensure a good match, lay a full sheet of abrasive paper on a flat surface and gently rub the mating surfaces, **Photo 3**, until they meet together with the keel inserted.



This was a pleasant and quick model building project and its on the water performance, considering the small size, is impressive.

At this stage I removed the raised bulwarks from the bow (1900's version), **Photo 4**. The keel and the two hull halves were now glued and clamped together, then set aside, **Photo 5**. There is a stern reinforcing piece to be glued inside the complete hull and I also added a thin piece of plastic sheet on its exterior which completely covered the transom and hid the join, plus reinforced it all.



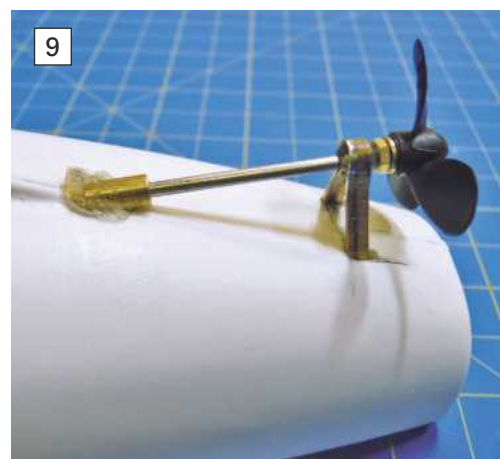
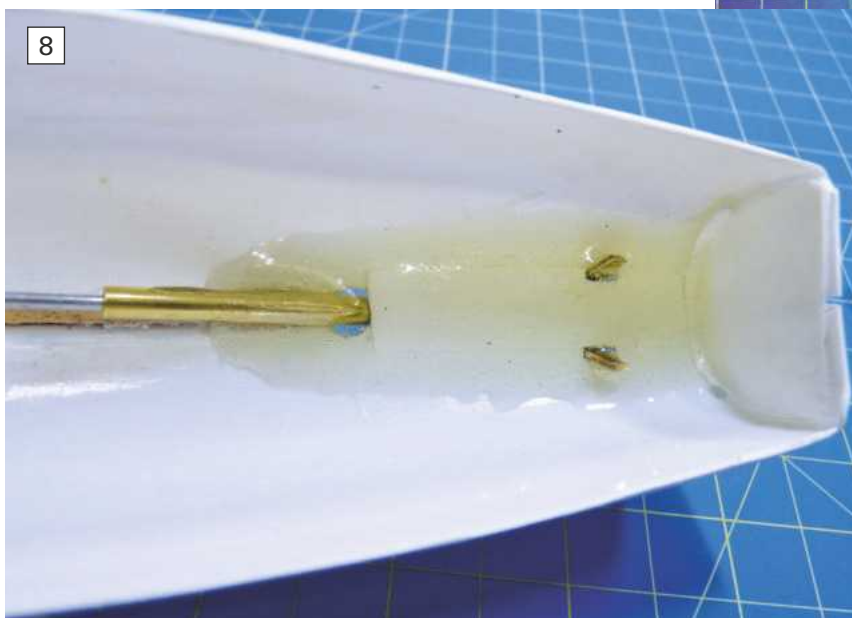
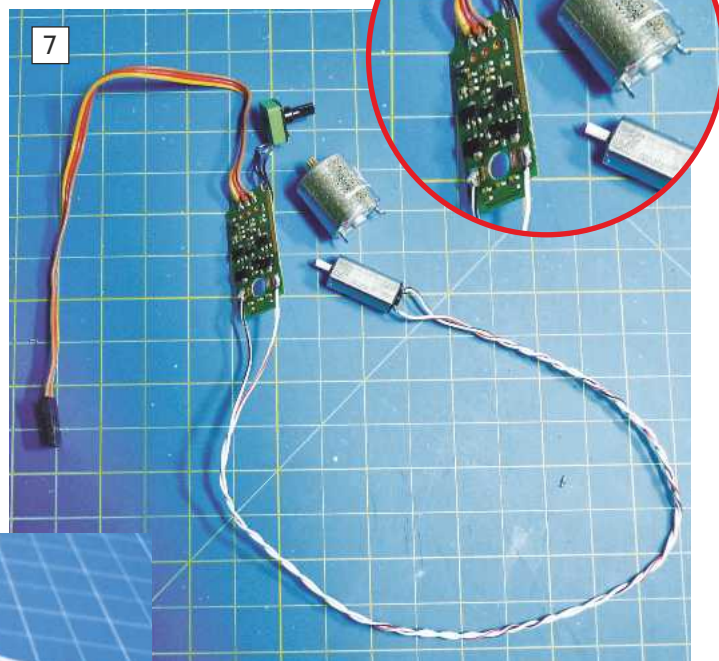
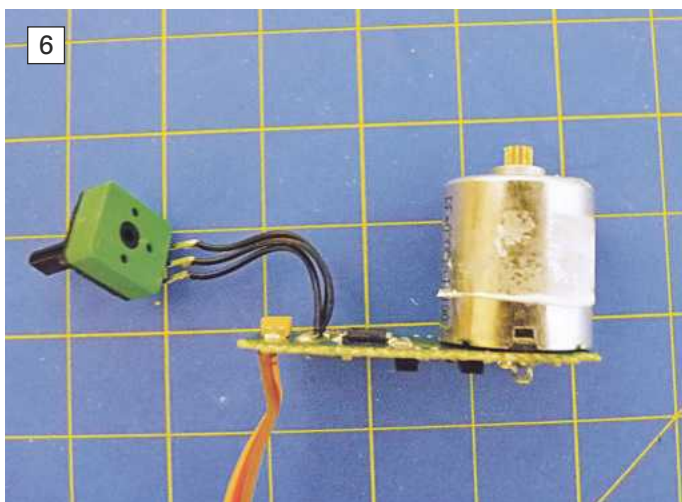


PHOTO 6. The servo electronics and motor. Any redundant servo can be easily stripped down.

PHOTO 7. The servo motor has been disconnected and the supplied Chylids Hall Model Shipyard version fitted instead.

PHOTO 8. The A-frame and propshaft fixed with epoxy glue - an inside view.

PHOTO 9. The propshaft A-frame fixed - an external view before being cleaned-up.

Running gear installation

This has to be considered now, as the internal space is limited. The receiver used in this example is an 'Orange' 2.4GHz DSM2 Spektrum clone which is quite small and very inexpensive! The recommendation for the esc (electronic speed controller) is a P68A Pico (ACTion) from The Component Shop, but Dave Abbott has recently successfully used the electronics from a stripped-down redundant servo in one of his Plastic Magic projects, so a cheap full-size servo to accompany the miniature one for the rudder was ordered online from one of those ultra cheap overseas Internet hobby shops. This was stripped down to its circuit board, with the motor still attached, together with the potentiometer (pot), **Photo 6**. A bit of experimentation then followed, with these results.

If power was connected to the red (+ve) and brown (-ve) wires, ignoring the signal wire, the motor would turn in one direction. By moving the potentiometer manually, the motor would speed-up and when turned in the opposite direction, it would slow to a stop and then actually reverse. The potentiometer was adjusted so the motor

was in a neutral position. Now the servo lead was plugged into the receiver's throttle socket, the transmitter switched-on and power connected to the receiver. The motor should (and did) respond to the throttle stick, only needing another tweak of the potentiometer to confirm the neutral position.

So, this is an economical way of having a forwards and reverse esc with motor for such a small model. As it so happened, Steve Pickering did supply a smaller and more suitable motor, so only the servo board was used in this instance, but if the servo motor is being utilised, the gear on its output shaft will have to be removed. **Photo 7** is of the board with Steve's motor connected. The coupling between the motor and propshaft is only a very small thin rubber tube. For power supply, a flat 4.8v four cell standard receiver pack was used, but split into two packs each of two cells.

With the two hull halves now joined, the hole for the propshaft tube was drilled and it was taped in roughly the right position. However, I noticed that the measurements given did not match the unit supplied, but a quick chat with Steve Pickering soon resolved that problem, the option being to reduce the propshaft length overall or moving the motor.

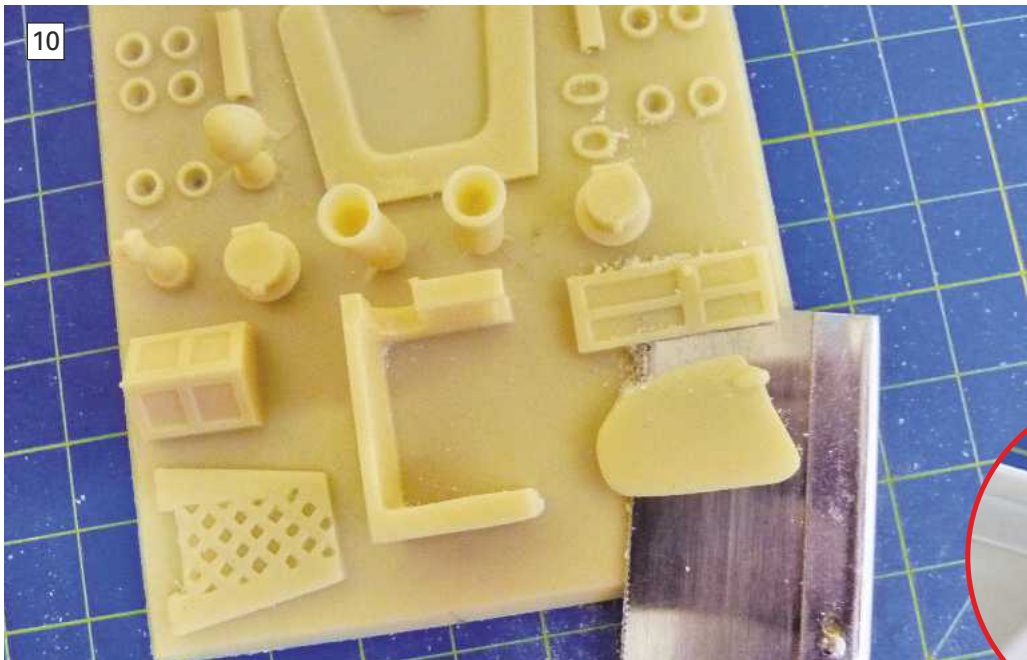


PHOTO 10. Cutting parts from resin base with an X-acto saw was okay, but perhaps is easier with a fretsaw blade.

PHOTO 11. Deck supports now in position.



The latter seemed to be the better option, and so the motor mount was duly fixed in the hull a little bit further forward in the hull.

The motor was now taped (double-sided) to this mount and aligned with the propshaft and coupling so the position of the external A-frame could be marked. Brass strip is supplied for the A-frame, but a small length of 2mm i.d. brass tube will still be needed to make a bearing in it. The brass strip was annealed, bent around the bearing and all duly soft-soldered to shape,

The A-frame was then positioned through its mounting slots in the hull bottom; the propshaft threaded through its bearing and the whole driveline checked for alignment, before temporarily securing it all with masking tape. Plastic reinforcing strips were first glued in place and once set, those areas covered with epoxy adhesive, **Photo 8** being an inside view and **Photo 9** is the exterior! Don't forget to cover the holes outside of the hull to minimise excess glue escaping.

Resin castings

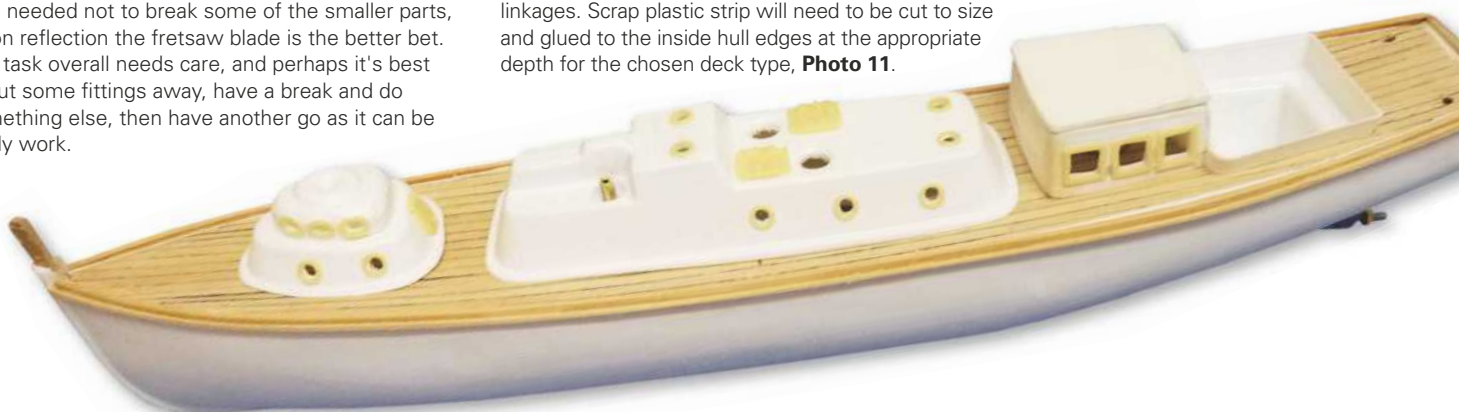
These were each cut from the single overall base casting. Polyurethane resin is quite easy to cut and a fine fretsaw blade is recommended. I tried an X-acto saw which worked okay, **Photo 10**, but care was needed not to break some of the smaller parts, so on reflection the fretsaw blade is the better bet. The task overall needs care, and perhaps it's best to cut some fittings away, have a break and do something else, then have another go as it can be fiddly work.

Deck

You have two choices:

To use the printed deck on its own, or to plank over it with lime stripwood.

The second option was chosen and looks much better from a complete model point of view. The choice will influence the position of the deck edge support strips as they have to be fractionally lower to accommodate the planking on top of the printed deck and also holes will need to be drilled in the across deck supports (before fitting), for the rudder linkages. Scrap plastic strip will need to be cut to size and glued to the inside hull edges at the appropriate depth for the chosen deck type, **Photo 11**.



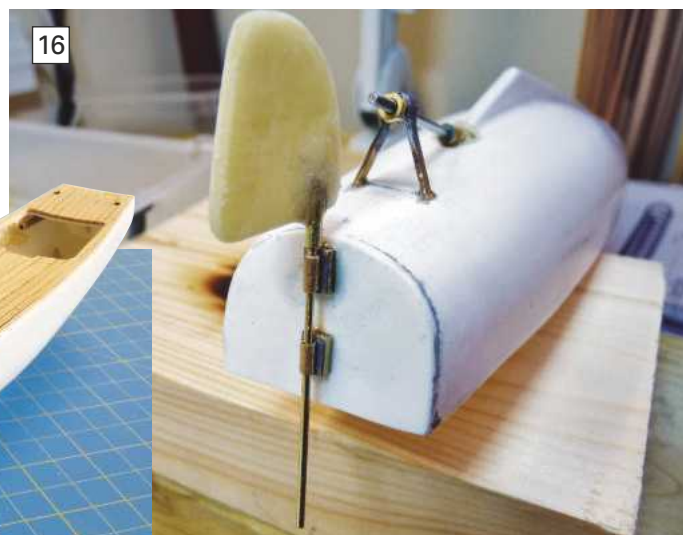


PHOTO 12. Caulking the edges of the planks. The optional supplied caulking is wonderful stuff!

PHOTO 13. The plastic deck was then covered with the optional caulked planks.

PHOTO 14. The rudder control guide tubes fit underneath the deck and have to be installed before the latter is glued into the hull.

PHOTO 15. The fabricated brass rudder bearings after the mistake with the cast resin versions!

PHOTO 16. The brass rudder bearings fixed in place on the transom. Note the reinforcing flat styrene piece.

PHOTO 17. The deck is now glued in place.

The basic printed deck was cut from its carrier sheet and tested for fit, before the across hull support bars were glued into the hull. Only the stern and centre openings in the deck were going to be cut-out, leaving the forward one covered, as there was no reason for access with the intended electronic and driveline setup, this also reducing the chance of water ingress. It is easier to plank over this printed plastic deck BEFORE it is fixed to the hull, since you can easily plank it 100% completely and then open out the access holes from beneath it.

A tub of acrylic caulking (a sort of thick paint) was supplied to fill the gaps between the planks, but before gluing these to the plastic deck they needed to be sealed to prevent any possibility of the caulking staining them, which was easily

achieved with a couple of coats of sanding sealer. With several planks held firmly together with tape, their 'thin' edges were lightly coated with the acrylic caulking, **Photo 12**, prior to gluing them to the plastic deck. A small gap was left where planks met end-on, and extra caulking pushed into those gaps where necessary, **Photo 13**. Once dry, the planks were lightly sanded to remove any unevenness and the excess caulking. The two access holes were trimmed and a couple of coats of varnish applied to the now lime wood planked deck with a rag, before it was put to one side, whilst the remaining running gear was next to be installed in the hull.

Remaining running gear

Internal hull access is much easier without the deck fitted! The esc mounting tray and rudder servo mount was fitted into the hull, followed by the two rudder linkage guide tubes underneath the deck as in **Photo 14**. These tubes, after annealing, were easily shaped by gently bending them around a small screwdriver handle. The rudder shaft bearings are small resin castings that are mounted on the transom, but need

to be drilled to accommodate the shaft. As a reviewer, one lives and learns, as drilling these tiny components once removed from the resin carrier sheet base isn't easy and in the event, proved impossible. To resolve this 'faux pas', the rudder shaft bearings were each fabricated from brass tube soldered to a brass section backing piece, **Photo 15**. A small hole was also drilled in the back and a short piece of wire glued into it and through the hull to create a more substantial fixing than just a glued flush mounting, **Photo 16** being of them duly mounted on the transom.

Now the planked deck could be glued in place, **Photo 17**. The rudder linkages are actually fine fishing line, which it was reasoned could (or would) snag or even eventually cut through the plastic deck supports. This was resolved by sliding pieces of plastic tube through the deck supports and on to the brass guides, **Photo 18**, before cutting to length just short of maximum servo output arm movement. A small combing will be needed around the openings in the deck and once again, some scrap thin plastic sheet did the job.

Superstructure units

These are vac-formings and were cut from their carrier sheets. Their edges were sanded in the same way as the hull halves, but should also match the slight camber of the deck. The rear cabin and seat is made from three vac-mouldings and its roof from plastic sheet. A small hole was cut in that roof, **Photo 19**, for access to an on/off switch, which makes life much easier at the pondside. To finish off the well seat's edge, a length of multicore solder wire was glued to it. A piece of normal brass wire would be okay, but the solder wire is much easier to form around the edge and makes it look much better. The forward engine room housing is as in **Photo 20**. The handrails were made up off the model, as heat from soldering can easily melt the plastic. A simple wooden jig replicating the spacing of the handrail uprights made life much easier and the fine brass wire was cut, bent and soldered, before the made up sections were transferred to the superstructure.

With these units all made and checked for fitting, it was back to the hull and adding the wooden external deck edges. Soaking the wood in hot water for a few minutes will soften it and make it easy to bend around the hull. One full strip is needed all around the hull, followed by one split in half for the rubbing strake. The wood was stained and varnished to enhance its appearance.

Painting

Before adding the detail fittings, it is best to paint the hull, superstructure units and fittings. Halford's aerosol acyclic white primer followed by Humbrol enamels applied by airbrush was the painting sequence. There is nothing difficult on this model and of course it isn't very big, so one aerosol can of primer is more than enough. I won't bore you with the mechanics of painting, suffice to say that clean lightly abraded surfaces are best for a good finish. The hull is all white, the deck is wood anyway and the superstructure, funnels etc. are brown. The brass window frames are just picked out using a 'gold' ink pen of the type that might be used on Xmas greeting cards.

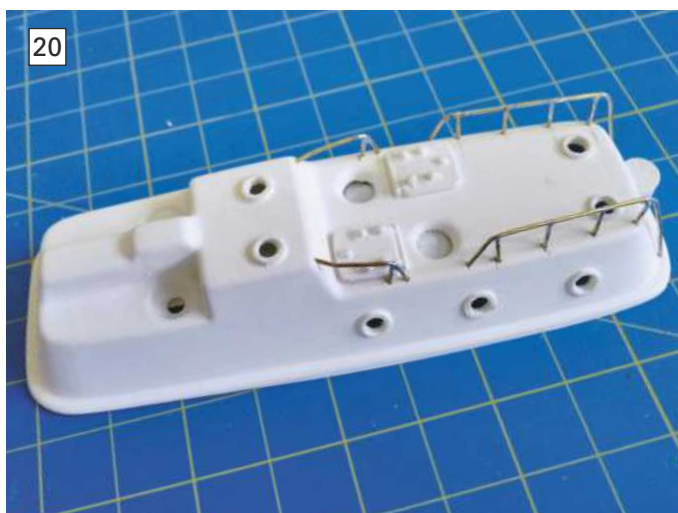
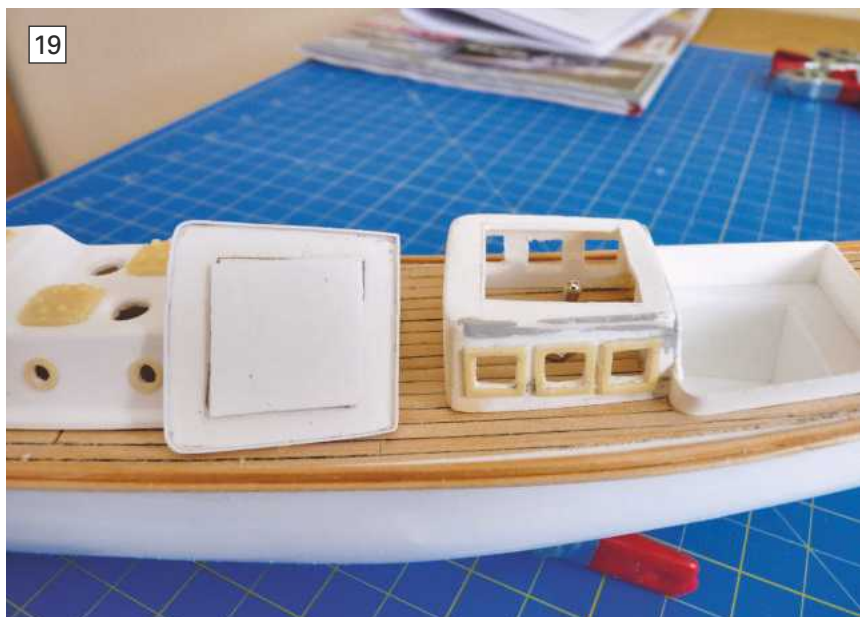


PHOTO 18. The plastic tubes for the rudder control wires.

PHOTO 19. The cabin roof showing switch.

PHOTO 20. Wire hand rails on the engine room housing.



PHOTO 21. The rudder shaft has to be bent to form the tiller. The fishing line linkages from the rudder servo attach to the end of the tiller.

PHOTO 22. The retaining hook inside the engine room housing unit.

PHOTO 23. The central part of the hull interior which also shows the swivels on the rudder servo and the retaining spring for the engine room housing.

PHOTO 24. The modified propeller.

Finishing-off

Once all the painting was complete, final assembly can commence. The rudder shaft was pushed through its transom mounted bearings. A small piece of brass tube was added to the top to stop the rudder dropping out at the most inconvenient moment(!) and the tiller bent and fixed in place, **Photo 21**. Fishing line was threaded through the internal hull guide linkage tubes, tied to the tiller and attached to the servo output arm with swivels. The rest of the assembly is quite easy, just following the excellent provided photos. If you buy the 3pdr QF gun, this is a mini-kit in its own right and comes with comprehensive assembly instructions. It is important that the cabin and its seat assembly is sealed, as water could otherwise easily get into the hull via this route, so some clear silicone applied with a small syringe, will make it all a bit more watertight.

A hook and spring arrangement was made, as suggested in the instructions, to hold the main superstructure unit in place and **Photo 22** is of the hook fixed underneath the engine room housing unit. **Photo 23** is an interior view of the hull and demonstrates that it really does all fit! The two cell AA battery packs from the standard receiver flat pack are normally each laid either side of the motor, but they are removed for charging in this last picture. The propeller will also need to be slightly modified, with its brass insert carefully twisted out, the plastic boss filed down and the insert pushed back in, before the propeller is secured to its shaft by a nut either side of it as in **Photo 24**.

On the water?

Not unsurprisingly the first test took place in the domestic bath, but you could also do it in the kitchen sink! A tiny amount of ballast was required on the starboard side, but apart from that it was ready to go and in the confined space of the bath, it looked to have good potential at the open-air pond.

Here at that pond off it went, but not very far! Once retrieved, it was evident that the double-sided tape that held the motor in place was not up to the job. So back home, silicone bath sealant came to the rescue to secure it - where would we be without it?



The next opportunity to sail it was at the Fishers Green Sailing Club Model Boating Section April 2014 Open Day, **Photo 25**. This was a thoroughly pleasant day with some slight rippling of the water, so not quite a dead calm. Off went the picket boat and the performance was just about right as the model could move at a reasonable pace and it steered very well, forward and reverse, which is quite unusual for a single screw driven model. Just to show you how small it is, **Photo 26** is of my average-sized hand and the model!

Thinking of 'scale' the ripples would have probably been mild-storm conditions in real life, but the picket boat made good headway and was perfectly dry when brought back to shore. This Chylds Hall Model Shipyard semi-kit attracted a lot of positive attention and comments on the day from the other modellers present.

Conclusion

This was a pleasant and quick model building project and its on the water performance, considering the small size, is impressive. Transport is easy, no hernias with this one(!), and you also have the option of making it as a display model, which would look great on a desk. Okay, in r/c form there is no way you would 'chance' it on anything other than a calm day on open water or a model show's small pond, but it is sufficient of a challenge to be well worth the effort and makes for a nice stocking filler project.

PHOTO 25. The Picket Boat on the water. It is actually a very safe model to operate, in spite of its small size.

PHOTO 26. The relative size of the Picket Boat, with added weed on the propeller!

Additional items that may be required

- 2mm i.d. brass tube.
- Fine fishing line.
- Swivels 'Mustad' Ref. 77900 (Google: 'Mustad swivels').
- Brass wire for the masts.
- Miniature servo.
- Either a normal servo for esc and motor, or a very small commercial esc.
- Two channel r/c.
- Four AA cells (can be rechargeable or dry).
- Paint and glues.

Availability and prices

Steam Picket Boat Basic Semi-kit:	£58.00
Extra parts:	
3pdr QF gun (Ref: V-C036/B)	£8.50
Miniature electric motor (4.8 to 6v) & coupling (Ref: P-SC001)	£3.50
Lime deck planking pack (Ref: P-SC002)	£4.75
Acrylic deck caulking (Ref CHB 001)	£5.00

All available only from: Chylds Hall Model Shipyard, Old Dairy Cottage, Upper Stepford, Dumfries, Scotland, DG2 0JP.
Tel: 01387 820558 or mob: 07596 596332
Email: chyldshallmodelshipyard@gmail.com



River Queen

a steam towing launch



Built by Lobnitz & Co. Ltd, Renfrew, Scotland with the yard No. 478. Launched in 1895, originally named Clive, she disappeared from mercantile navy lists after 1935.

A typical river tug of her time, she had a compound engine and coal fired boiler. Used mainly for light towing, soundings and the transportation of people. She had only limited accommodation aft, and a forward saloon fitted with bench seats, lockers, fold down wash basin and earth closet.



Scale: 1:24
L.O.A. 271/2" (698mm)
Beam: 6" (152mm)

£215
inc UK Carriage

The kit is presented to our usual high standards. Hull, superstructure and forward housing are from GRP. White metal fittings, printed wood, strip wood, rod, wire, card and helmsman figure. Supplied complete with electric motor, propshaft, coupling and propeller, complemented with an illustrated instruction booklet and full size plans. A very complete kit to make the model as illustrated, with the exception of paints and adhesives.



Mount Fleet Models, change of owner ship, please call Adam on: **01977 620386**

www.nylet.co.uk

1932 - 2014 The longest established model sailmakers in the world!

IOM yacht kits "THETIS" – also "SPIRIT 3" available in semi-kit or full kit with rig/s; prices start at under £400.

Finest IOM sails in racing scrim, film, or white Dacron. Any size sails made to your sizes. Replacement kit sails (Voyager 2, Victoria, Seawind, Fairwind etc). "Classic sewn" Dacron sails. Finest NYLET cotton sails & Vintage yacht restoration service.



Large range of deck & mast fittings, wires, running cordage, st. steel & brass wood screws, alum. tubing, tools, IOM rig bags & folding yacht stands, Nylet 'how to' booklets. Latest 36 pg **CATALOGUE** send 10 x 1st cl. stamps (UK). **MINI CAT.** 4 x 1st cl stamps (UK). **See NEW website!**

One of many customer comments:

M-class sails absolutely fantastic, really pleased, more than happy to recommend your workmanship.
(Lee, Berkshire)

NEW PHONE NUMBER

tel/voice: **07474 939 535** (Int +44 7474 939 535)

Fast world-wide mail order
PayPal & VISA accepted

1932
82 years

NYLET

www.nylet.co.uk

NYLET
(MB14)
P.O. Box 5416
Bournemouth
BH6 5XT
U.K.



SCALE HOBBIES

UNIT 20 , SANDY LANE, SKELMERSDALE , WN8 8LQ

Opening times – Fri & Sat

9.30am-5pm.

www.scalehobbies.net

We stock a large range of **Robbe** fittings plus 1000's of others available



We have a large range of hulls that we manufacture in fibre glass , this is a small selection , please ring for more details

We also have a large selection of radios in 2.4ghz , including **Planet T5** and **Pulse etronix** radios in stock



Moorcock £55.00 1/32 scale with plan
German Harbour Tug with plan £45.00
Searcher - Custom and Excise Launch with plan £45.00

Applegarth 36" with plans £58.00
Hazelgarth 40" 1/32 with plans £64.00
Eldergarth /Rowengarth 1/32nd £64.00
TID tug 1/24th with plan £55.00

We get regular shipments Of Graupner fittings
Building materials and tools are also available

MTRONIKS

Speed controllers
Full range of viper speed controllers

Plus

Many others available

NEW MOULDING

S Class Manchester ship canal tug, 1957 Hull, Superstructure and bridge in fibreglass with plan £ 100.00

Mail order is available for all of our products

Please ring for prices
01695 732800



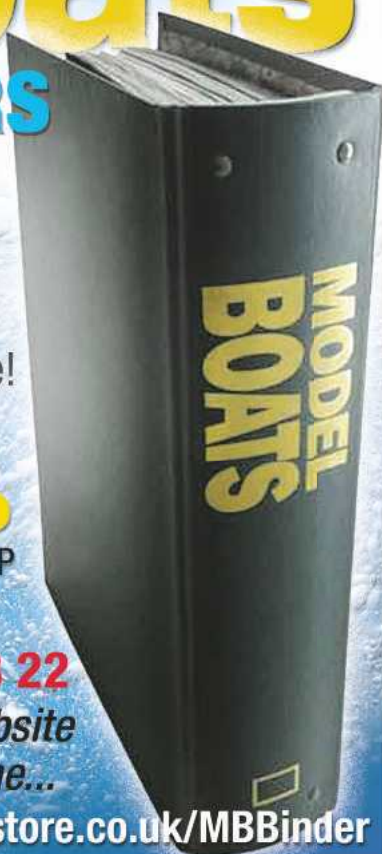
model Boats BINDERS

They each will hold 12 issues and also look fantastic in your book case!

Only £8.50 each plus P&P

Call:
0844 848 88 22
or visit our website and order online...

www.myhobbystore.co.uk/MBBinder



Just ENGINES

We care about your engines

SPECIAL OFFER!

**ASP 46M+
40 power pipe & Manifold
Just £99-00**

**ASP 61M+
60 power pipe & Manifold
Just £110-00**

www.justengines.co.uk
01747 835817





An outstanding 1:48 scale waterline model of HMS Warspite (as built), a Queen Elizabeth class battleship. The model is in the Naval Heritage Centre at Devonport Naval Dockyard. HMS Warspite was laid down just prior to the outbreak of WW1 and was considered to be the best of the best of the battleship type.

Range Finder *Special!*

Warships of the Royal Navy: PartTwo - 1895 to 1905



By **Dave Wooley**

This is the second part of three, the first being published in the 100 page May 2014 issue, which concentrated on RN warships from 1895 to 1905. At the end of the 19th Century, the perceived threat to Great Britain, namely her trade, colonies and dominions overseas, was from France and Russia. Yet within five short years that balance of power had shifted significantly towards the growing threat from Imperial Germany. Even before 1900, Kaiser Wilhelm II of Germany had on the one hand a reverence for the Royal Navy and the British Empire, but on the other an almost pathological

desire to have a fleet that could challenge Britain's economic and naval supremacy.

In the late 1890's there was a realisation that Germany was on the cusp of becoming the dominant economic power on the European continent and in order to bolster his global ambitions the Kaiser, with support of the Reichstag (German Parliament) and the newly appointed (1897) highly influential Secretary of State of the German Ministry of Marine, a certain Alfred Von Tirpitz, concluded the Navy Law of 1898. This set in train a program of expansion for the German Navy (Kaiserliche Marine).

The Dreadnought Battleship

The British response to this was actually quite simple in its core objective, that being to make every battleship in every navy obsolete overnight including all the new battleships being built for the German Navy! This was both radical and highly controversial in 1904 and was inspired by the then newly appointed first Sea Lord, Admiral John Fisher. The result was HMS Dreadnought the first steam turbine powered all big gun battleship, and to have centralised gunfire control, **Photo 1**, and **Photo 2** is of a fine model of this warship to 1:96 scale by Mark Hawkins.

Although similar big-gun warships were being constructed elsewhere, particularly in the United States of America, it was the 20700 ton HMS Dreadnought that was to inspire a naval arms race

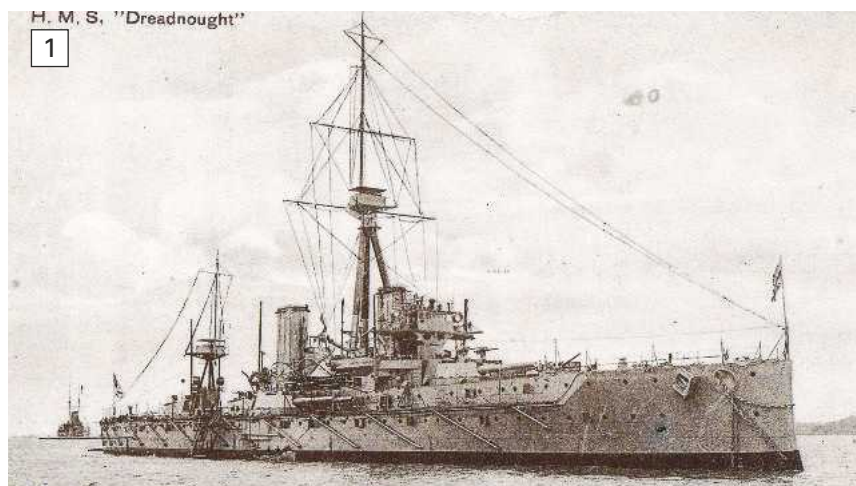


PHOTO 1. HMS Dreadnought. A great technological leap forward, but not without consequences.



the world had never before experienced. Between 1905 and 1914 British shipyards were to build no less than 29 battleships and 10 battlecruisers. This of course does not take into account the new armoured cruisers, cruisers, destroyers and submarines also being constructed. British shipyards were indeed the most productive in the world at this time.

The Bellerophon class were a direct follow-on, but unlike HMS Dreadnought there was a need to have a more substantial secondary armament other than anti-torpedo boat 12pdrs. To address this, all of the class, HM Ships Bellerophon, Temeraire and Superb were fitted initially with sixteen 4 inch guns. Completing just over 13 months later was the Saint Vincent class, slightly larger, but a full 2000 tons bigger displacement. Whilst retaining the main armament of HMS Dreadnought, the secondary battery increased to eighteen 4 inch guns. Other refinements included an aft tripod mast with a gunfire spotting top and on HMS Bellerophon, by moving the forward funnel just aft of the foremast, this reduced the effects of smoke on the main forward spotting top, **Photo 3**.

One of the principle advantages of having a warship with a uniform calibre of main gun was to be able to better predict the fall of shot at great range, thus increasing the accuracy of succeeding salvos.

During the Russo-Japanese war of 1904 to 1905, Admiral Togo annihilated a strong, but inefficient, Russian fleet in the Straits of Tsushima. This fleet action was fought at a relatively close range varying from 7000 yards down to as little as 400 yards, more reminiscent of the close quarter action when ships of the line slogged it out on a parallel course in Napoleonic times. However, the deficiencies of having a mixed calibre armament became apparent in this action as was the lack of central fire control on the battleships, for both the Japanese and Russians.

By January 1911, HMS Neptune entered service, having the same specification as the preceding Saint Vincent class, which included the hull's 10 inch armour belt and 11 inches on the turrets. There was though an innovative departure in gun disposition that retained the wing turrets, but for the first time included superimposed turrets, but only aft. However, although incorporating a flying bridge, it was still extremely unlikely that a 10 gun broadside could be brought to bear without causing damage to the decks and surrounding superstructure, **Photo 4**.

Whilst HMS Dreadnought was indeed a game changer, Britain's main naval rival was now Germany, which continued with what in effect were pre-dreadnoughts. The Westfalen class with twelve 11 inch main guns were limited to a four turret broadside and by implication therefore inferior to their British counterparts. On the other hand, the Germans included a new form of anti-torpedo



protection which was provided by a steel bulkhead inboard of the side coal bunkers and cofferdams the entire length of their magazine and engine spaces, thus making for a more survivable warship.

PHOTO 2. A superb 1:96 scale model of HMS Dreadnought, built by Mark Hawkins.

PHOTO 3. HMS Saint Vincent retained the same main armament as HMS Dreadnought.

PHOTO 4. HMS Neptune was the first battleship to have superimposed main turrets, but only aft on this ship.

Evolving the Dreadnought concept

HMS Agincourt was a dreadnought battleship built in the United Kingdom just after 1910. Originally the vessel was ordered by Brazil with the distinction of mounting 14 heavy guns in seven turrets, more than any other dreadnought battleship so far constructed. Brazil had ordered the ship as the Rio de Janeiro from the British Armstrong Whitworth Shipyard, but improving relations with Argentina, led to the ship's sale whilst still under construction to the Ottoman Empire. The Ottoman Navy renamed her Sultan Osman-1, after the empire's founder. The ship was nearly complete when WWI broke out and the British Admiralty seized her (together with another vessel under construction) for use by the Royal Navy. This act was a significant contribution to the decision by the Ottoman Empire to join the Central Powers (Germany), as the payment for both ships was already complete.

It was still extremely unlikely that a 10 gun broadside could be brought to bear without causing damage to the decks and surrounding superstructure

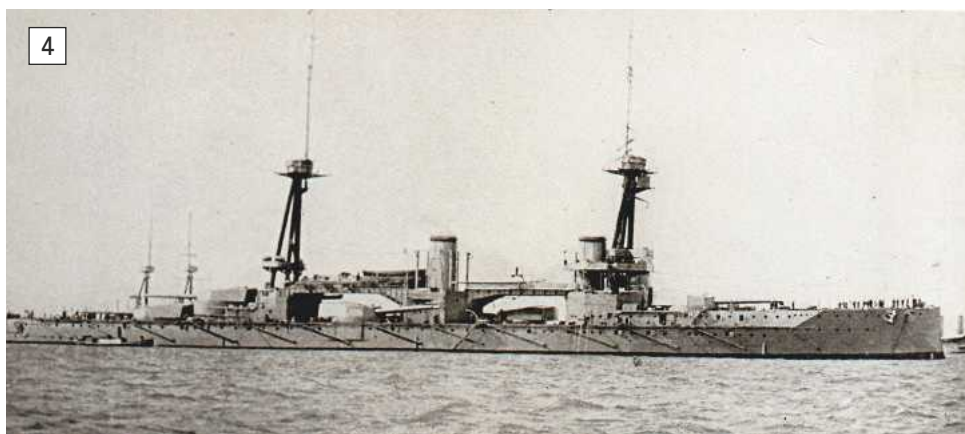




PHOTO 6. The builder's model of HMS Colossus at 1:48 scale. Note the fore funnel is in front of the fighting top, thus filling it with smoke when the ship was at full power.



PHOTO 5. HMS Colossus increased the length of the hull by 20ft.

PHOTO 7. A view aft the builder's model of HMS Colossus.

PHOTO 8. An example of the type of davit used on the dreadnoughts and battlecruisers. Now a century later, these models are often the only three dimensional record we have of 'how it was done'.



Anyway, renamed HMS Agincourt by the Royal Navy, she joined the Grand Fleet in the North Sea. The ship spent the bulk of her time during the war on patrols and was the last of the original Dreadnought concept having fourteen 12 inch guns, all on the centreline super-firing fore and aft and capable of a full seven turret 14 gun broadside. To do this, the hull was 100ft longer than HMS Dreadnought, and 8000 tons heavier. HMS Colossus extended the original Dreadnought concept of having ten 12 inch main armament guns and the 11 inch armour belt, resulting in a displacement close to that of the Saint Vincent's and with the same hull dimensions. HMS

Colossus was laid down at Scott's in July 1909 and completed in July 1911, a month earlier than HMS Hercules of the same class. Highlighting the evolutionary pattern, HMS Colossus was built with a secondary armament of sixteen 4 inch guns, adopting the same disposition of turrets as HMS Neptune. However, the main spotting top on the main tripod mast was aft of the fore funnel - so not a good place to be when the boilers were working at full stretch! **Photo 5** is a striking bow-on picture of HMS Colossus.

The builder's model

The builder's model of HMS Colossus, **Photo 6**, is pictured here in the Clyde Room at the former Transport Museum of Glasgow and is now available to be seen within the Glasgow Museum's Resource Centre, and here we have a stern view, **Photo 7**. The advantage of builders' models, particularly those not too embellished, is that they are often nowadays the only three dimensional record of how things were done in the past and for example, **Photo 8** is of the cutter davits on a battleship model. There are more examples of fine builder's models at resource centres such as the No. 1 Smithery in Chatham Historic Dockyard and at the Dock Museum in Barrow-in-Furness. Just in case you wondered what the full-size HMSA Colossus looked like, here is an exceptional stern-view of her at anchor, **Photo 9**.

By 1905 the naval race was essentially between Imperial Germany and Great Britain and in 1909 the Admiralty became aware that the former was initiating a program of Dreadnought construction. Adopting turbine propulsion and like HMS Dreadnought's

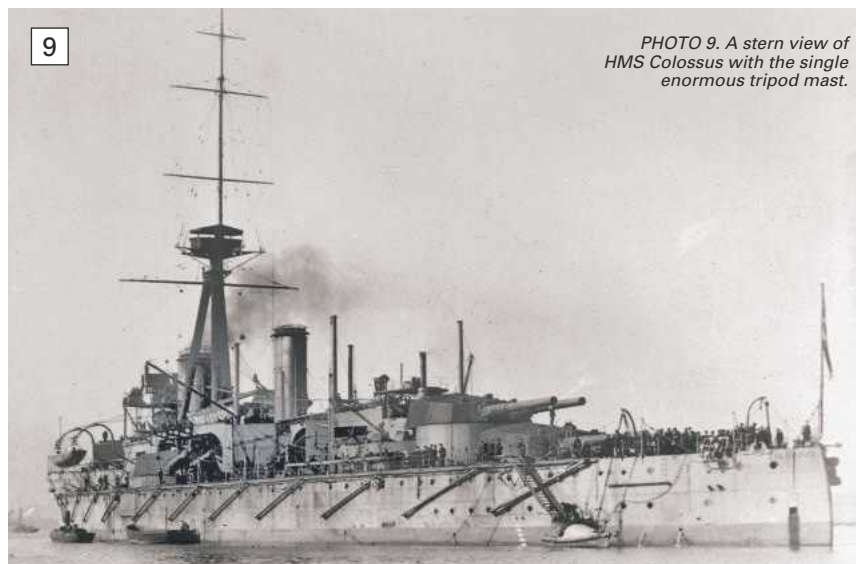


PHOTO 9. A stern view of HMS Colossus with the single enormous tripod mast.

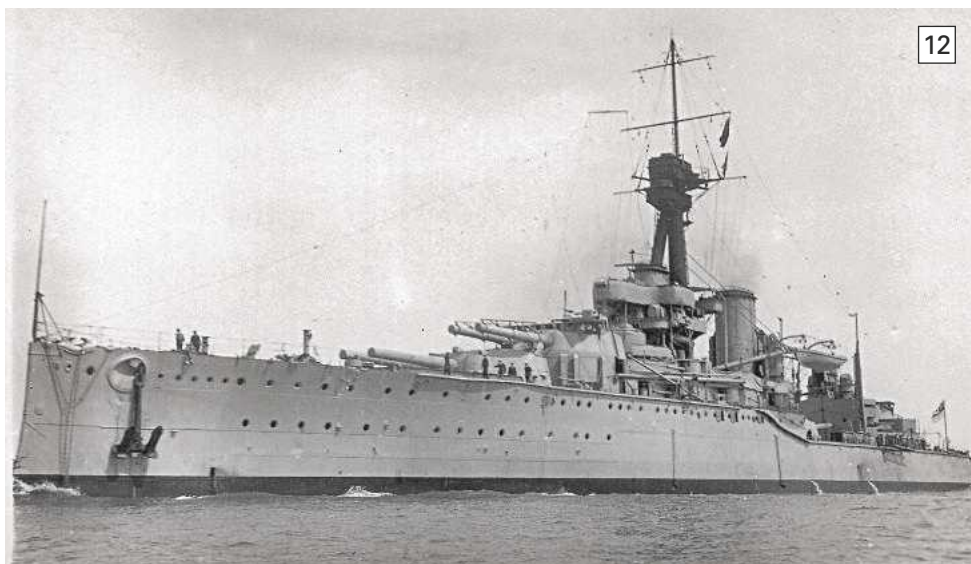
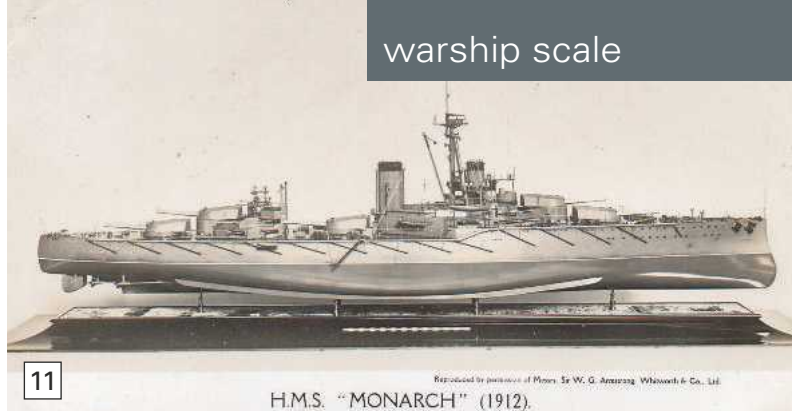
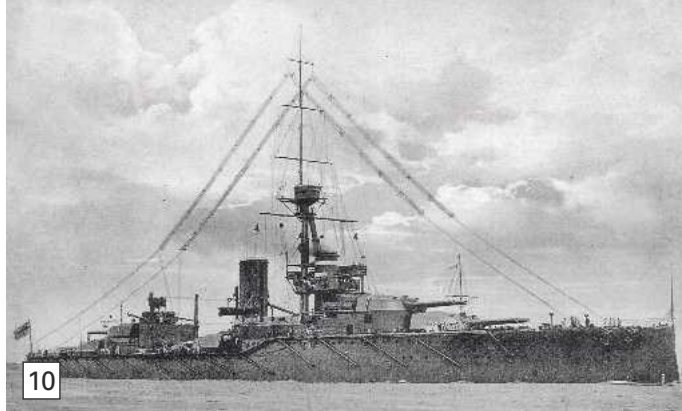


PHOTO 10. The Orion class dreadnought HMS Monarch was a so called super-dreadnought.

PHOTO 11. An early Science Museum postcard depicting the builder's model of HMS Monarch.



ten 12 inch main armament, the Germans were augmenting this with a powerful secondary battery of fourteen 5.9 inch guns. The result was the five ship 24380 ton Kaiser class. More worrying for the Admiralty was the lead Germany had in hull protection and its internal sub-division. Add to that, SMS Kaiser on trials in March 1911 achieved a remarkable 24 knots, two knots faster than any contemporary British Dreadnought battleship at that time and so the Admiralty were worried!

Super Dreadnoughts

The Admiralty ordered HMS Monarch, of the so called first Super Dreadnought class, the Orion's. Displacing 25000 tons and having a greater length to beam ratio than the earlier Colossus class, the evolutionary jump was not just in size, but also firepower. For the first time a new more powerful gun was installed, the 13.5 inch and adopting the super-firing arrangement fore and aft with all five turrets on the centre line. This arrangement on HMS Monarch which was built at Elswick and laid down in April 1910, is shown on a post card of the period, **Photo 10**.

It's worth noting the wireless aerials with their height and length. Remember that wireless equipment was relatively new and had only been adopted by the Royal Navy in 1897. Improvements were being made almost daily, but height and spread of the aerial translated into a greater range which was essential as communication over long distances with the individual ships of the fleet was now almost as important as firepower, protection and speed.

Pictures of models were widely available between the two world wars and much sought after. This superb example, **Photo 11**, is of the 1:48 scale model of HMS Monarch issued by the Science Museum in London, probably c1920's.



HMS Conqueror of the Orion class performed slightly better in achieving over 23 knots, a respectable speed for the dreadnoughts of the day and the 13.5 inch gun could propel a 1400 pound shell 24000 yards (21840m). This shell was 150 pounds heavier than that delivered by a 12 inch gun. This picture, **Photo 12**, shows HMS Conqueror with what looks like a flying-off platform on 'A' turret which may well have been fitted immediately post-WW1, as the ship was scrapped in 1922.

By March 1913 Germany was completing the König, Markgraf, Kronprinz and Grosser Kurfürst, all fitted with ten 12 inch and fourteen 5.9 inch guns, whilst in the same year four super-dreadnoughts of the King George V class entered service, all fitted with 13.5 inch guns.

PHOTO 12. The last of the Orion class to be completed was HMS Conqueror.

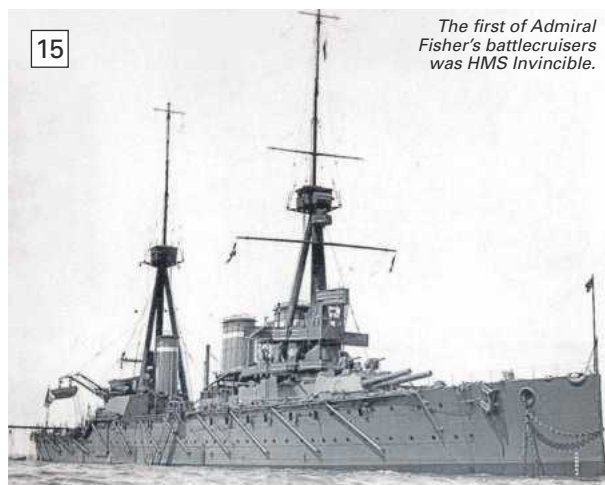
PHOTO 13. HMS Iron Duke was completed in March 1914 and became a flagship.

HMS Iron Duke

In March 1914 the first of the Iron Duke class entered service. Although having a similar profile and centre line turret arrangement as the King George V (KGV) class, the hull was 22 feet longer and displaced 30380 tons, 5000 tons more than the KGV's. The secondary armament was reduced from 16 to 12 guns, but increased from 4 inch to 6 inch in size, and she was the first of the Dreadnoughts to be fitted with a 3 inch anti-aircraft armament, **Photo 13**.



14

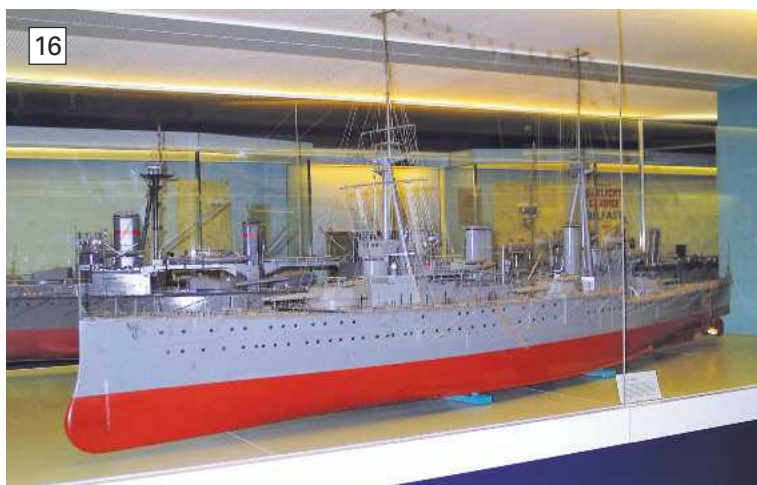


15

The first of Admiral Fisher's battlecruisers was HMS Invincible.

PHOTO 14. Ron Horrabin's magnificent 1:96 scale HMS Iron Duke, pictured here with a late-Victorian TBD.

PHOTO 16. A 1:48 scale builder's model of HMS Indomitable.

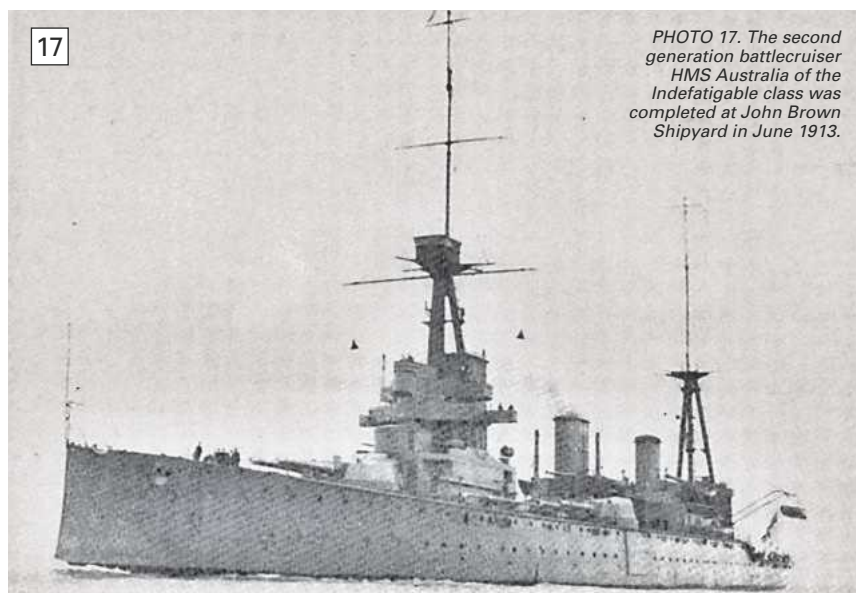


16

One of the best representations of HMS Iron Duke is a 1:96 model built by the late Ron Horrabin, seen here in 2009 together with a TBD, **Photo 14**. As a matter of interest, Ron's HMS Iron Duke was recently presented to Admiral Jellicoe's grandson Nicolas Jellicoe, and now forms part of the Admiral Jellicoe Collection.

The battlecruiser

The concept of the battlecruiser originated with Admiral Fisher just prior to the construction of HMS Dreadnought. In theory, he wanted a fast well-armoured cruiser capable of catching and overwhelming potential enemy armoured cruisers whilst having the firepower to remain out of range, but then inflict devastating damage to the target. The result was the Invincible class, at 567 feet in length longer than a dreadnought, but with a slightly reduced beam of 79 feet. Capable of 26 knots and firepower consisting of eight 12 inch 45 calibre guns, these were the same type of gun carried by the first generation dreadnoughts, together with a sixteen 4 inch gun secondary battery. The original concept was sound, but to achieve the performance a trade-off was necessary and that translated into a substantial reduction in armour compared to HMS Dreadnought, namely a 50% reduction in deck thickness amidships and a 45% reduction in side armour. This was a philosophy vindicated in late-1914 in the Falklands Battle, but a somewhat different view prevailed by June 1916! The first of the Invincible class was HMS Inflexible, laid down at Clydebank in February 1906 followed by HMS Indomitable at Fairfield in March 1906 and HMS Invincible, **Photo 15**, at Elswick's in April of the same year. Here is the superb builder's model of HMS Indomitable, **Photo 16**, displayed in the former Transport Museum Glasgow.



17

PHOTO 17. The second generation battlecruiser HMS Australia of the Indefatigable class was completed at John Brown Shipyard in June 1913.



PHOTO 18. HMS Princess Royal was larger, faster and more powerful with eight 13.5 inch guns.

The first generation of battlecruiser continued with the Indefatigable class, increasing the hull size to 590 feet by 80 feet beam, yet having a similar displacement and developing 3000shp more than the Invincible class to achieve 27 knots. Although retaining eight 12 inch guns as a main armament, there was a change to 50 calibre and HMAS Australia was one such ship, **Photo 17**.

Second generation battlecruisers

These Lion class were 29000 tons displacement, 700 feet long and 89 feet beam, with 80000shp and capable of 32 knots. Often referred to as 'Splendid Cats' and fitted with an eight 13.5 inch main armament, these were formidable warships, but like the first generation had a marked reduction in armour protection. The German equivalent, SMS Derfflinger, adopted the 12 inch 50 calibre gun, but retained heavy armour with a 12 inch belt amidships and 4 inches of deck armour. HMS Princess Royal, **Photo 18**, of the Lion class had a 9 inch main belt, but just 2.5 inch upper deck armour plating.

Twilight of the armoured cruisers

Eleven months prior to the laying down of the keel for HMS Dreadnought in December 1905, the last generation of armoured cruisers, the Minotaur class, were commenced with the class nameship at Devonport Dockyard on 2nd January 1905 and HMS Shannon, **Photo 19**, at Chatham Dockyard on the same day. The third of the class, HMS Defence, was laid down at Pembroke Dockyard on the 22nd February 1905. These ships could be described as obsolete before being laid down, being powered by triple expansion engines in a hull not much smaller than that of HMS Dreadnought. Armament was four of the well tried 9.2 inch 50 calibre guns together with ten 7.5 inch guns. The 75 feet beam allowed for all of the 7.5 inch guns to be mounted on the main deck thus, avoiding the use of casemates, but naval development had moved on.

The Rurik (Рюрик) armoured cruiser

I thought it interesting to include an armoured cruiser built for the Imperial Russian Navy. Vickers of Barrow in Furness built Rurik (2), **Photo 20**, completing in September 1908, designed by their naval architect, Owens Thurston. For its time, the ship was far ahead in design terms to the Invincible class and was the second to be named Rurik, hence is often referred to as Rurik (2). For example, the magazines had a water spraying and flooding system and cross flooding ducts in the double bottom, designed to transfer water automatically from a damaged compartment to the opposite side, thus mitigating a potential list.

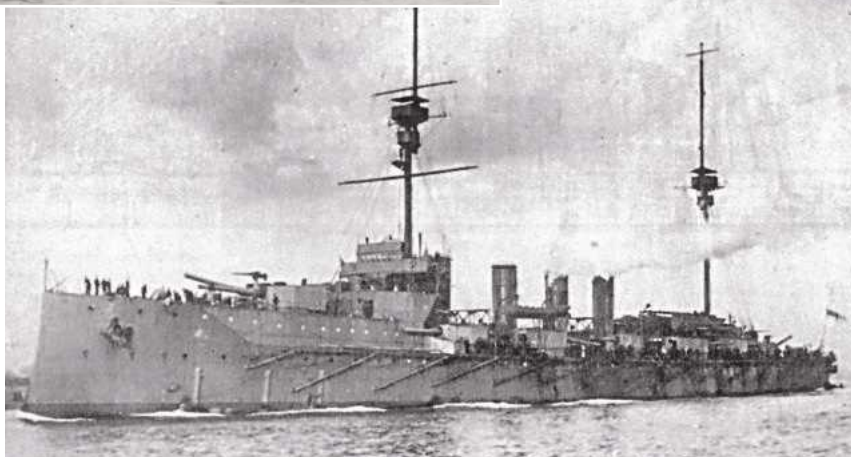
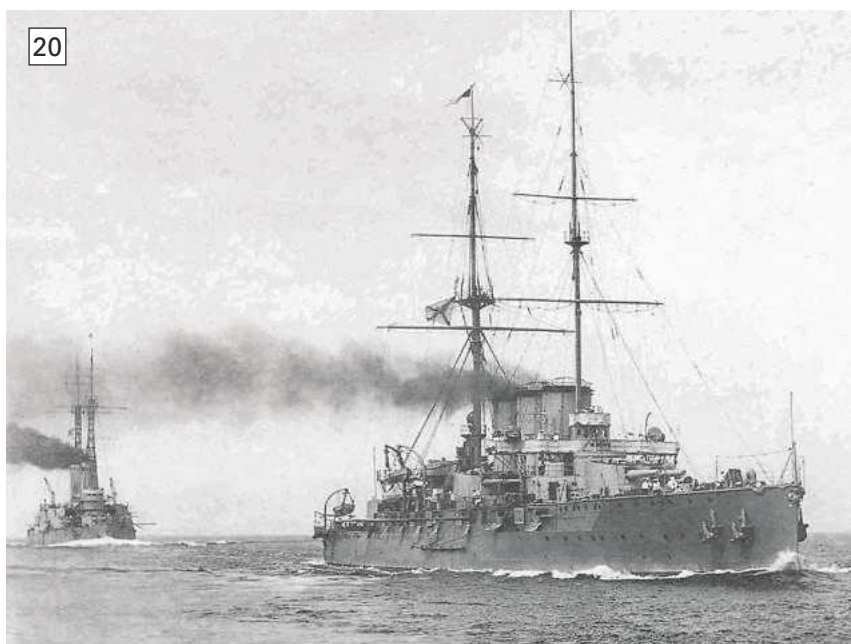
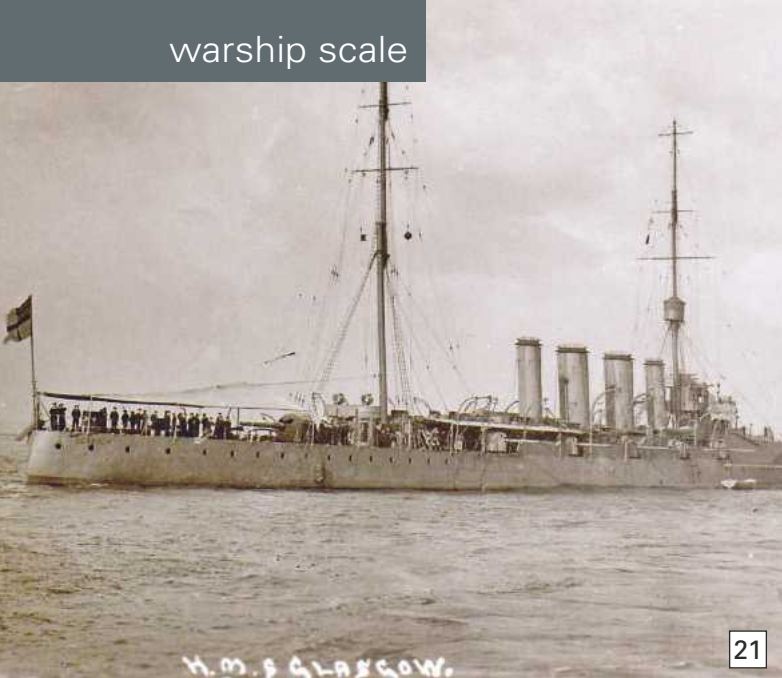


PHOTO 19. HMS Shannon was the last of the armoured cruiser type and had triple expansion engines,

PHOTO 20. Vickers of Barrow in Furness designed and built Rurik (2) for the Russians, and this was considered to be the finest armoured cruiser ever built.

Armour was of Krupp steel, but the protected deck had two levels, the main deck and beneath that, a second armoured deck of high tensile steel rather than of mild steel. There was extensive subdivision within the hull and the 10 inch 50 calibre guns, although firing a lighter round than the 12 inch fitted to HMS Invincible, could achieve a higher rate of fire to the same or a better range owing to 35 degree elevation. Also effective was the eight 8 inch secondary armament, also of 50 calibre. Although Rurik 2 was fitted with four cylinder quadruple expansion engines and 28 Belleville boilers, the 24 knots achieved was comparable with the performance of contemporary British armoured cruisers. Had the original turbine design been accepted, the ship may well have been capable of 28 knots or more. I think you will agree that this warship looks very impressive in this last photograph.





21

PHOTO 21. Maid of all work! The Town class light cruiser HMS Glasgow.

PHOTO 22. A builder's model of HMS Gloucester, a Town class light cruiser of the first 'Bristol' sub-batch.

PHOTO 23. The Tribal (F) class destroyer HMS Amazon, the first class of destroyer to be fitted with steam turbine propulsion.

PHOTO 24. A1 was of the first regular class of submarine in 1903, being larger and faster than the preceding five Holland boats.

These warships were better armed and had a better performance than their German equivalents such as the Dresden and Kolberg classes.

Town class light cruisers

In Part One, published in the May 2014 issue of MB, I discussed the 'Scout's' as a distinctive type of cruiser, but the term 'light cruiser' was now beginning to emerge as a descriptive term. The first of the 'Towns' to be laid down in September of 1909 was HMS Glasgow, displacing 4800 tons in a hull 453 feet long and 47 feet beam. The concept was to have a cruiser that that could be a 'maid of all work' combining long range and endurance for trade route protection, plus the ability to work with the fleet as a Scout. The four turbine driven screws produced a top speed of 26 knots and the armament was two 6 inch fore and aft, and ten 4 inch mounted in shields amidships, all over a 2 inch armoured deck, **Photo 21**.

These warships were better armed and had a better performance than their German equivalents such as the Dresden and Kolberg classes. Between September 1909 and August 1914, there were 18 of the class, in four groups, completed or near completion. HM Ships Birkenhead and Chester, of the fifth group were completed in 1915 and 1916 respectively. The builder's model of HMS Gloucester, **Photo 22**, is a fine example of the first batch of the class.

Ocean going destroyers

As discussed in Part One, the destroyer started its evolutionary curve with the Torpedo Boat Destroyer and was divided between the coastal type designed to counter potential enemy torpedo boats and the now emerging ocean going destroyer. The latter were larger, better armed, and designed to accompany the fleet in all weathers anywhere on the globe.



22

The ocean going destroyers called for by Fisher reached the Royal Navy in 1907 and were known officially as 'Oceans' but they became more widely known as the F (or Tribal) class. These were the first class of destroyer fitted with turbine machinery with HMS Tarter making a remarkable 37.4 knots under trial conditions.

At 270 feet in length and a beam of 26 feet, internal space must have been cramped, but these 890 ton destroyers mounted five 12pdrs and two 18 inch torpedo tubes. The later Batch 2's of 1908 and 1909 were increased in size to 280 feet by 27 feet beam with a corresponding increase in displacement to 1090 tons and principally two 4 inch guns. The G, H, I, K and L classes all followed the pattern set by the 1907 Tribal class, **Photo 23** being of HMS Amazon.

Experiments in design resulted in the 353 feet 2207 ton HMS Swift, a flotilla Leader, actually completed shortly before HMS Amazon. With four 4 inch and a single 2pdr, with steam turbines to four propellers, HMS Swift recorded a speed of over 40 knots earning her the title of 'The Fastest Warship in the Fleet'.

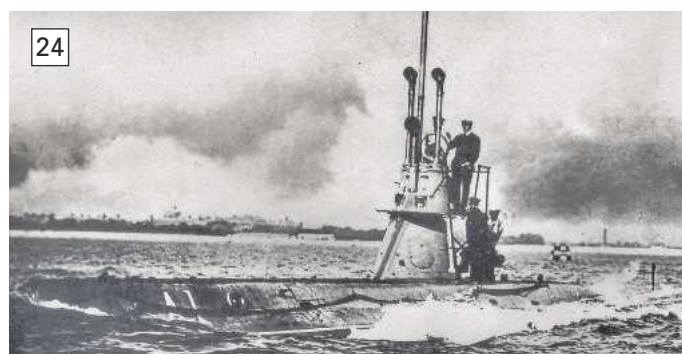
Submarine development up to 1914

Like HMS Dreadnought, the entry of the submarine into the Royal Navy was controversial, but Admiral Fisher endorsed its development and was a believer of its potential in naval warfare. The first submarine was ordered by the Admiralty in 1900 and by 1903 the RN had acquired five Holland class boats, designed by the Irish-American, A. P. Holland.

A quote from Submarine Boats by Richard Compton Hall was that the authorities were not 100% happy with this warfare concept



23



24

and therefore: 'Submarines are dangerous and discreditable, so they were banished to the upper reaches of Portsmouth Harbour along with the powder barges, prison hulks and quarantine vessels'! This perhaps sums up the general attitude of some of the officers within the Royal Navy of the time to these 100 ton craft with their 260hp petrol engines and a single bow torpedo tube.

A class

Between 1903 and 1905, thirteen of the larger 100 feet long 180 ton A class boats were built, each with a single propeller and a 12 cylinder petrol engine of 480hp and therefore capable of just over 11 knots on the surface. These were the first to have a recognisable conning tower and two 18 inch torpedo tubes. These craft were submersibles rather than the submarines of today, in that they were intended to submerge for attacking purposes rather than operate underwater for long periods at a time.

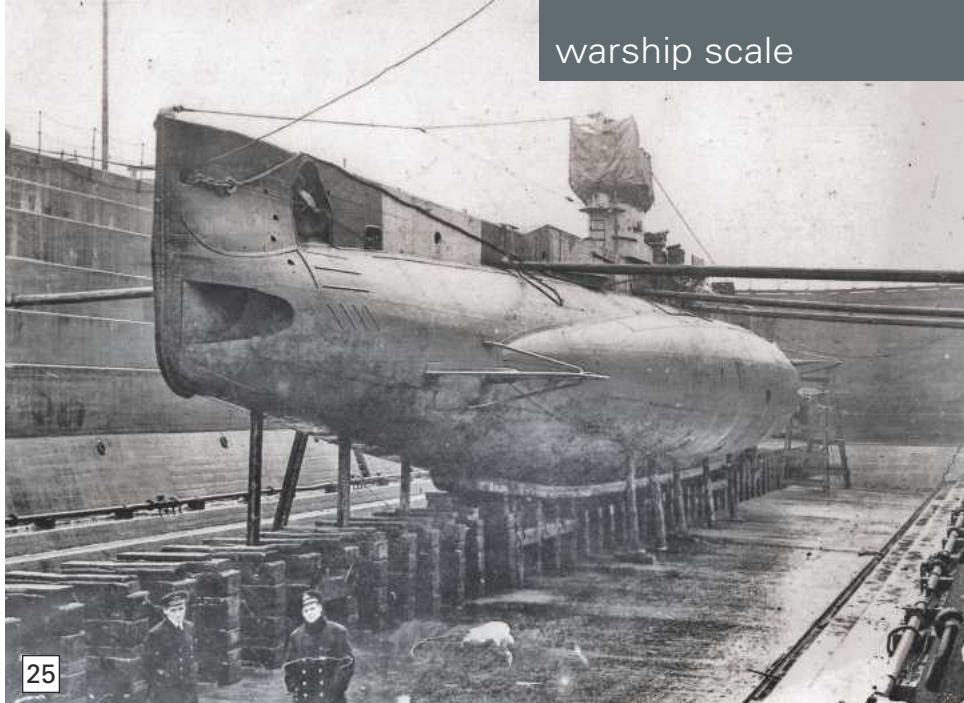
The first of the A class (A1) was actually laid down as Holland No. 6, completing in 1903, but was lost in March 1904 as a result of a collision in the Solent. Recovered a month later, A1 sank once again whilst undergoing experimental unmanned trials, **Photo 24**.

E class

Considering the ambivalence at the highest levels of the Admiralty towards the submarine, there is no doubt that development and construction did increase apace from the 13 boat A class to the 11 boats of the B class, 38 boats of the C class and eight D class.

This culminated in 1913 with the completion of the first batch of the E class, E1 to E8 and in all 57 of these were built. An experimental diesel engine was fitted to A13 in 1905, but it was not until the D class that the diesel engine became the surface running power plant of choice. Also, D4 was the first RN submarine to have a deck mounted gun.

The E class design introduced transverse bulkheads and the across beam torpedo tube. With twin propellers, these 800 ton 181 feet long submarines could surface operate at 15 knots and



were fitted with five 18 inch torpedo tubes. **Photo 25** is an example of the E class, but its location and period is unknown.

PHOTO 25. The E-class submarine of 1913 to 1914 had a diesel engine for surface running as well as electric underwater propulsion and were fitted with five 18 inch torpedo tubes.

Conclusion

On the 31st July 1914 the British Grand Fleet depicted in this classic picture, **Photo 26**, entered Scapa Flow to take up its war station. On 4th August 1914, John Jellicoe was made C in C of the Fleet and on the same day communication was received that hostilities would commence against Germany at midnight, and so started World War One.

The pace of naval development at every level up to 1914 was incredible, but from then onwards the pre-existing belief in the superiority of the big gun was also to change with the emergence of a new form of capital ship, namely the aircraft carrier and the use of submarines. The third part of this Range Finder Special will be published in these pages in due course.

PHOTO 26. Ships of the Grand Fleet preparing for war.

'Submarines are dangerous and discreditable, so they were banished to the upper reaches of Portsmouth Harbour along with the powder barges, prison hulks and quarantine vessels'

Useful address

Glasgow Museums Resource Centre (GMRC)
200 Woodhead Road, South Nitshill Industrial Estate, Glasgow, G53 7NN.
Tel: 01412 769300
Website: museums@glasgowlife.org.uk



Claim your **FREE** Issue of RCM&E Magazine today!*

SPECIAL OFFER FOR MODEL BOATS READERS!

Offer ends 12th September 2014

Radio Control Models and Electronics (RCM&E) first appeared in May 1960 and has grown to become the biggest and best-selling monthly model flying magazine in the UK. RCM&E has brought benchmark levels of writing and photography to the hobby and each issue has extensive reviews, informative features, columns from a number of well-known contributors, plus a high-quality free plan and build article!

There are no obligations or catches.

Simply call: **0845 286 4635****

quoting **FREERCME0714** to
claim your free copy now*

Terms & Conditions: Offer ends 12th September 2014

*This offer is available for UK delivery addresses only and is subject to availability. When you respond you will be offered the chance to take out a trial subscription – there is no obligation to do so. Your free issue will be the next available issue posted to you within 6 weeks of your phone call. This offer is not available to existing RCM&E subscribers and may not be used in conjunction with any other offer. 1 free issue only per household/caller.

**Our phone lines are open Monday to Thursday 8am to 9pm and Friday to Sunday 8am to 8pm. Calls cost 2p per minute plus a 6p set up fee on a BT Landline. Other suppliers may vary. Calls from mobiles will be considerably more.



Flotsam & Jetsam *Special!*

Australia's First Submarines

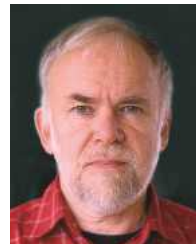
John Parker delves into the archives

One hundred years ago, in February 1914, the Royal Australian Navy (RAN) commissioned its first two submarines. They had been built by Vickers at Barrow-in-Furness in the UK as part of the first group of E Class submarines, and were given the designations AE1 and AE2 to distinguish them from their Royal Navy (RN) counterparts. Both were destined to have short lives, though one achieved a measure of fame and the other continues to make headlines regarding its possible wreck site.

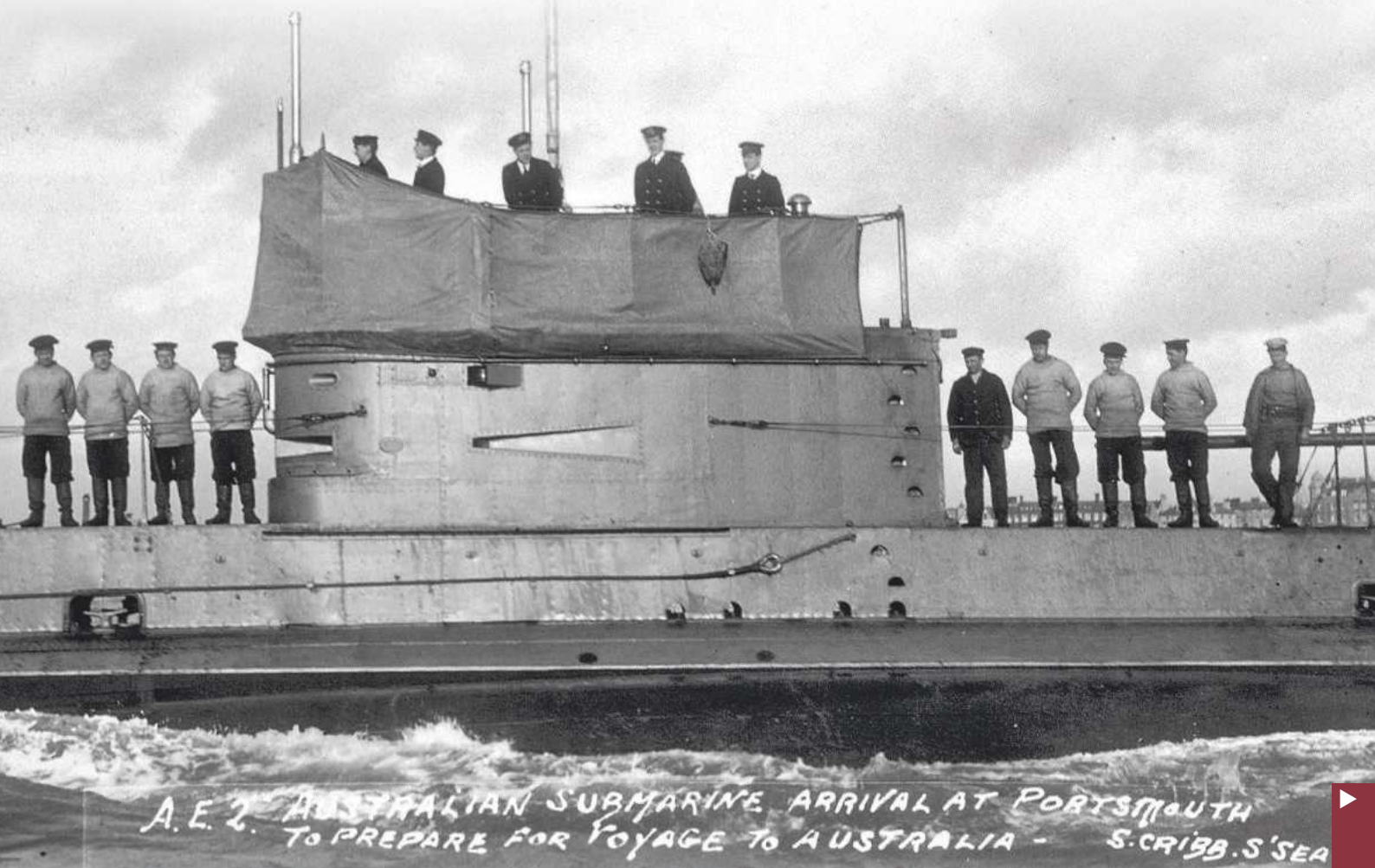
The E Class was a logical progressive development of the preceding classes that had seen the submarine evolve from a mere 'harbour groper' to a practical weapon of war. Moving away from the Holland-inspired B and C Classes, the much enlarged D Class saw the introduction of diesel engines in a twin shaft arrangement, external ballast tanks and an enlarged battery capacity that made it possible for the first time to patrol enemy shores for several days, remaining

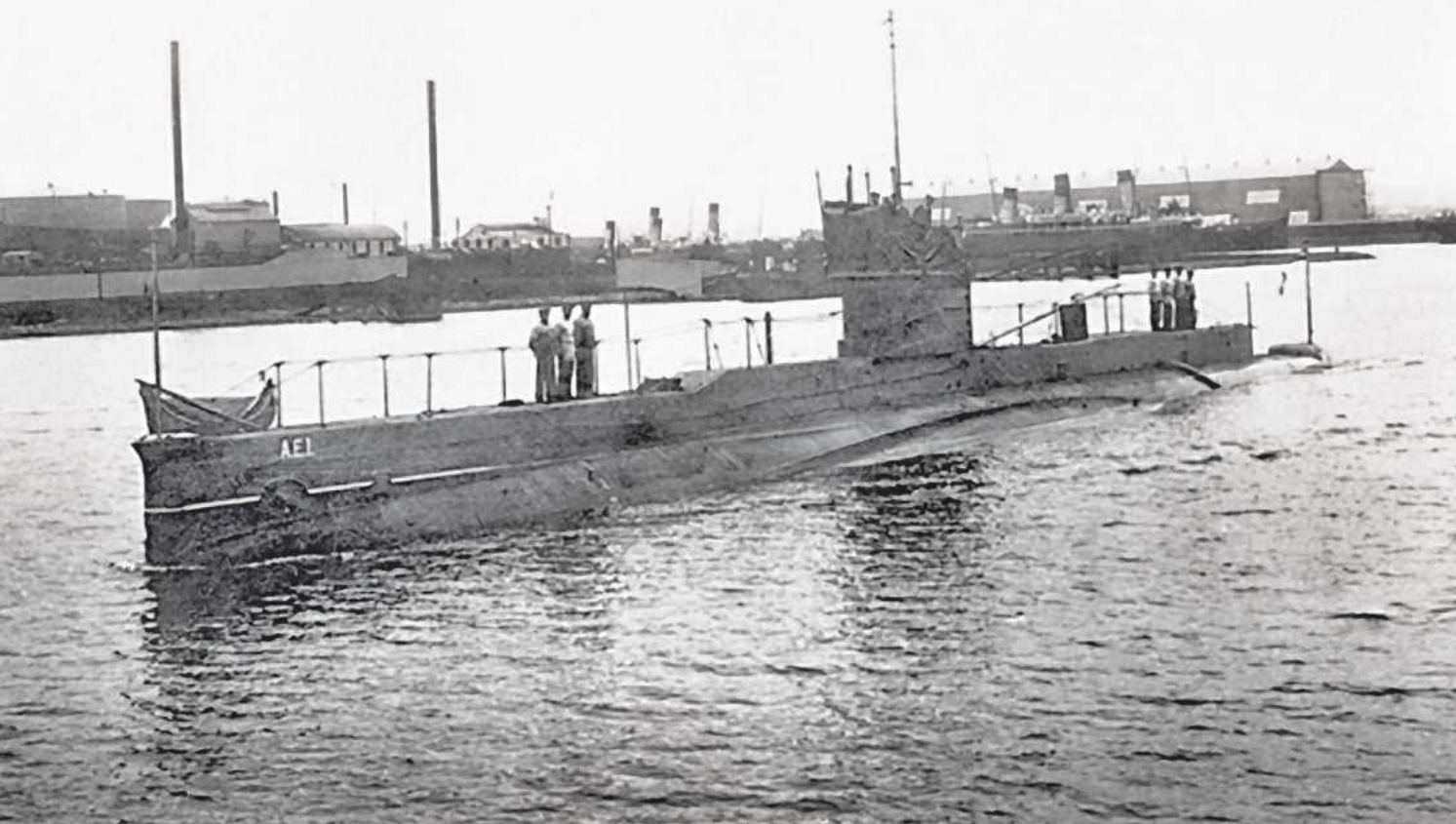
submerged during the daylight hours. The D Class were only built in small numbers as they were soon superseded by the further enlarged but generally similar E Class of some 660 tons surface displacement. These were amongst the most effective submarines of their time, and were built in large numbers for the RN.

The Australian E Class boats differed only in minor ways from the RN boats. Their displacement was a few tons less at 652 tons surfaced, 795 tons submerged. Propulsion was by two Vickers-Admiralty diesel engines totalling 1600 brake horsepower for a speed of 15.25 knots surfaced, or two electric motors providing a total of 840 brake horsepower for a speed of 9.75 knots submerged. Their range was some 3225 nautical miles at 10 knots surfaced, but only 65 nautical miles at 5 knots submerged. A total of eight torpedoes were carried for the four torpedo tubes, situated one in the bow (later E Class boats had two bow tubes), one in the stern, and the unusual arrangement of



This photo is inscribed "AE2 Australian submarine arrival at Portsmouth to prepare for voyage to Australia" (Australian National Maritime Museum).





ABOVE: HMAS AE1 (Australian War Memorial A02551).

The normal safe diving depth was 100 feet, and it's sobering to reflect that this was only a little over half their overall length of 176 feet (181 feet for later boats).

two amidships beam tubes, one firing to each side. No deck gun was fitted to the Australian AE boats, but some of the E Class as a whole had them retro-fitted in 1915. The normal safe diving depth was 100 feet, and it's sobering to reflect that this was only a little over half their overall length of 176 feet (181 feet for later boats). Normal crew complement was 34 men for the RAN boats, three more than the RN boats carried.

Just the delivery of these two small submarines, across half the world's circumference, was a major achievement, 9000 of the 13000 miles being carried out under their own power, with the rest under tow. It was proud moment when they entered Sydney Harbour and tied up at Cockatoo Island on 14th May 1914 for repairs and a refit during the brief respite that preceded the outbreak of World War One on the 28th July of that year.



RIGHT: Replica of AE2 conning tower at the Western Australia Maritime Museum, port side, with indication of current condition (Saberwyn, via Wikimedia Commons).

The AE1, by this time known as HMAS AE1 and commanded by Lieutenant Commander Thomas Besant RN, was ordered to New Guinea as part of the Australian Naval and Military Expeditionary Force, tasked with capturing the German territories in the region. On 14th September, she failed to return from a patrol in the vicinity of Rabaul. Careful searches found no trace of the submarine or its crew, and it was presumed she sank after striking an uncharted rock or reef. This was the RAN's first major loss, and was felt keenly. The wreckage of the AE1 has been reported found a number of times in recent years, but never formally identified. The search continues, with another survey due to be underway at about the time this article is published.

Having accompanied AE1 to the Far East, AE2 returned to Sydney in November 1914 for maintenance and to be prepared for a return to European waters, it not being cost effective to maintain a single vessel of its type so far from its manufacturer's support base. Towed by a transport that was part of a convoy carrying ANZAC soldiers to the ill-fated Gallipoli offensive, the AE2, commanded by Lieutenant H. G. Stoker RN, joined the British Second Submarine Flotilla at Tenedos in the Aegean Sea in February 1915. The flotilla was tasked with keeping enemy Turkish shipping bottled up in the Sea of Marmara, itself joined to the Aegean Sea by the narrow 35 mile long Dardanelles Strait.

On two previous occasions submarines had attempted to force a passage through the Dardanelles and failed; Stoker had his own ideas on how it could be achieved and was ordered to try again. Defeated by mechanical failures on his first attempt, he re-entered the straits on 25th April, having to cope with treacherous currents, submerged passage through a Turkish minefield and the guns of shore batteries that fired at him whenever he surfaced to check his position. At Chanak, the narrowest part of the strait, he



torpedoed and sank a Turkish vessel, variously described as a mine-laying cruiser or large gunboat. Running aground in the aftermath, he surfaced right beneath the guns of a Turkish shore battery, saved only by the fact that he was so close that they were unable to depress sufficiently to fire at him!

Some frantic manoeuvring freed the AE2 once more and Stoker was able to continue toward his objective, all the while having to evade the attentions of enemy craft that were now on full alert and which caused him to remain submerged for 16 hours at one point. Finally, on 26th April, the AE2 entered the Sea of Marmara, the first submarine to have forced a passage through the Dardanelles. Stoker signalled his success, which led in turn to the RN submarine E14 making a successful passage. The two submarines were due to rendezvous on 29th April, AE2's orders being to create havoc in the meantime, but in the course of so doing, probably due to damage sustained or mechanical failure, she broke surface not far from a Turkish gunboat on April 30th, leading to her pressure hull being holed by gunfire and Stoker being forced to scuttle his command. All the crew survived to be taken prisoner, but four died in captivity.

The well-preserved wreck of the AE2 was pinpointed by Turkish divers in 1998, lying level with silt up to its waterline. A camera peering through the partly open conning tower hatch showed that the silt had not filled the hull, raising hopes

that the vessel could be recovered and put on display as the only surviving example of a World War One submarine. Alas the cost, likely to exceed \$100 million when the need for a special display venue is taken into account, was deemed too great and instead the recommendation made that HMAS AE2 remain a protected wreck, 73 metres beneath the waves in the Sea of Marmara.

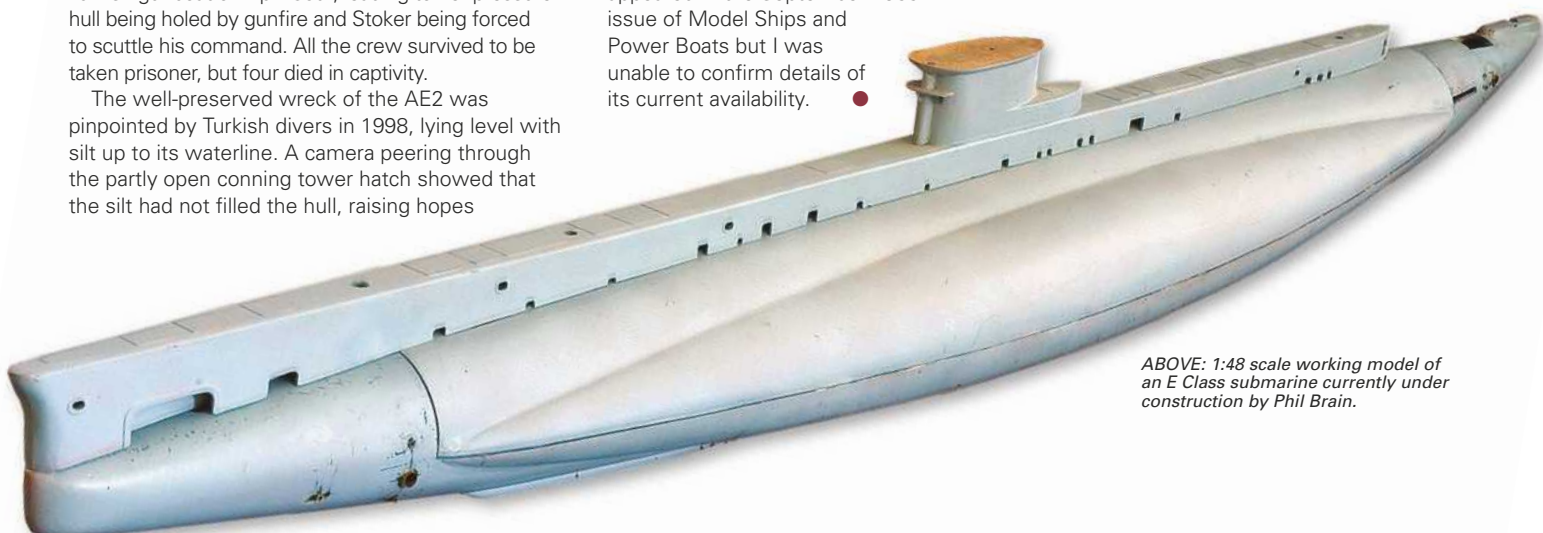
Modelling the E Class

It is rare to see a working radio controlled model of a World War One submarine, though I know of one E Class under construction. No kits or hulls are available, so an accomplished scratch-builder is required, with little to assist them other than the drawing by Norman Ough of the E29 and an ambition to see the bulging saddle tanks and quaint open bridge details of this early submarine captured in a working model. Ough's drawing appeared in the September 1955 issue of Model Ships and Power Boats but I was unable to confirm details of its current availability. ●

ABOVE: Starboard side of AE2 conning tower replica, in-service condition (Sabervyn, via Wikimedia Commons).

ABOVE LEFT: E Class submarine interior (Official photograph, Imperial War Museum No. 18650).

It is rare to see a working radio controlled model of a World War One submarine, though I know of one E Class under construction.



ABOVE: 1:48 scale working model of an E Class submarine currently under construction by Phil Brain.



Eze-Kote for covering hull.



I am no beginner to the steady growth of adhesives and allied products and was therefore pleased to be given this opportunity to try out and test some of the latest products from a company that has been at the forefront of adhesives and model product technology for 40 years, namely Deluxe Materials.



Ron Rees
looks at some of
their products



We have certainly come a long way since the days of Casein and animal 'hide' glues, although they still have a place today for craftsman who make and repair antique furniture and musical instruments. The incredible range of adhesives and finishing products we now have has been driven by the discovery, development and diversity of new and more technologically based materials and the problems of using and repairing them. For the beginner to our hobby it must seem a bewildering challenge to choose the right product for the right job.

Use and abuse?

There are times when we need to glue two different materials together and they just will not stick, or they appear sound but then break in use. There are also times when the material around the joint sands well, but the glue stays put and leaves a rigid line. The fact is we often try to use an adhesive to do a job for which it was not designed, but we try it nonetheless because it's a Sunday and it's the only stuff we have! We tend to ask too much of our adhesives and in the main, this boils down to 'not enough information or knowledge of the product'. On the back page of the Deluxe Materials 2014 Product Catalogue is listed nearly every situation we could ever come across and which of their products would solve the problem, so you can't get much better than that.

Another thing we all tend to do, is to not read the instructions on the bottle! Anyway, perhaps unusually, I decided to test the products after reading the labels and found that they all do what they say, so do 'read the instructions', please! Putting together a little foam replica of an early Keil Kraft EeZeBilt Triton cabin cruiser was an ideal platform to check-out these glues, so here we go.

Cyano Acrylates (CA. Cyano, Cya., Superglue, Crazy Glue, etc.)

Probably the most used modelling product nowadays. They come in small bottles because they are designed to stick with tiny amounts. Nearly all of us apply too much of these to the joint and this will sometimes cause a weak or slow curing bond. The Deluxe ROKET range includes a fast thin penetrating HOT CA which sets in 1 to 5 seconds, a medium viscosity 5 to 10 second RAPID CA and my favourite, the MAX, a thick gap-filler which really does work in 20 seconds. What I particularly liked was the almost Gel consistency which allowed it to stay put as you turned the glued object over to position it. Added to the range





LEFT: Super Phatic for gluing veneer to Depron.

there is an ODOURLESS CA which I have found is also safe to use on foams. There are more and more of us out there who are experiencing an allergic reaction to some modern products and the ODOURLESS CA solves this problem. All the ROKET range can be made to go off almost instantly with the ROKET BLASTER accelerator from a handy spray bottle. This can also help by pre-treating some difficult materials before applying the glue for a fast and permanent bond. For those really tough joints, engine mounts and so on you can also add some ROKET POWDER to the joint which will produce an incredibly strong fillet and not come apart without a pickaxe!

One big problem in using these 'superglues' is their tendency to clog up the applicator nozzles and also drying around the necks and caps of the bottles making them either hard to open, or impossible to apply. Deluxe Materials have solved these problems by making available replacement bottle tops, caps and applicators as well as very fine capillary and delivery tips available as extra replacements, allowing you get the very last drop out of a bottle.

One or other of their CA adhesives will bond balsa, hard and softwood, most metals, ABS, styrene, PVC, plasticard, acrylic (odourless), butyrate (odourless), polycarbonate and Lexan (odourless), Epoxy GRP, Polyester GRP, painted wood, glass and ceramics, carbon fibre, blue and white foams (odourless) expanded polyolefin foams and foam EPP. You can see why we use these glues!

Wood glue for general building

Nearly all the Deluxe range will glue wood, except those designed specifically for plastics, but at the top of the list in my opinion is their ALIPHATIC RESIN GLUE, which some people would call 'Yellow Glue'. This product has been aimed directly at bonding woods, but can be used on paper and card and is particularly good for laminating wood pieces together. There are a lot of builders who stick to the older PVA or white wood glue, which is a very good product, but Deluxe Aliphatic Resin Glue is another generation on from standard PVA. A little known fact is that standard PVA wood adhesives resist other adhesives, so at a molecular level while your model is glued with PVA and is strong, any GRP resin, epoxies, CA glues and even some paint finishes applied after the PVA is dry, do not actually adhere to it as well as people think. It is also susceptible to water and moisture over



ABOVE: Eze-Kote for covering hull in stocking. BELOW: The ROKET Superglue range.





ABOVE LEFT: Rocket powder for 'bulking superglue joints'.

ABOVE: Sand 'n' Seal.

BELOW LEFT: 1 Hour Speed Epoxy.

BELOW RIGHT: Glue 'n' Glaze & Brush Magic.

time and cannot be rubbed down easily. If PVA is dripped onto an unpainted or unstained surface, even if wiped away it will resist the later application of some finishes, particularly coloured wood stains. ALIPHATIC RESIN GLUE has a very good 'wicking effect' or depth penetration, and is waterproof once dry. It is much easier to sand and will accept other adhesives and paint finishes over the top. Although both PVA and Aliphatic have almost identical dried bonding strength, the later has a much faster initial grab time than conventional PVA and it is now the only adhesive I use on my all wooden models.

Epoxy resin glues

Deluxe Materials offer a range of good, strong and easy to use two part epoxy resin glues, SPEED EPOXY and SPEED EPOXY II, with a choice of working and hardening times which include four minutes, 20 minutes and one hour. Different sizes and applicators are available and the one hour variety is good for gluing in rudder posts and propshafts as it gives plenty of time for alignment, dries glass clear, sands much easier than others and takes paint well, plus no joints have failed on my models, thus far!





Plastic Kit Glue & Plastic Magic.

Glues for plastics

Deluxe Materials also have a range of glues for plastics including PLASTIC MAGIC, a brush applied solvent type adhesive and PLASTIC KIT GLUE, which is so much better than the old tube glues having a nice applicator bottle which will deliver tiny amounts if needed. These two products were tested on a plasticard (styrene) model boat superstructure, making a neat quick job of it. The best specialist plastic glue though, was when bonding an aluminium engine mount into a Tamiya plastic kit being converted to r/c. FUSION is a two part glue for all those hard to glue plastics, being a liquid and a powder which mixes into a thick paste. Everything you need is in the pack, and it certainly sticks! Another area which causes problems where FUSION could be the answer, is when gluing plastics or metal inside an ABS, Styrene, Resin or GRP hull. Many just end up using car body filler, but FUSION came to the rescue, and very well too!

Building in foam

Regular readers, will be aware of Depron foam and its use in hulls. A recent project was glued together using R/C Modellers Glue, something we also know as 'Canopy Glue', because it dries clear.

The Deluxe Materials PVA/Latex product came out tops when used just for edge gluing the thin Depron foam sheet. There is a little hull made out of Depron in the pictures, (an old Keil Kraft Triton plan (1970's vintage) brought up to date, all glued with R/C Modellers Glue, covered in a nylon stocking and then laminated/sealed with EZE-KOTE laminating resin, a milky emulsion that has now replaced the smelly dope previously used. It dries fairly quickly in around 20 minutes or so and makes a lovely job of covering a model. It goes on thinly and needs to be built up over five or six coats, but is light and easy to sand, unlike epoxy finishing resins. It will take an overall silky smooth finish and then you can paint it if desired.

Another discovery, because it takes a while to fill the weave of a nylon stocking, was SAND 'n' SEAL which works really well on balsa as a sealer, once again fast drying and with no smell, unlike Shellac sanding sealer or thinned dope. This product seems to be similar to EZE-KOTE, but has a much thicker texture.

For larger models, stockings will not normally stretch around them, plus they will not cover undercuts. Lightweight fibreglass cloth and EZE-KOTE is fine for this purpose as it keeps the weight down and provides a nice base for the undercoat and colour painting.



Three other useful products.

GLUE 'n' GLAZE: It seems that apart from gluing in your clear glazing on a model, this stuff can be used to make the whole glazed window itself by filling in the space where the clear plastic would normally go. They say that sizes up to 6mm in diameter will be okay, such as portholes, but pushing the envelope, a 20mm square was cut in a piece of 1mm styrene and the gap successfully filled. The first layer was clear, but to make it thicker and less flexible another layer was added and yes, it all worked fine.

BRUSH MAGIC: Thus cleans brushes no matter what paint has dried on the bristles.

SUPER 'PHATIC: A watery milky liquid that seems like nothing at all, yet the list says it sticks a whole host of things including most woods, ABS, Styrene, PVC, Plasticard, Epoxy and GRP resins, Lightweight glassfibre, large areas of veneer or plywood, covering film, trim, white and blue foams, EPP foam and Depron.

This adhesive was used to laminate styrene over all the blue foam on the Targa Police Boat and also the deck of the 'EeZeBilt' Keil Kraft foam boat with a wood veneer to Depron bond. It is very, very sticky and seems to be a cross between many glues, as it 'wicks' and soaks into porous surfaces, dries well on shiny plastics, making a thin bonded skin on foams. All round a very useful addition to the glue box.

Conclusion

John Bristow and his wife, who run Deluxe Materials, have been at the cutting edge of adhesive development for many years and are now extending the range into smoke oils and other products. Good glues are never cheap, but the technical support in the literature and their website mean that you can select a product to do exactly what you want and not what you think it will do, which are two very different things!

MyHobbyStore stock the Deluxe Materials range, as do other notable retail and online outlets who advertise in this magazine, Deluxe preferring to support the hobby trade rather than selling direct, unless there is no practical alternative.

Website: www.deluxematerials.com

Telephone for inquiries: +44(0) 1529 455 034

UK trade distribution: Ripmax

Happy gluing! - Ron Rees

Fusion seems to almost glue anything!

“Good glues are never cheap, but the technical support in the literature and their website mean that you can select a product to do exactly what you want...”



ABOVE: Dave Reith's 1:48 scale HMS Clyde.

ABOVE RIGHT: A general view of the Victorian Christmas Market stand.



News

The Spring 2014 issue of Quarter Deck Ramblings, the newsletter of the Surface Warship Association, arrived in the editorial office. This association is a national organisation, its members all having an interest in warships and as a group they support many model boating and general interest events in the UK and Europe. One such event where they were promoting the hobby to the general public was the Portsmouth Historic Dockyard Festival of Christmas in late-2013, and the following is from an article by David McNair-Taylor printed in this issue of Quarter Deck Ramblings.

Portsmouth Historic Dockyard Festival of Christmas

For the past eight years, just before Christmas, the Portsmouth Historic Dockyard has been transformed back to the time of Queen Victoria for a Victorian Festival of Christmas, which also includes all the usual naval attractions on the site. There is of course a massive Christmas Craft Fair, a Street Market and even snow, together with numerous themed displays. The modelling fraternity has previously only been represented by model steam traction engines in the street, but this year Area Four of the SWA were invited by Stuart Waterman, Manager of 'Action Stations', to put on a display of our model warships on the second floor of that attraction by the Sherlock Holmes exhibit. We only had three weeks notice, so it was a little difficult to muster our members, but eight of us managed to make it. These were John Hawley, Dave and Andrea Reith, Ken Winter and his grandson Jamie,

BELOW LEFT: USS McNair, a 1:96 scale US Navy Fletcher Class destroyer, built by David McNair-Taylor.

BELOW RIGHT: Joe Jackson's 1:96 scale HMS Bramble.



Joe Jackson, myself and my wife Lucy, and we were able to display 19 models.

To keep in with the festive theme and knowing that a lot of children would be attending, a Children's Fun Quiz was organised, involving observation (finding Snowmen and Santa's etc. on the display), observation of the models and information from the data sheets. All the children were given a packet of sweets for completing the quiz, but in addition Action Stations donated a Laser Quest Ticket every day which was drawn from the completed quiz sheets. The quiz proved very popular with children (and adults!) and kept us all busy. It was also an excellent way to get children interested and talking about the model warship hobby and the models.

Models on display included, amongst others: Dave Reith's 1:48 scale HMS Clyde; Joe Jackson's 1:96 scale HMS Solebay; HMS Vanguard under construction by Ken Winter and IJN Yamato also under construction by John Hawley and my HMS Kirkliston with a gun crew from Nelson's Navy hiding on the deck as part of the quiz!

Pre-ticket sales for this three day Christmas event were a record 16500 and this was supplemented by ticket sales, so we had a very, very busy time! The important thing is that this was a great way of bringing our hobby to the general public and having the Children's Fun Quiz meant that they were positively encouraged to develop more than just a passing interest. In summary, well worth the effort and very satisfying for all those who participated.

David McNair-Taylor.

Contact information

The SWA Membership Secretary is Mr. Hilary Breeze, 38 Birch Crescent, Holtwood, Aylesford, Kent, ME20 7QE. Tel : 01622 710528, email: hbreeze@ecgroup.co.uk.

(Editor's note: The SWA are pro-active at promoting warship modelling across the UK and are to be commended for what they do for the hobby as a whole. As an association, they are a national body and membership also means that discounts can be obtained from a number of suppliers)



LEFT: The launching stage. The island made the wind somewhat tricky on parts of the course.

BELOW: Good start by Rob Vice black hulled boat and Mike Ewart's yellow hulled Footy.

2014 Footy Championship & Junior Championship

A report by **Roger Stollery**

The forecast rain didn't dampen the spirits of competitors, but the strong gusty wind made just getting round the course a challenge for Footy's, as it was blowing and swirling around one of the islands of the Two Islands RYC sailing water at Furzton Lake, Milton Keynes. A total of 16 races were sailed around a simple windward/leeward course with a spreader mark and leeward gate. There were quite a few technical problems early on and the Race Officer waited for the competitors to complete repairs before starting the next race as it is after all a sporting hobby!

It was immediately clear that there were three competitors dominating the racing. Rob Vice, sailing an ICE won the first four races, with Peter Shepherd, sailing a SLIM, getting three second places and Peter Jackson, also sailing a SLIM, getting three thirds. Peter Shepherd then won Race 5, Rob came back with wins in Races 6 and 7. The high wind was now causing problems for the gazebo protecting the 'race management table', so racing stopped for short time while this was all dismantled!

Peter Shepherd won Race 8, but was pipped on the line by Rob in Race 9. At the lunch break the scores had Rob in the lead, whilst in the Junior Championship, Lockie Vice was leading his younger brother Gabriel by 11 points.

At the start of the afternoon's racing the gusts became even stronger and more swirly. Peter Jackson enjoyed these more difficult conditions and won Race 10 from the other Peter and Mike Ewart, who was making the tall narrow balanced Una rig work well on his 1299 boat to achieve third place, his best result of the day.

In Race 11, won by Peter Shepherd, there was another boat that got its best result of the event, with young Gabriel Vice gaining sixth place. Peter Shepherd won again in Race 12. Rob Vice changed up a rig to win Race 13 in front of the two 'Peters'. Peter Jackson won Race 14, where also Trevor Thomas gained his best result of the event in fifth place. Rob made no mistakes in the final two races to take the Footy Championship with a few points to spare and young Lockie extended his lunchtime

lead by another 13 points, to win the Junior Championship Trophy - A Happy Family!

At the prize-giving, Roger Stollery and Brian Hawkins were thanked for making up the race team at short notice, as the event had originally been planned to be sailed at the Cotswold Sailing Club. The experience of running a Footy event at Furzton Lake was well worthwhile preparation for the International Footy Gold Cup, due to be run on this lake at the end of July.



...the strong gusty wind made just getting round the course a challenge...

LEFT: Roger Stollery (left) presenting Rob Vice with the Lost Rock Trophy.

BELOW: The 2014 Junior Champion Lockie Vice.

Results - 2014 Footy Championship, 10th May

- 1st Rob Vice (2014 Footy Champion)
- 2nd Peter Shepherd
- 3rd Peter Jackson
- 4th David Wilkinson
- 5th Mike Ewart
- 6th Lockie Vice (2014 Footy Junior Champion)
- 7th Sid Sims
- 8th Trevor Thomas
- 9th Gabriel Vice (jnr)





James Craig Junior

By **Eris Kennedy**

The model was never intended to do anything other than run downwind...

One of the attractions of model boats is the diversity within the hobby. There are options of old and new, economical and expensive, large and small. Recent contributions to this magazine from Peter Whitehead have demonstrated a continuing interest in free sailing models as well as those of the r/c variety, so this is the story of one man's excursion into the field (or pond!) of free sailing models. I guess the attraction of such a model is its simplicity, but there is something more, as watching a model sail away without external control input of any sort is somehow fascinating and quite evocative.

My first free sailing boats were simple sloop rigged cutter rigged type models, but I am sorry to say that no photographic record of these craft remain. Their hulls were constructed from foam plastic and the sails from lightweight plastic sheet material recovered from shopping carrier bags. There was no stitching of sails as all hemming was done by folding their edges and taping them with clear double-sided sticky tape, this making for very lightweight sails that were waterproof and surprisingly durable.

The first of my free sailing boats that made it on to photographic film was a freelance rendition of the Golden Hind as in **Photo 1**, where my son is holding it and in **Photo 2** where it is battling the elements. Once again this model was made from foam plastic, but the sails were of very thin styrene sheet (Plasticard), this material being waterproof and having sufficient rigidity to maintain the shape of a square sail without any additional support. The model was never intended to do anything other than run downwind, but in practice it was found that it would sail remarkably close to the wind which also seemed to be its preferred tack. The ballast was formed by cutting two chunks of lead from an old diver's weight and then securing them to each side of the keel with glue, reinforced by a tooth pick. Incidentally, BBQ skewers (and toothpicks) are essential to small scale sailing boat construction in my experience as you will see later.



James Craig Junior?

Of more recent times I have taken an interest in ships of the windjammer era, so this latest free sailer is loosely based on the iron hulled barque, James Craig, which still operates under sail and power within Sydney Harbour and beyond. The ship was built for Scottish owners in the late 1800's and was called the Clan Macleod. She served with them for 26 years before commencing a new career with an Australian owner and the ship made 23 passages around Cape Horn. Notably, the celebrated nautical author Alan Villiers served aboard her at one time in her history and the name, James Craig Junior? Well, I thought it was appropriate and like it!

Model construction

I decided to build the hull in bread and butter style, but using foam insulation board, a material that is a fine grain polystyrene block type of material. It carves and sands nicely and is also very light,



helpfully coming in various thickness of sheet and 25mm (one inch) thick was the variety used for this model. The central wooden keel part is in two sections, with one part integral to the hull and this was made from 2mm plywood. The removable, weighted keel is also made from 2mm plywood and the deck is 1mm of the same material, but the bulwarks are formed from card, much as in the style that Glynn Guest utilises on his Free Plan models.

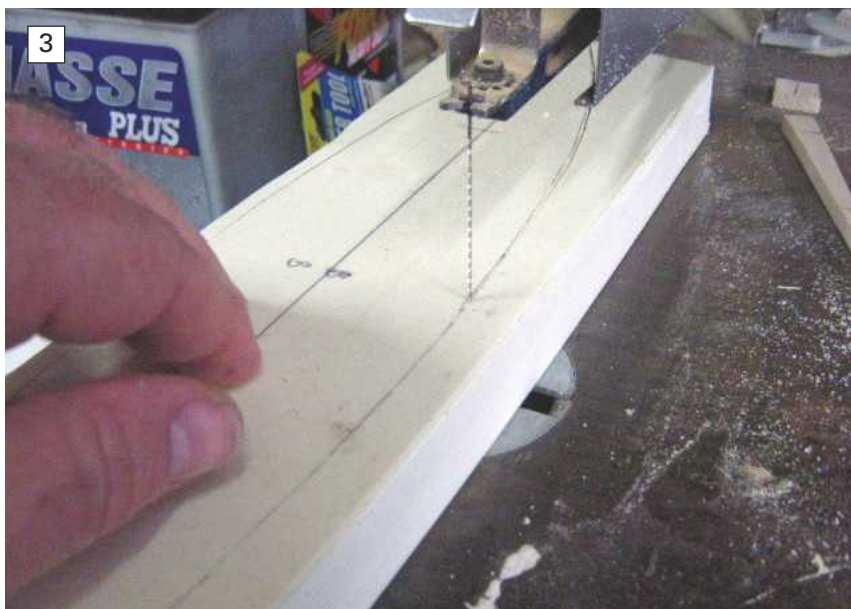
Plans

The basic plans for James Craig Junior were developed using a 2D CAD (Computer Aided Design) program. So that it would be possible to avoid having to reduce the thickness of any of the layers of foam, the scaling function in it was used to adjust the overall dimensions of the model whilst keeping the relative proportions unchanged, until the hull was exactly three layers of foam deep, that is to say 75mm (3 inches), all of which gave an overall length of 43cm (17 inches), excluding the bowsprit. From here-on I made some educated guesses and sketched out the hull lines before printing the drawings, as the aim of this model was not to be 'super-scale' but rather having 'proportional correctness'. These printed plans were then cut-out as necessary and the 'bread and butter' sections from them glued to the foam panels with white PVA glue.

Each piece of 'bread' was cut to shape and then halved along its centre line. The jigsaw proved to be useful for cutting out parts, but is not essential, **Photo 3**, as hand tools can be used. The halved 'bread' pieces were then temporarily rejoined in the middle with double-sided tape. This was because the hull would need to be separated into port and starboard sides after being shaped, so that the wooden keel piece could be inserted. The 'bread layers' were held together vertically with double-sided tape. Using double-sided tape for holding the 'bread' slices together may seem daft, but actually has proved extremely practical.

So, there was now a solid block of foam which was shaped to a 'pleasing form' using nothing more sophisticated than an 18mm snap-off blade knife and coarse sandpaper on suitable sanding blocks. To enable access to any concave areas, particularly around the stern, a convex sanding block was created around a piece of scrap foam. I like this part of model boat construction, as I think it brings out the latent sculptor in me! If accidentally too much foam was removed, it was replaced with scrap pieces and yes, double-sided tape for adhesion once again. Mind you, I suspect this is not an option that Michael Angelo had at his disposal! A wedge shaped piece of scrap foam was added forward to create the sheer of the deck and a 25mm thickness piece added at the aft end, to create the poop deck.

Once the hull was suitably shaped, its two halves were separated down the centre line and one half of the hull was used as a template to draw the outline of the keel, **Photo 4**. The keel piece was cut slightly oversize all the way around the hull with the exception of being flush with the deck-line. It was also recessed as you can see from that last picture so that it would permit the hollowing-out of the hull internal centre section. Again, not essential, but I just liked the idea of having a hold!



Each half of the hull was sealed with epoxy finishing resin brushed over 0.75oz woven cloth, and then finally finished-off with spray putty from an aerosol before rubbing down and colour coat painting. A word of warning here: Don't use standard fibreglass resin to seal the foam blocks, as it will dissolve them very quickly!

The two halves of the hull were now re-joined with the keel piece sandwiched between them and then it was into action with a Dremel power tool and a rotating wire brush to hollow out the tween deck void.

Deck

The hull itself was used as a template to copy the shape of the deck on to 1mm plywood and the hatch openings marked and cut from it. The whole deck was then sectioned into one piece for the main deck including the forward sheer area and one for the raised poop before they were glued in place.

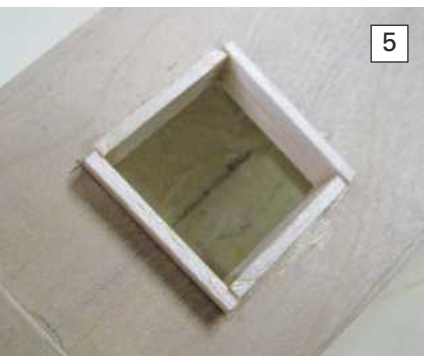
The bulwarks came next and were cut from card. Each was oversize in the vertical sense so they would overlap the hull. Once glued in place, epoxy resin was used to coat any exposed wood and card, together with with some filler disguising the lap joint where the bulwark meets the hull. As an aside here,

...I made some educated guesses and sketched out the hull lines before printing the drawings...

6



5



7



it is advisable when using the epoxy resin, to thin it with about 30% methylated spirits (de-natured alcohol), as it will then soak-in much more readily and therefore provide better waterproofing qualities.

The deck openings have coamings constructed from balsa, **Photo 5** with a corresponding balsa and plywood hatch which is a press fit over the coaming, **Photo 6**. On this model, they do admit

a little water when the model is heeling from the wind pressure, but not enough to be worrying!

A planked deck would look better and my son Andrew suggested that we print out a suitable pattern from the Internet with the colour printer, glue the printed paper to the deck and then also waterproof this with a coat of epoxy resin. This approach has proved to be quite effective.

Rudder and keel

The ballast keel is made to be detachable so that the model can be displayed without it if desired. It is made from a centre piece of 2mm plywood, laminated on either side with 2mm pieces so that a slot is formed along the top edge. This slot fits over the permanent keel on the bottom of the hull and this detachable keel is secured to the hull with plastic screws as you can see in **Photo 7**. The lead weight on each side of the keel is of the type sold in hardware shops for roof flashing. Strips of this were cut and glued to the pre-painted keel using gutter silicone. Sorry, but no real attempt was made at creating a state of the art model, 'functional' being the watchword.

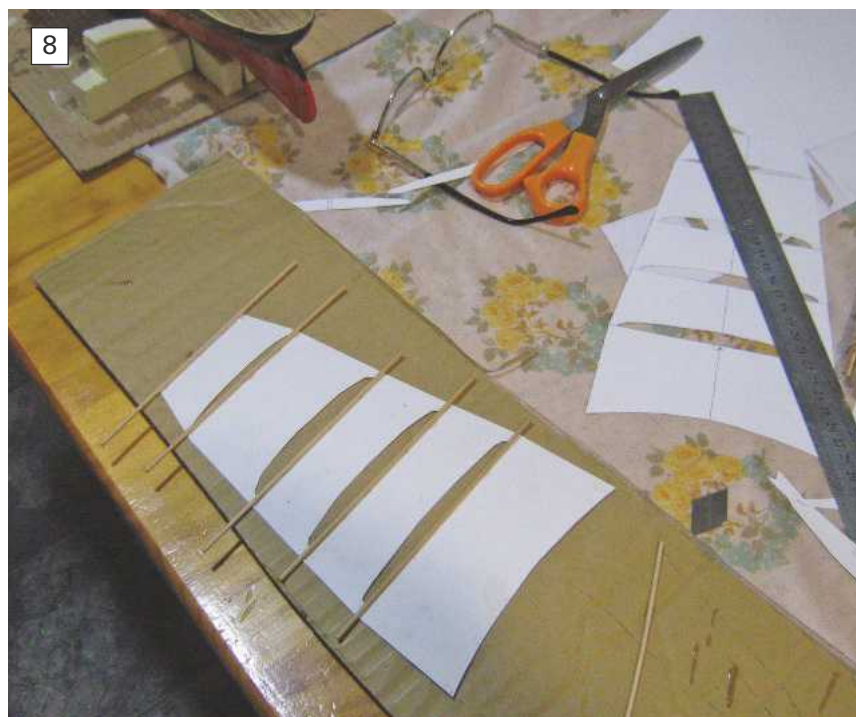
The rudder is incorporated into the rear of the keel by sandwiching a piece of litho plate between the laminated components of the keel at the back. There is no hinge as such, but the rudder can be set to any desired angle by bending the litho plate. This will eventually crack and fall off, but I expect to get a fair bit of use out of the model before that happens - famous last words perhaps?

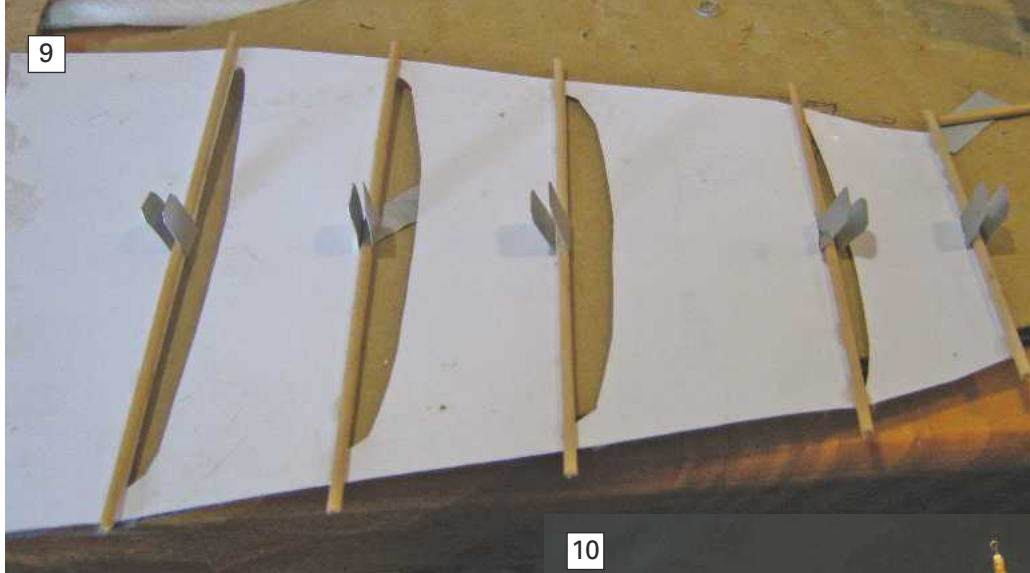
Sails and rigging

The mast and spars are all made from BBQ skewers and the sails are cut from very thin plasticard (styrene) of the type that is sold for architectural models. This material is light, waterproof and can be drilled, which is advantageous when attaching running rigging or stitching a sail to a spar or yardarm etc. Once the masts were installed, the spanker sail was also made from plasticard and stitched to the mast and adjacent spar.

The square sails are not independent entities in that they are actually cut in one piece for each mast. That is to say, that all the sails on mast are in one section and joined at the clews (their lower corners) to the neighbour below, **Photo 8**. The sails do not 'billow' either and the lowest square sails, the fore course and the main course, which have no yardarm below them, are held in their correct relative positions to the mast by means of a small wire hoop fitted to the foot of each sail and wrapped around the mast, but sorry as I am getting ahead of myself!

8





Once the sails were cut, their yardarms were added. These were made from the ubiquitous BBQ skewer, sanded flat on one side and glued in position across each respective sail in the appropriate position (Please see Photo 8 again).

To attach the sails to the masts, yardarm slings were manufactured by cutting a slot in each sail immediately under each yard arm at the centre of each sail, and inserting a piece of pre-cut and pre-drilled (to the diameter of the BBQ skewer mast) piece of litho plate through the slot. The tongues of the litho plate were then wrapped around the yardarm as in **Photo 9**. A piece of 2mm thick balsa was placed between the tongues of the U-shaped litho plate and fixed with superglue. Once set, the excess balsa was trimmed off and the holes (to fit over the the masts) re-drilled. Each assembly of sails and yards was then threaded on to the mast by means of these litho plate slings. They are a tight fit so they tend to stay where they are positioned, the stiffness of the sails helping with this as well. If you wish, you could slip sections of silicone tube of the type used for i.c. engine fuel piping over the mast skewer, set to support each yardarm at the desired position.

So that the sails on both the fore and main mast can be swung in unison, they are connected together at the upper topsail level with straight lengths of wire. The connections are articulated with EZ Connectors (sold for use in model aircraft control linkages) fitted to the top of each upper topsail yardarm. A sheet runs aft from each main topsail yard from each send to a turnbuckle fitted to each side of the mizzen mast and then down to the deck via a bowsie on each side. This allows the sails to be set and held in the desired position. The mizzen sail is also a piece of thin styrene sheet fitted to a boom, tied off at a suitable location.

The headsails are simply triangular shaped pieces of styrene with holes drilled at intervals along the luff of each sail, which is then threaded on to its respective forestay. A simple sheet, which runs either side of the stay immediately aft of the relevant sail, holds it against the force of the wind.

Once in use, a practical modification is to cut the two upper sails away from their yardarms below and drill each to take a small wire ring as this allows the option of shortening sail when necessary. I then sabotaged this (!) by installing a fitting at the top of each mast to take a support stay which has subsequently proved unnecessary. **Photo 10** shows how it all goes together and from this viewpoint, the method of rigging is apparent. However, delete the fittings on the top of the mast if you want to be able to shorten or replace the sails! This last picture also shows the printed planked deck - good enough for me!



Sailing?

The maiden voyage of James Craig Junior was on a local lake, **Photo 11**. The model has proved to be a very successful free sailer, particularly as it sails close hauled on either tack and loses little, if any, sea room to leeward. If there is a problem, it is that it will not sail on an intermediate tack without rounding up toward the wind.

12



13



Sailing in such clear water does tend to give the keel away, **Photo 12**, but on the other hand is essential when really 'at sea' in salt water as in this last picture. The ability to shorten sail would be handy, **Photo 13**, so perhaps it is best to leave the tops of the BBQ skewer masts unobscured so the sails can be slid on and off as wind conditions dictate.

I have also read somewhere that by making a rudder with an integrated lead weight that hinges freely, it is possible to overcome the tendency of turning into the wind, the theory being that when it freshens, the model will turn away to leeward because the weighted rudder falls with gravity and opposes the model's tendency to swing up to the wind. I imagine there would be a good deal of trial and error in this process and much adjusting of the actual amount of weight to

get things right, but it would be interesting to try the concept. For now though, I am happy to sail to and fro across the 'sea' in a close hauled configuration.

Conclusion

Free sailing models have not outlived themselves and they are still fun, even in this age of radio control. It is most satisfying to see one's handwork proceed, sailing independently and heeling to the breeze. Another attraction is that these models are relatively simple to build and there remains the unique pleasure of sailing them. With Peter Whitehead in the UK and me in Australia, this branch of the hobby definitely now extends at least halfway around the globe!

Solarcat performs quite well on sunshine power. There is no alternative power source for the electric motor.

Radio control is two channel for the rudder and a servo operated switch for On/Off for the motor.

The hull is of catamaran style, each half joined to the other by carbon fibre tubes which also carry the r/c wiring leads.

The hull units are mostly of balsawood, total weight being 11lb 10oz (750 grams), length 24 inches (610mm).

There is no alternative battery (or electronic speed controller), the solar panels powering the motor direct.

(Stephen is a member of West Hampshire Modellers)

BELOW: There is a conventional rudder servo and also a servo controlled On/Off switch.

Solar Power!

Stephen Eastick's Solarcat model

Recently received in the Editorial Office were these pictures and information about this home-designed and built solar powered model, which performs quite well in full or part-sunshine, and is virtually silent.

Principal particulars

Power comes from two Power Film solar panels producing 7.2v @200mA, wired in parallel and supplied by Select Solar of Essex.

The motor is a Mabuchi 520C from Model Motors Direct.



Test Bench

Model Boats looks at new products

Attention - Manufacturers & Distributors

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

Some of the new tools and different shades of rust from Wilder.



LifeColor

This is also an American manufacturer that produces a range of **acrylic** washes and paints, usually in packs of six 22ml bottles for a specific application and priced at around £16.99. We received 'Hemp Ropes and Tar' as well as 'Burned', each with six variations on their titles for each collection. LifeColor are a well-known paint supplier, widely used in the military modelling hobby and although not cheap, if you wish to weather your model, then these will do the trick.

The Airbrush Company

They are at: 79 Marlborough Road (East), Lancing Business Park, Lancing, West Sussex, BN15 8UF, tel: +44 (0)1903 767800. Website: www.airbrushes.com. Model makers wanting these products can purchase direct via their website, or through specialised retail hobby outlets.

Review by **Paul Freshney**

News from The Airbrush Company

This is a rapidly growing business that specialises in paints and equipment for the hobbyist and which has recently added some new items to its product range.

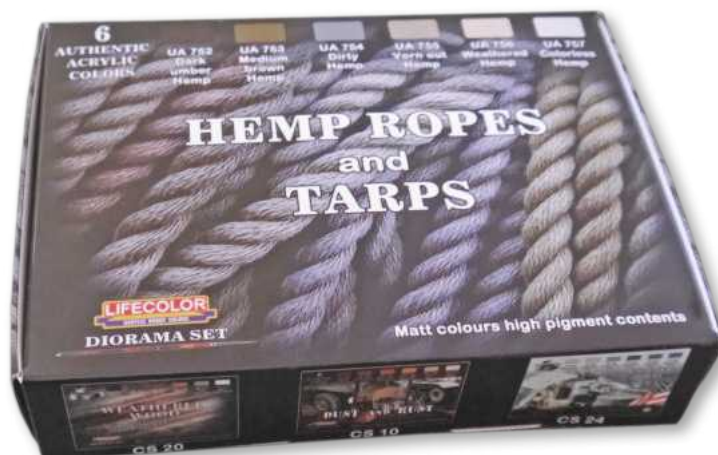
Adam Wilder

This is a new American manufacturer that produces dry texturing powders, enamel (Nitroline) washes and paints for models of all types, and some useful tools and sanding devices.

We received a selection of the **enamel** washes which come as

50ml bottles priced at £4.50 each that include rust in all its shades, blacks, greys, smoke and in fact every sort of weathering colour you could want!

In addition, there are now a range of sanding sticks and blocks, some rather neat tweezers and the Wilder version of Blu-Tack called 'TakK' a reusable plasticine-like material. The washes are really good, as the paint is already well thinned and the range of colours is such that you must be able to find something appropriate if you wish to authentically weather your model.



Hemp Ropes and Tar is a pack of six acrylic paints from LifeColor.

Chylds Hall Model Shipyard

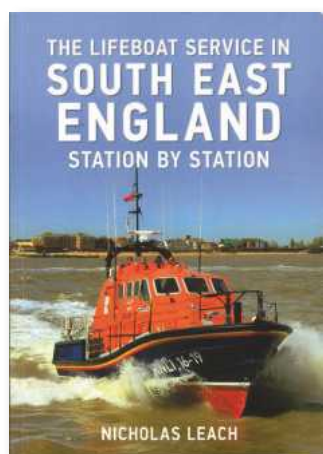
These newly developed 1:48 scale cast resin figures, depict two officers and six seamen in late Victorian/Edwardian uniform and in different poses. They were developed for the 1:48 scale RN picket boat featured in this September 2014 MB,

1:48 Scale Royal Navy Figures



but are also suitable for some of the other models in the range. They can be used for populating the decks of any 1:48 scale RN vessel from 1880 to 1912 and could be adapted as appropriate for later periods. Each of the figures is supplied individually, unpainted and mounted on an easily removed resin base. The figures are priced at £2.75 each. p&p is £2.50 for up to four figures and £3.50 for five to eight figures.

Website: www.chyldshallmodelshipyard.com
Tel: (+44) 01387 820558



The Lifeboat Service in South East England – Station by Station

Written by Nicholas Leach. Softback, 160 pages, 235 x 165mm, over 370 illustrations, photographs, drawings and maps in black & white and colour. ISBN: 9781445617503, price £15.99 (RRP). Published by Amberley Publishing Ltd. The Hill, Merrywalks, Stroud, Gloucestershire, GL5 4EP. Tel: 01453 847800, website: www.amberley-books.com. Available direct from the publisher or through the usual retail outlets.

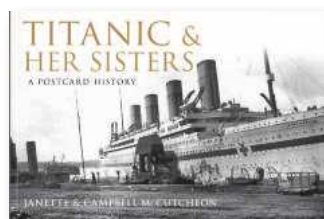
The Royal National Lifeboat Institution (RNLI) was established in 1824 with a long and proud tradition of saving lives at sea and nowhere is this more evident than the South-East of England. The lifeboats and the volunteer lifeboat crews from Norfolk, Suffolk, Essex and Kent have been involved in some of the most dramatic, courageous and daring rescues in the history of the RNLI, and this book provides details of many of the medal-winning rescues that have been undertaken by the lifeboat service in the South East.

The lifeboats stationed in East Anglia were among the first anywhere in the British Isles. The number of stations increased during the 19th Century, but then reduced with the introduction of motor lifeboats which had a greater range, in the twentieth. The RNLI currently operates twenty-seven lifeboat stations in the South-East of England, from Hunstanton in Norfolk to Dungeness in Kent, including the lifeboat stations on the River Thames at Gravesend, Tower Bridge, Chiswick and Teddington.

The author, Nicholas Leach, editor of Ships Monthly magazine and an acknowledged expert on the lifeboat service, has divided this highly illustrated book into two parts; the first gives an overview of the lifeboat history along the East Anglian and South-East coast, and how sea rescue services have developed since the late eighteenth century; the second looks at all the lifeboat stations in the area, both past and present in detail, with information on each entry including key dates, current lifeboats, station honours awarded, location information covering lifeboat houses and launch methods as well as major events in each station's history.

This is an extremely interesting book that will appeal to lifeboat modellers.

Book Review by John Deamer



Titanic & Her Sisters – A Postcard History

Written by Janette & Campbell McCutcheon. Softback, 128 pages, 248 x 170mm, over 290 postcards, photographs, drawings and illustrations in both black & white and colour. ISBN: 978-1-84868-110-1. Price (RRP) £19.99. Published by Amberley Publishing Ltd. The Hill, Stroud, Gloucestershire, GL5 4EP. Tel: 01453 847800, website: www.amberley-books.com. Available direct from the publisher or through the usual retail outlets.

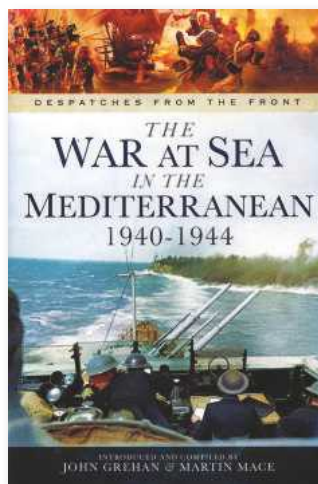
In 1908, the White Star Line announced it was constructing a pair of sister ships at the Harland & Wolff Shipyard in Belfast. The new behemoths would dwarf even the largest ships of the time, being one-third larger than any ship afloat. They would also be the most sumptuous vessels built to date, carrying their millionaire passengers in unsurpassed luxury. Passengers in second class, as well as immigrants in third class, would also benefit from a standard of

accommodation and catering previously unseen on transatlantic liners.

The two ships, Olympic and Titanic were to be followed by a third sister, originally to be called Gigantic(!), but renamed Britannic after the sinking of the Titanic in April 1912. Olympic's remarkable career spanned nearly a quarter of a century, including her distinguished war service, before being scrapped in 1935 and she was a living example of what her sisters failed to be. Titanic never completed her maiden voyage and although Britannic's completion was delayed, she enjoyed a successful (but short) career as a hospital ship before foundering one clear morning in November 1916 in the Aegean, after hitting a mine on her sixth voyage.

In this well illustrated book, which will appeal to maritime historians, enthusiasts and ship modellers alike, Janette and Campbell McCutcheon tell the story of the White Star trio using their extensive personal collection of postcards and photographs of the three sisters.

Book Review by John Deamer



The War at Sea in the Mediterranean 1940 - 1944

Written by John Grehan & Martin Mace. Hardback, 256 pages, 240 x 165mm, 30 black & white photographs and maps. ISBN: 978-1-78346-222-3. Price (RRP) £25. Published by Pen & Sword Books Ltd, 47 Church Street, Barnsley, South Yorkshire, S70 2AS. Tel: 01226 734222, website: www.pen-and-sword.co.uk.

Available direct from the publisher or through the usual retail outlets.

The Royal Navy had a long-established presence in the Mediterranean. Its bases in at Gibraltar, Malta and Alexandria had enabled it to maintain a powerful fleet that rivalled those of the other European powers in the region. The Second World War however, saw a prolonged struggle by the Royal Navy for control of the Mediterranean, which continued until the capital ships of the Italian Navy were driven from the seas and the North African Ports were in Allied hands.

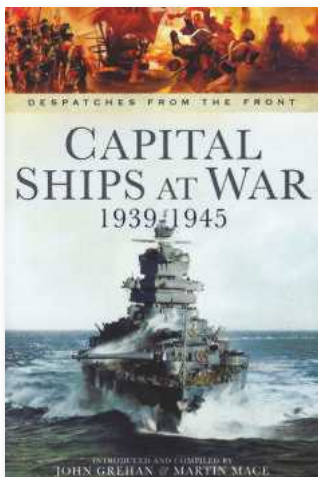
Much of the fighting in the Mediterranean involved defending convoys of merchant ships taking supplies to the beleaguered island of Malta, the most famous being Operation Pedestal, in which one aircraft carrier, two cruisers, one destroyer and five merchant ships were sunk in a desperate bid to save Malta from capitulation.

Possibly the most important of all naval encounters of the war in the Mediterranean occurred in November 1940. This was when aircraft from HMS Illustrious attacked the Italian naval base at Taranto. The attack resulted in the destruction of one Italian battleship and severe damage to two others.

The nature of the naval warfare in the relatively confined waters of the Mediterranean permitted the deployment of motor gun boats and motor torpedo boats of the Coastal Forces. These proved surprisingly successful in impeding Axis communications and disrupting enemy supply lines.

This book, one of two new titles in the 'Despatches from the Front' series comprises a detailed summary of the Malta Convoys, the official account of the Taranto raid; reports on the Battles of Matapan, Sirte, Calabria and Cape Spartivento and despatches on Coastal forces, including actions in the Aegean, by the admirals who commanded these engagements. Highly recommended reading for both naval historians and enthusiasts alike with an interest in the War at Sea in the Mediterranean 1940 to 1944.

Book Review by John Deamer



Capital Ships at War 1939 - 1945

Written by John Grehan & Martin Mace. Hardback, 191 pages, 240 x 165mm, 22 black & white photographs and maps. ISBN: 978-1-78346-204-9. Price (RRP) £19.99 Published by Pen & Sword Books Ltd., 47 Church Street, Barnsley, South Yorkshire, S70 2AS. Tel: 01226 734222, website: www.pen-and-sword.co.uk. Available direct from the publisher or through the usual retail outlets.

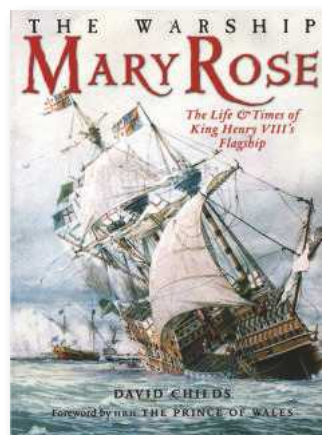
They were the epitome of military might. Huge, powerful and fast, the heavy cruisers and battleships of Germany were feared across the globe. Yet for all their potential destructive power, these ships operating as surface raiders, achieved comparatively little. Scharnhorst, Graf Spee and Bismarck were hunted down as soon as they went to sea, chased by battleships, cruisers and destroyers. Brought to battle, their big guns, capable of hitting targets 22 miles away, proved an inadequate defence, for on every occasion the Royal Navy were able to bring overwhelming numbers against them. The most modern and powerful of all the German warships, Tirpitz, never got the chance to engage any allied shipping before being disabled and wrecked by midget submarines and aircraft in a Norwegian fjord.

It was, of course, not just German battleships that were found to be vulnerable, the pride of the Royal Navy, HMS Prince of Wales, was sunk by torpedoes from Japanese aircraft in the South China Sea and HMS Hood was blown apart by a single shell fired from the Bismarck.

This book, one of two new titles by John Grehan and Martin Mace in the 'Despatches from

the Front' series tells the story as the book title intimates and includes official reports on the Battles of the River Plate, Denmark Strait and The North Cape; despatches from Admiral Tovey on the loss of the HMS Hood; the reports on the sinking of HMS Prince of Wales and HMS Repulse from the senior surviving officer; full despatches on the midget submarine attack upon the Tirpitz, as well as a full account of the British Pacific Fleet in 1945. This is a must-read for ship modellers, naval historians and enthusiasts with an interest in capital ships of the Second World War.

Book Review by John Deamer



The Warship Mary Rose - The Life and Times of King Henry VIII's Flagship

Written by David Childs. Softback, 224 pages, 246 x 186mm, over 150 photographs, illustrations, line drawings, diagrams and maps in black & white and colour. ISBN: 978-1-84832-211-0. Price (RRP) £16.99. 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.

The raising of the Mary Rose in 1982 made headline news. As an archaeological event it ranked alongside Schliemann's excavations at Troy or Arthur Evan's work at Knossos as so much information has been gleaned from the wreck and its contents that there is an

overwhelming tendency to treat the ship as a 'time-capsule' like some Tudor burial site.

However, the Mary Rose is not just an archaeological relic. She is a warship that was revolutionary in her time and despite being most famous for her loss in battle, a ship that served her monarch for thirty-four years, almost as long as his reign.

In this book, the author David Childs, Development Director of the Mary Rose Trust, tells the full story of the construction and career of the ship, placing it firmly within the colourful context of Tudor politics, court life and the developing administration of a permanent navy. However, the book, with its foreword by HRH The Prince of Wales, brings the story right up to the present, with chapters on the recovery and the new ideas and conclusions arrived at by the massive programme of archaeological work that has been undertaken, together with the preservation and display of the hull and some 19000 artefacts in the new Mary Rose Museum which opened in 2013 at the Portsmouth Historic Dockyard. This revised edition must be one of the most comprehensive works on the Mary Rose to date and as such would make a welcome addition to any maritime bookshelf.

Book Review by John Deamer



British Warships in the Age of Sail 1817 - 1863 Design, Construction, Careers and Fates

Written by Rif Winfield. Hardback, 414 pages, 297 x 255mm, over 200 illustrations, photographs, line drawings, ship plans and diagrams in black & white ISBN: 978-1-84832-169-4. Price (RRP) £50.00. 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.

The publication of this book sees the completion of a monumental work, listing the technical details and career histories of every significant British warship between 1603 and 1863, including captures, purchases and many hired ships. Following earlier volumes on the periods 1603-1714, 1714-1792 and 1793-1817, this volume, 1817-1863, carries forward the story from the post-Napoleonic War re-organisation of the Royal Navy's rating system to the end of sail as the principal mode of propulsion.

Although apparently well documented, this is a period of great complexity in the procurement and naval architecture of ships. The introduction of steam radically altered the design of vessels under construction and was later retro-fitted into others, while many 'names' lived a ghostly existence on the Navy List; ships ordered but not started, and in some cases having their intended draughts altered more than once before being cancelled entirely.

In this book, the author, sorts out and clarifies these confusions, a major contribution in itself, but for the first time he also provides outline service histories for an era that is largely neglected. Like its companion volumes, the book is organised by Rate, Classification and Class with significant technical and building data followed by a concise summary of the careers of each ship in every class.

This fourth and final volume in the series completes the coverage of the Royal Navy's ships during the three and a half centuries that they were principally propelled by sail. Meticulously researched and exhaustive in scope, these volumes constitute one of the most important reference works in the field of naval history, and as such would be essential reading for historians and period warship modellers.

Book Review by John Deamer

Casting Kit Everything for resin casting



Make **super-detailed** resin casts of carriages, figures, buildings, fittings - just about anything.

Long life silicone rubber moulds & professional resins for detailed casting.

Styrene Profiles

Huge range of scale plastic profiles

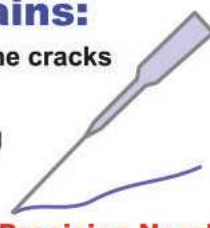


- Hundreds of shapes and sizes to choose from
- Comes in lengths up to 100cm

Superglue Bonding Kit

Comprehensive Kit Contains:

- Thin:** for bonding fine gaps and hairline cracks
- Medium:** general purpose bonding
- Thick:** gap-filling and accurate bonding
- Activator:** for instant curing
- Precision Nozzles** for pin-point application



Precision Nozzle

Pin Vices & Micro-Drills

Metric Sizes 0.3 to 1.6mm
Number Sizes 61 to 80



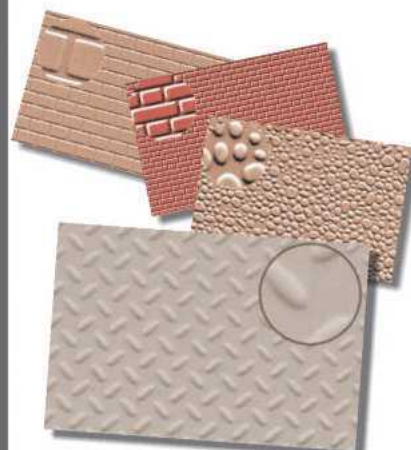
Precision Angle Sander

Perfect for sanding angles on plastic profiles & Plastikard

- Sand wood, plastic & metal at precise angles
- 40mm sanding depth
- With 3 spare bands
- Made in Britain



Plastikard



Plain & embossed styrene sheets in a wide choice of patterns including tread plate, bricks stone, paving, roof tiles...

Work Holding

Wide range of Work Holders & Vices for every application



Multi-Angle Guillotine

- Cut wood, plastic, balsa, card, white-metal etc
- With spare blades and cutting anvil
- Made in Britain



Metal Profiles



High precision Micro Tubes, Rods, Angles, Sheets, Strips, U-Channels & C-Channels.

OVER 800 NEW TOOLS ONLINE



Buy online at **www.sylmasta.com** or phone **+44 (0)1444 831459**

Email: **sales@sylmasta.com** Sylmasta delivers **WORLDWIDE**

Selling or buying? You can place a FREE readers' advertisement here. Simply fill in the coupon printed on this page and send it to us at Model Boats, Marketplace Free Readers' Advertisements, P.O. Box 9890, Brentwood, Essex, CM14 9EF

Sales

MARTEN HOWES & BAYLIS TOPAZ full kit, unbuilt inc. steam plant, all as left factory. Sensible offers please? Alan Luckett, tel: 01515 271028 (Aintree, Liverpool).

MOULDEANS 1:96 WW2 ILLUSTRIOUS class aircraft carrier, 92 x 13 inches. Hull, deck island, fittings, crew, 18 spitfires, vac-formed boats, propshafts etc. Not really started, £200 ovno. John May, tel 01790 754293 (Spilsby, Lincolnshire).

MARX DECAPERM 5 pole 6v geared 2.75:1 electric motor brand new, unused, £60 plus p/p. Mr. C. Duthie, tel (evenings): 01335 347283 (Derbyshire).

SCREWDRIVER offshore power boat, 48ins, twin 600 motors, Hitec r/c, no esc, £120. Also: 46in fireboat, 850 motor, drive batteries, Futaba r/c, no esc & fittings need attention, £180. Gordon Santer, tel: 01626 862756 (Dawlish Warren, Devon).

CRUISER 1:32 scale tug with Torpedo 500 motor, full lights & sound, F14 40Mhz Tx, 12v battery, ready to go, £900 ono. Buyer collects, Mr. W. Miller, tel: 01326 372332 (Penryn, Cornwall).

R/C YACHT, 5ft long built from plans, all plywood, some servos, lights, radar, horn and other features etc. Has been pictured in this magazine at model boat shows, £295 ono. M. John, tel: 07923 816301 (Huntingdon, Camb's).

SCHARNHORST battleship, 1:128 scale, 6ft long, unfinished but hull & deck complete. Fitted with motors, r/c, unfinished superstructure. All fittings, plans, books etc. included, £750 ono. Buyer collects. James McSevney, tel: 01536 352860 (Corby, Northants').

CLYDE Class 1:12 scale lifeboat GRP hull by Models by Design, superstructure, RIB, some fittings, RNLI plans cost over £300, sale price is £150 ono. Loss of water is reason for sale. Also; 'A' boat, 64ins long, two sail suits, good condition and sailer, £75 ono. Mike Gay, tel: 01647 61869 or 07971 064023 evenings (Exeter, Devon).

LIFEBOATS: Calshot (23.5 inches) £250; Small lifeboat (14.5 inches) £175; Two small (10 inch) police boats £125 each; King George V (22.5 inch) £125; Cobble (35 inch) £300. All with full radio (except King George V). Dot Wilson, tel: 01924 523080 (W. Yorks).

CAPTAIN COOK'S 'Build the Endeavour', complete set of 100 weekly publications purchased for a hobby, but bereavement causes sale. £250, buyer collects. Kathleen Harrison, tel: 01733 563940 (Peterborough).

BILLINGS ST. CANUTE converted to r/c. Plank on frame construction with MFA motor, 6v battery & 2.4GHz 2 channel radio, £150 ono. Mr. D. Lane, tel: 01778 603707 (Alfreton, Derbyshire).

ITALERI E-BOAT kit with rudder servo, esc, motors and two drive batteries but no radio. £240 ono. Mr. P. D. Dyer. Tel: 01202 690130 or 07971 808066 (Wimborne, Dorset).

HMS COSSACK (45 inches) & **ILITIS**, a German stern firing torpedo boat (30 x 6 inches). Both twin screw with rudder servos etc. Excellent models. Offers? Ted Bunton, tel: 01255 556065 (Dovercourt, Essex).

MV DAWNLIGHT built by Tom Gorman, very well fitted-out, quality fittings, as new condition, only sailed twice & in presentation case. Reduced price of £400, all proceeds to Macmillan Cancer Support. Dennis Jephson, tel: 01142 510515 (Sheffield).

LIFEBOAT, 18 inches, twin motors, LiPo batt's (2), Mtroniks esc, 2.4GHz Rx. Also, cabin cruiser, 25 inches (electronics same as lifeboat), Radio-Link Tx, rechargeable batt's & chargers plus Marblehead yacht with sails, needs finishing, £350 ono. John Ludgate, tel: 01458 259777 (Somerset).

HB 61 & ENYA 35 glow engines with glow plugs, three large fuel tanks, 2v lead acid battery, half gallon Model Technics glow fuel. £100 ono. Derek Potter, tel: 01228 810916 (Carlisle, Cumbria).

Wants

FITTINGS KIT for Model Slipway Broom 44 cabin cruiser please. Bob Chew, tel: 07824 883959 (Bristol).

Your own FREE advertisement could be filling this space. To place an advert here simply fill in the form below and send it to us.

Model Boats

Post or email a copy of the coupon to: Model Boats, Marketplace Free Readers' Advertisements, P.O. Box 9890, Brentwood, Essex, CM14 9EF

FREE READERS' ADVERTISING

Please write your details in CAPITALS in the grid below including a contact name and address or telephone number in the word count. Please also enter your full details in the address box below the grid.

PLEASE TICK:

FOR SALE

WANTED

☐
☐

* Free Readers' ads are only accepted on a coupon by post, or email.

Terms and conditions

We will endeavour to print your advertisement in the next available issue of **Model Boats**. Free Readers' Advertisements will only be accepted on this coupon, or by email with all details as required on the coupon with a maximum of 36 words per advertisement. Any received after copy date will be held over until the next issue. No responsibility can be accepted for misprints. Please comply with the Trade Descriptions Act when detailing goods for sale. This service is only available for private sales. Other services and trader advertisers must use the pre-paid classified section of the magazine. By law, consumers must be able to differentiate between an advertisement for private or trade sale (traders would include modellers who have previously purchased items with a view to then selling them at a profit). Only ONE free advertisement per person will be listed each month. Multiple advertisements from the same person will be inserted in subsequent issues, space allowing. MyTimeMedia Ltd reserve the right to refuse a free private advertisement.

Name:

Address:

Postcode:

Telephone:

Signature: Date:

* If you don't wish to spoil your magazine, then please photocopy this coupon. **mytime media** MB Vol 64 No 766



BMPRS News

Website: www.bmprs.co.uk

Craig Dickson reports from Telford, the third 2014 race meeting

ABOVE RIGHT: The C class boats battling it out! (Judith Beesley photo)

Hello readers! The fantastic Priorslee Lake was the venue, ideally suited to powerboat racing with ample parking next to the water along its grass banks. As luck would have it, we enjoyed glorious sunny weather all day, making for perfect conditions that were ideal for competitors

and spectators. On the Saturday before the event, a number of racers turned up to have a fun 'blast' of their boats and some relaxation afterwards, camping with a BBQ on the Saturday evening.

This event saw the highest number of boats entered to-date so far in 2014 with 49 boats in all. This presented a challenge to Mark Wild who once again took on the demanding role of Officer of The Day (OOD). He had the task of taking all the pre-booked entries and arranging them into their respective classes of boat heats. In the Spark Ignition D class there were 16 boats entered, so two heats of eight boats for these monsters was the order of the day.

The usual format applied and for the benefit of readers, each boat in its respective class has two heats (a morning and afternoon session) in which to race, the aim being to clock up as many laps as possible over the two heats, their total deciding the overall result positions. All the competitors were called for the all important pre-race driver meeting at 9.45am. These meetings are so very important, as all competitors are reminded of the key safety issues and it provides an opportunity for any questions to be asked prior to the start of racing.

With no further delay, racing got started and with the heats each having up to eight boats in each, this time it wasn't the choppy waters (as in previous events) that presented the main challenge, but it was avoiding crashing into each other! Eight boats in a race might not seem many, but when they are doing between 30 and 50mph or so and several bunch-up to get past one buoy, then that tests the driving skills and steady fingers of the best of competitors! So, what were the highlights of each class?

AA class

David Clay running his CMB 21 powered Challenger clocked up a very impressive total of 79 laps to run away with a well deserved first place. Considering that this was the smallest engine class, his boat was impressively fast. His lap total exceeded that of many of the larger classes of boats as can be seen in the results table. David Hough with his GO 28 powered Pursuit 27 scored a similarly impressive 65



ABOVE: Bernard Holder's fleet! BELOW: What's happening here? (Judith Beesley photo)



laps in total to take second place. With 61 laps under his belt, Mike Barnes running his trusted MDS 28 powered Sea Spirit came in at third place. Mike, despite gaining consistent lap scores in both heats, noted that for some unexplained reason his boat was not performing to the standard that won him the British BMPRS Champion (in this class) last year!

Graham Stanley with his impressively fast OS 21 powered Cavalier was out of the top three this time. In Heat One he hit Buoy 3 hard, when flat out, and that cost him a lot of laps. Bernard Holder suffered a broken engine con-rod in Heat One of this race and (unusually) had to retire his AA class boat for the day.

A class

With eight boats entered, this class featured some furious battles around the buoys! David Clay racing his CMB 45VAC powered Orion scored a total of 80 laps for his second podium position of the day. In the second heat, David achieved an outstanding 48 laps which (as a single heat score) was only bettered by the winner of the D class. Close behind by a fraction of a lap, and racing his CMB 45 powered Crusader 2 was Bernard Holder who took second place. My SC 46 powered Crusader 3 ended up with 72 laps for third place.

Junior member Kian Searle who has previously enjoyed a lot of success in this class, unfortunately suffered water ingress into his radio box which caused problems with control (not surprising really) and thus a disappointing result. No doubt the problem will be fixed for his next race. Another junior member, Luke Bramwell, also had radio issues because the 'fail safe' kept kicking in, closing the throttle and cutting the engine for no obvious reason, so something else to be checked and resolved!

B class

Only four boats in this class, but it saw some very close racing and tight overtaking, sometimes too close! Bernard Holder's CBM 67 powered Magnum clocked up a total of 80 laps to win first place by a good margin. If it wasn't for hitting Buoy 4 in the second heat, the score would have been even higher as Bernard is known for driving extremely close to the buoys! Second place with 70 laps went to Malcolm Pratt running his impressively quick CBM 67 powered Apache. In the first heat, Malcolm had a couple of collisions requiring his boat to be rescued and restarted. If it wasn't for this misfortune, his total lap score could have been substantially higher. Third place with 69 laps went to Garry Dickson with his Webra 60 powered Challenger. Garry also had a collision (with Malcolm's boat!) which cost valuable laps.

C class

All except one of the seven boats entered in this class were powered by CMB engines and being the largest class of nitro (glow fuel) powered mono hulls, that meant furious and fast racing! Bernard Holder drove a very tight and consistent course with his Magnum giving him a total of 90 laps and first place. Bernard also achieved the highest total lap score of the day with this performance. Mark Beesley's Aeromarine XXX clocked up a total of 82



ABOVE: Have they spotted boat B9?

laps to take second place and in third place with 79 laps was Mike Gelson and his Stratos. This race saw some exciting friendly rivalry between him and Robert Daniel because both are members of Bridlington Model Boat Society, and both wanted to outdo each other which resulted in collisions, at least once! Unfortunately for Robert, in the second heat the engine's throttle barrel came loose resulting in loss of ability to control the engine speed, so it was retired before damage could occur.

D class

This Spark Ignition (S.I.) petrol engine class saw 16 boats ready to battle it out. Racing in two separate heats, this class delivered plenty of action as these boats are huge and have massive power plants. The Gizmo 28 powered Patriot of Mike Barnes scored a total of 85 laps to win first place by a decent margin. Garry Dickson's MPM 31 powered Miami with 72 laps took second place. He tends to drive quite defensively to avoid trouble and it paid off in this race. Not far behind with 67 laps was Mike Durant with his Gizmo GZ 31 powered Phantom. Large hulls create a lot of choppy water and Mike's Phantom, which is a large hull, seems to handle very well in these conditions.

A notable feature of this class was that the rescue boat was constantly kept busy recovering boats that had collided or flipped over. Our three newcomers; Steve Abbott, Jack Hull and Ron Willets all enjoyed their first go at racing in this class and judging by the excellent standard of their boats, we look forward to them doing well in future events. In addition, Ron Willets won the 'Best Boat of the Day', so 'well done' to him!



ABOVE: C176: Inside one of Mark Beesley's boats.



D104: Jack Hull and his new Pacer.

Telford Results: Sunday 18th May 2014

	Name	No.	Hull	Engine	Heat 1	Heat 2	Total
AA class							
1st	David Clay	42	Challenger 43	CMB 21	43	36	79
2nd	David Hough	87	Pursuit 27	GO 28	28	37	65
3rd	Mike Barnes	4	Sea Spirit	MDS 28	30	31	61
4th	Sha Simon	60	Cavalier	MDS 28	22	27	49
5th	Graham Stanley	29	Cavalier	OS 21	9	33	42
6th	Mark Beesley	176	Cavalier	OS21 O/B	12	17	29
7th	Bernard Holder	86	Crusader 1	MDS 21	6	0	6

A class							
1st	David Clay	42	Orion	CMB 45VAC	32	48	80
2nd	Bernard Holder	86	Crusader 2	CMB 45	40	40	80
3rd	Craig Dickson	55	Crusader 3	SC 46	37	35	72
4th	Robert Daniel	17	Magnum	CMB 45	30	32	62
5th	Kurt Cave	7	Cougar	TT 46	24	19	43
6th	Luke Bramwell	6	Sea Spirit 2	SC 40	19	0	19
7th	Kian Searle	128	Crusader 3	ASP 46	4	11	15
8th	Mike Proudman	85	Shockwave 36	Dynamite 32	2	8	10

B class							
1st	Bernard Holder	86	Magnum	CMB 67	44	36	80
2nd	Malcolm Pratt	9	Apache 50	CMB 67	23	47	70
3rd	Garry Dickson	44	Challenger 48	Webra 61	30	39	69
4th	Mark Beesley	176	Unknown	ASP 61	4	32	36

C class							
1st	Bernard Holder	86	Magnum	CMB 90	45	45	90
2nd	Mark Beesley	176	XXX	CMB 91	46	36	82
3rd	Mike Gelson	36	Stratos	CMB 91RS	33	46	79
4th	Robert Daniel	17	Delta Force	CMB 91	37	27	64
5th	Andy Uttley	22	Arrow	CMB 101	37	17	54
6th	Ian Searle	126	Makara	CMB 91	24	20	44
7th	Harry Stuart	133	Warhawk	OPS 80	2	22	24

D class *(Boat D18 disqualified due to rule infringement)							
1st	Mike Barnes	4	Patriot	GIZMO 28	49	36	85
2nd	Garry Dickson	44	Miami 55	MPM 31	34	38	72
3rd	Mike Durant	8	Phantom	Gizmo GZ31	39	28	67
4th	Kurt Cave	7	Apache Chief	39 Blata	43	23	66
5th	Mark Beesley	176	Waverider	Zen 26	29	30	59
6th	Ken Dodd	78	Phantom	Zen 29	27	29	56
7th	Graham Stanley	29	Pipedream	Zen 26	15	36	51
8th	Mike Proudman	85	Isopon	Zen huffy 29	22	11	33
9th	Harry Stuart	133	Woody	GWS 26i	15	15	30
10th	Malcolm Pratt	9	Sigma	RCMK 30	3	24	27
11th	Ron Willets	108	Apache	RCMK	15	11	26
12th	Andy Uttley	22	Phantom	Tiger King	3	22	25
12th=	Ian Searle	127	Apache	RCMK	21	4	25
14th	Steve Abbott	18*	Pacer	RCMK	6	0	6
15th	Jack Hull	104	Pacer	MPM Zen 30	4	0	4
16th	Kevin Alcock	75	Patriot	RCMK/Zen/gizmo	0	0	0

Cat T1 class							
1st	Harry Stuart	133	R2 Silver Fox	OPS 45	27	24	51
2nd	Boyd Elson	72	X-Cat 38	ASP 46	26	14	40
3rd	Kurt Cave	7	F1	OS21ob	13	23	36

Cat T2 class							
1st	Malcolm Pratt	9	Aeromarine Cat	CMB91 RS	24	26	50
2nd	Garry Dickson	44	Mercury	MPM 31	29	17	46
3rd	Daz Elson	73	X-Cat 48	RCMK K30	29	5	34
4th	Kevin Alcock	75	Conquest	RCMK 27	11	13	24



Mark & Madelyn at the lap scoring desk.

Cat T1 class

The catamaran classes (T1 & T2) have heat durations of 10 minutes instead of 15 minutes, but the three competitors in this T1 class all did extremely well with some close racing. The rescue boat crew had relatively little work to do because the boats, in the main, kept going for the race duration. Harry Stuart with his OPS 45 powered R2 Silver Fox won first place with a total of 51 laps. Our youngest junior member of the day, Boyd Elson, gained second place with a healthy 40 laps total. He was running his ASP 46 powered X-Cat which was designed from scratch and beautifully hand built by Daz Elson. In the second heat Boyd was quick off the blocks for a great start, but then clipped a buoy which caused the boat to stall needing recover. If it wasn't for this, Boyd could have been in with the chance of a class win. Kurt Cave's OS 21 O/B powered F1 Cat came in with 36 laps to take third place.

Cat T2 class

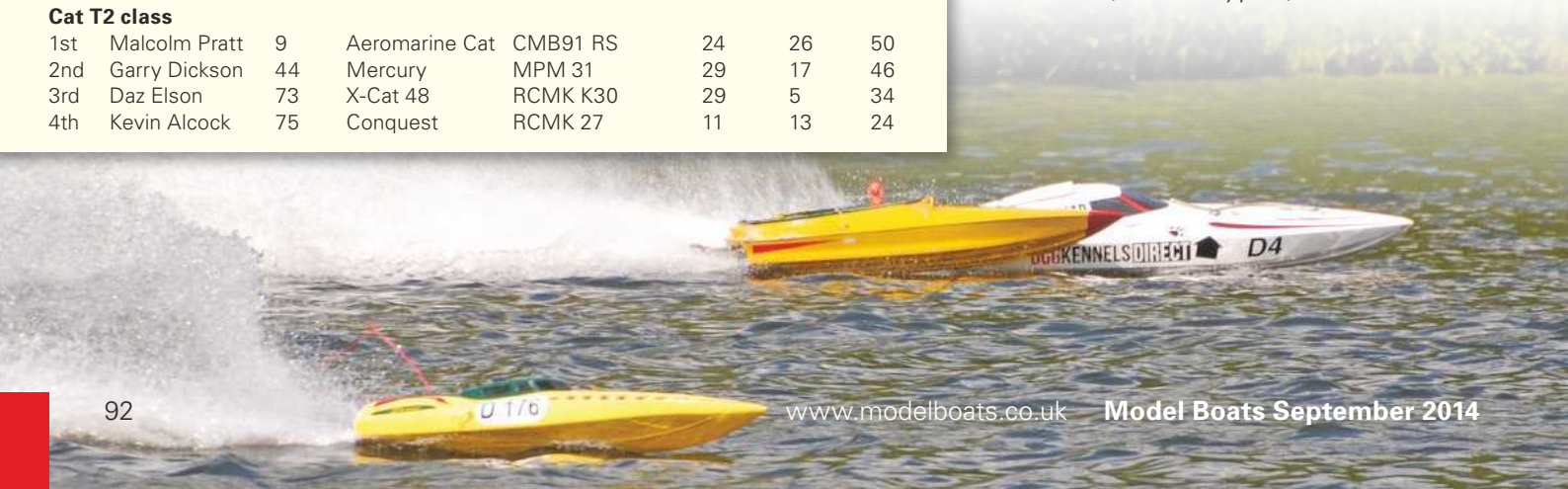
This features the larger catamarans that can have either petrol or nitro engines. The CMB 91 powered Aeromarine XXX of Malcolm Pratt had consistent scores in both heats and a total of 50 laps for first place. With 46 laps, Garry Dickson's MPM powered Mercury came home to take second place. Garry's second heat run lost several valuable laps after he pressed the Mercury perhaps a bit too hard resulting in a high speed flip-over needing recovery and a restart. Daz Elson's RCMK powered X-Cat clocked up 34 laps for a well deserved third place.

Kurt Cave had originally intended to race his super-quick Conquest, but unfortunately a failed rudder servo prevented him from racing.

Conclusion

A great day all round! Special thanks were given to Giles Ponting and his colleagues at Telford MBC for hosting the event; providing the vital rescue boat facility and allowing us to enjoy their excellent facilities. A big THANK YOU to Madelyn Reid for doing the demanding job of lap counting for all the 14 heats and special thanks to Judith Beesley as her photos on our BMPRS website are outstanding. It's worth taking a look!

D class action. (Judith Beesley photo)





The proud Telford winners.

Inexpensive nitro fuel marine engines

I thought a quick look at these would be handy. I suspect that some of you reading this will remember the days when there were many brands of marine nitro or glow powered engines available for boating use, but it seems that these days we are more limited as to choice. So, let's have a quick look at the SC/ASP engines that are not expensive to purchase, but which have proved popular and successful in the AA and A classes, despite a relatively low price. When set up properly, it is reliable, easy to start and a good choice for anyone wanting to have a go at our style of racing.

Photo 1 shows a side view of this 46 (0.46 cubic inches or 7.5cc) size engine for **A class** use. Note the watercooled cylinder head and alloy flywheel with a groove to take a starter belt. The carburettor on this engine incorporates two adjustable needles to alter the fuel mixture settings; a main needle for high speed settings and an idle needle for running at tick over. In terms of the exhaust manifold,

Photo 2 shows a manifold, hand-made by Bernard Holder. It incorporates a machined brass plate with a steel curved pipe hard soldered (brazed) on to the joint and of course a coil of copper tubing for water cooling, close to where a silicone sleeve will connect the manifold to the tuned pipe. This type of manifold works perfectly and is very durable.

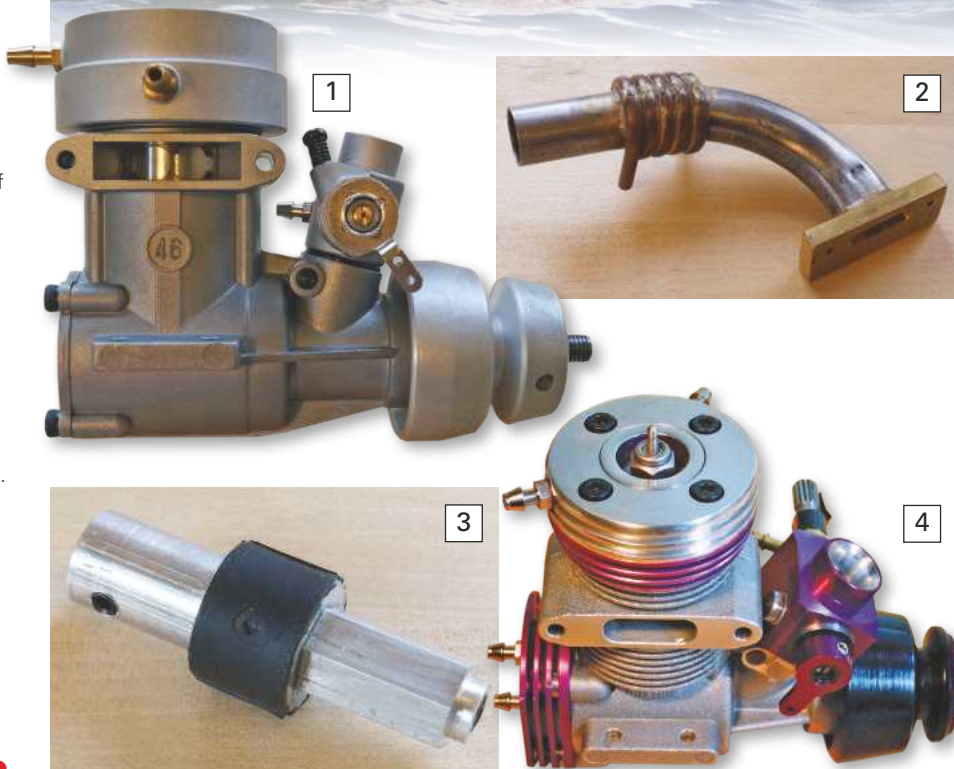
Photo 3 shows the coupling which delivers the power from the engine to (in this case) a solid propeller shaft. This coupling, also hand-made by Bernard, incorporates two alloy sleeves machined plain at one end to take a solid steel propeller shaft with a grub screw for clamping in-situ. At the other end, the sleeve is tapped to match the threads of the 1/4 UNF engine crankshaft. In the middle is a rubber bobbin which reduces vibration and noise and allows for a very small amount of misalignment. Ideally of course, it should be perfect, but we are all human! **Photo 4** shows a West 28 engine (4.5cc capacity) which qualifies for the smaller **AA class**. This engine incorporates a watercooled backplate and its components are beautifully machined giving a feel of quality, right out of the box.

In the next issue I will be including some information on the basic maintenance of racing boats, which is considerably more straightforward than many might imagine.

Craig Dickson - PR Officer



ABOVE: A55: Craig Dickson's Crusader 3 getting a bit lively! (Judith Beesley photo)
BELOW: D18 is by new member Steve Abbott - very nice!



TRAINS AT WAR

**SPECIAL
ISSUE**

Trains at War **SPECIAL ANNIVERSARY EDITION** looks at the various ways in which the railways helped to win the war including taking care of the wounded, getting troops and supplies to and from the front and protecting civilians when the bombs started to fall.

**ON
SALE
NOW!**

SPECIAL ANNIVERSARY EDITION

TRAINS

www.model-engineer.co.uk

AT WAR

HOW THE ALLIED RAILWAY NETWORK HELPED WIN THE WAR

THE LONG ROAD TO RECOVERY
RETURNING THE RAILWAYS TO FULL WORKING ORDER

AMBULANCE TRAINS
REDUCING THE HUMAN COST OF WAR WHILE ON THE MOVE

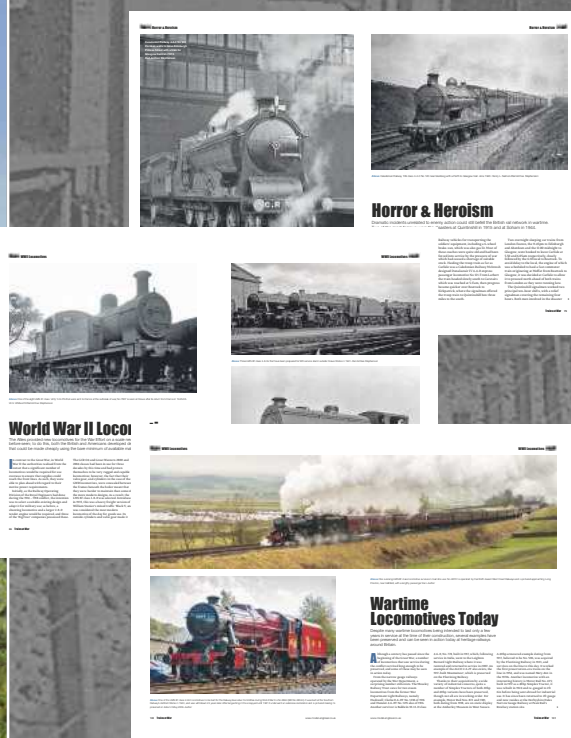
MODELLING WARTIME RAILWAYS
RECREATING THE TRAINS IN MINIATURE

WARTIME LOCOMOTIVES

BUILDING NEW ENGINES TO SERVE THE FRONT LINE

REMARKABLE SURVIVORS WHERE TO SEE WARTIME ENGINES FOR YOURSELF
WAR DEPARTMENT LIGHT RAILWAYS MOVING SUPPLIES THROUGH THE MUD
RAILWAYS ON THE HOME FRONT COPING WITH LIFE AT HOME IN WWII

mytime Hobbies HISTORY SERIES
 ISSUE 10014 PRINTED IN THE UK
 9 781907 063701

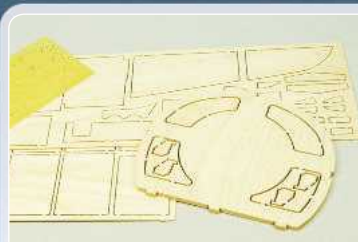


FEATURING:

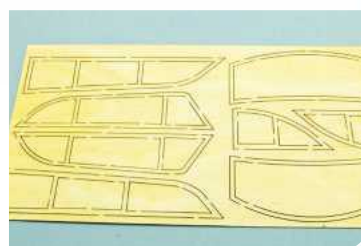
- Narrow gauge in WWI
- Ambulance trains
- WW2 Locomotives
- Railways on the Home Front
- Modelling Wartime Railways and much more...

Available at selected WHS High Street, Tesco and local newsagents, or order online at www.myhobbystore.co.uk/trainsatwar

WELCOME TO SLEC MANUFACTURING AND MODELLING



SLEC Limited • Units 8-10 Norwich Road Industrial Estate, Watton, Norfolk IP25 6DR
Tel: +44 (0)1953 885 279
Fax: +44 (0)1953 889 393 • Email: Sales@SlecUK.com
Shop online at: www.slecuk.com



We offer a comprehensive range of manufacturing facilities in Wood, Plastics and Composite. Plus we stock a large selection of finished products in plastics and metal accessories, Balsa & Hardwoods and a mixed range of Laser friendly Ply woods and MDF.

Puffin Models
www.puffinmodels.com

Puffin Models, Unit D3 Backfield Farm, Wotton Road, Iron Acton, Bristol BS37 9XD
Telephone Sales 01454 228184 E-mail info@puffinmodels.com
We are mail order specialists and a local model shop, please phone for direction



SOUTH GLOUCESTERSHIRE'S MODEL SHOP

SERIOUS ABOUT BOATS!

RADIOS

- Hitec Optic 5 - 5 channel 2.4GHz FHSS full range radio with Minima 6T Rx £72.50
 - Hitec Optic 6 Sport Combo 2.4GHz FHSS full range radio system £119.95
 - Hitec Optic 6 Sport set with servos, charger, NiMH radio batteries £149.95
- Jeti DUPLEX 2.4GHz radio systems in stock. Full 16 channels with more features than you could possibly imagine. Unbelievable quality!



ELECTRIC DUCTED FAN
We are Wemotec's Premier Dealer for UK, and can give you the best advice on fan systems



POWER BOATS

- Aeronaut Princess builders kit with laser cut wood parts, suitable for 600 and 700 motors with 6 to 10 cell battery packs or 2 to 3S LiPoly and 2 channel radio control £139.95
- Aeronaut Ramborator builders kit suitable for 600 motor with 6 cell 7.2V NiMH battery pack and 2 channel radio control. Easy to build with precise laser cut 2mm ply £74.95
- Aeronaut Capri builders for 600 size motors with 6 to 8 cell or 2 to 3S LiPoly battery pack and 2 channel radio control. The completed model is 700mm x 203mm, gorgeous after a couple of coats of clear varnish! £124.95
- Vlada 500mm semi-scale vac formed kits, full range with FREE 400 motor £35.95
- Vlada Falke 715mm fishing boat builders kit with ABS hull and wood strip for deck planking - we love this one! £69.95



ACCESSORIES

- Mega Mig 600 Turbo 12V BOAT motor with 3.2mm £14.95
 - Mega Mig 400 6v with 2.3mm shaft £4.95
 - JP 50A water proofed marine controller reverse £29.95
 - Graupner 30A water proofed marine esc reverse £33.95
 - Jeti Navy 600 OPTO controller with the option of water cooling, intended for brushed motors drawing up to 60A with 8 to 30 cells NiMH. £55.00
 - Graupner fast electric and scale marine props from £2.50
 - Pelikan GO servos from 3.7g to 17MG from £4.50
 - JP rudder in brass threaded plastic fitting and tiller £4.45
 - Aeronaut water cooling plate £11.95
- We are a major world dealer for Mega brushless motors, and we know how to use them!
Lots of marine accessories on stock

**Our prices include VAT
Orders are sent same day
Postage from £3.00 to £7.50**

BATTERIES

We sell HIGH QUALITY Li-Poly battery packs!



SAIL BOATS

- Dumas Hobie Cat with fittings, nylon sails, and parts for the hulls in mahogany sheet and ply. Designed for free sailing, but could be adapted for simple radio control. £29.95
- Aeronaut Clipper 17" builders kit with fittings, nylon sails, keel, and alloy spars for simple radio control. Perfect as a beginners or family project. £35.95
- Dumas 17" Ace "racing sloop" builders kit with fitting, nylon sails, and keel. The hull is mahogany, balsa and ply, and looks incredible when varnished! Designed for free sailing. £29.95



- Aeronaut Bella 810mm semi-scale builders kit of a 1950s day sailing yacht with laser cut mahogany and ply parts £149.95

Balsa Oak SLEC Ash Poplar
Spruce Cherry
Obechi Cedar
Plywood's Buy on Line Pine Bass
Beech www.slecuk.com Mahogany

Laser & Router Cutting Service

Slec Ltd Tel 01 953 885279 Fax 01 953 889393
E-mail : sales@slecuk.com

LIME - MAPLE - OBECHI - CEDAR
WALNUT - CHERRY - MAHOGANY
PEAR - PLYWOOD - MDF

Extensive range of
 SHEET and STRIPWOOD in both METRIC and IMPERIAL sizes

For lists S.A.E. to

Dennis Nixon
 TWIGFOLLY Attleborough Road
 Great Ellingham Attleborough. NR17 1LQ
www.twigfolly.com

MARCLE MODELS
Masterpieces in card



HMS Lion
 Scale 1:200 - £55.95

We stock a wide range of scale model ship card kits for you to build including:

Scale 1:200 - Full Hull	Admiral Hipper.....£45.95
HMS Prince of Wales.....£51.95	SMS Seydlitz.....£56.95
HMS Matabele.....£25.95	Great Eastern.....£54.95
HMS Badsworth.....£26.95	Scale 1:400 - Waterline
HMS Abercrombie.....£29.95	HMS King George V.....£12.95
USS Missouri.....£59.95	HMS Ajax.....£11.95
USS Saratoga CV-3.....£49.95	HMS Exeter.....£11.95
Graf Spee.....£29.95	HMS Sheffield.....£10.95
Tirpitz.....£58.95	HMS Belfast.....£11.95
	HMS Roberts.....£8.95
	Gneisenau.....£22.95
	Raider Atlantis.....£18.95

Normandie.....£25.95
 RMS Mauretania.....£18.95
 Edmund Fitzgerald.....£8.95

Send your order with cheque/PO/credit card details to Marcle Models (MB6), Turnagain, Finch Lane, Amersham, Bucks. HP7 9NE, England Tel/fax 01494-765910 (24 hrs.) www.marcle.co.uk Prices include UK P&P - overseas surcharge per order: Europe £5, ROW £9. Send £4.50 (overseas £6.50 surface, £8.00 airmail) for our illustrated catalogue.

***14-day "NO QUIBBLE" MONEY-BACK GUARANTEE** (*if returned in a saleable condition)

Book "Card Modelling - Basic & Advanced Techniques" - £17.95 UK, Europe £22.95, ROW £25.95

VISA MasterCard American Express

Only available direct from the manufacturer, not from any retail outlet!

Club500 Slipway



Model Specifications:
 Length: 515mm
 Beam: 180mm
 ...includes motor, propshaft and Tube Propeller, Coupling and Rudder assembly with over 200 possible colour combinations and a rainbow mix of colours.

Club 500 Racing...
 ...continues to be ever popular at our model clubs so contact us for the latest updates on current models, colours and accessories available NOW!

Ordering is only via the website: **www.club500slipway.com**
 or by telephoning: Malcolm Griffith at Club 500 Slipway, 59 Shackleton Drive, Perton, Wolverhampton WV6 7SA. * Tel/fax: 01902 746905
 * Mob: 07884 071 122 * email: club500@hotmail.co.uk

FLEETSCALE

WWW.FLEETSCALE.COM

GLASSFIBRE BOAT & WARSHIP HULLS.
 FITTINGS AND SEMI KITS
 IN MOST SCALES AND ERAS

EXTENSIVE
 SECURE ONLINE STORE

MILITARY & CIVILIAN RANGES

19TH, 20TH & 21ST CENTURY

1/12TH, 1/32ND, 1/48TH,
 1/72ND, 1/96TH, 1/128TH

TEL: 01822 832120
 FAX: 01822 833938

WESTWARD MOULDINGS LTD

Australia's Premier Maritime Hobby Shop

FLOAT a BOAT

Fine Models Since 1982

48c Wantima Road, Ringwood Victoria 3134 Australia
Tel. 61 3 9879 2227
 www.floataboat.com.au Mail Order

MANTUA MODEL UK LTD

Boat kits and Fittings from:

Mantua, Sergal, Pannart range of products.
 Walnut Mahogany, Birch ply & Lime Woods.
 S.A.E. for list & free leaflet.

Full catalogue £14.95 + £2.95 p&p
 179 Dedworth Road, Windsor, Berks, SL4 4JN
Tel 01753-856321 Fax 01753-857444
www.mantuaamodel.co.uk



The Leading Manufacturers of Precision Cast Propellers and Drives

Send for our fully illustrated catalogue £3.75 inc. postage
 Tel: 01295 263134 Fax: 01295 270461

Visit our website: **www.prop-shop.co.uk**
 email: **info@prop-shop.co.uk**

Swan Precision Castings & Engineering Ltd.
 Swan Close Road, Banbury, Oxfordshire
 OX16 5AL Tel: 01295 263134 Fax: 01295 270461

SWAN
 A Swan Group business

25TH MODEL BOAT CONVENTION

SAT 23RD & SUN 24TH OF AUGUST 2014

THEME 'NAVAL VESSELS & SUBMERSIBLES' HAYDOCK RACE COURSE

Newton-le-Willows, Merseyside WA12 0HQ. Signed from M6 J23
 Hundreds of models on display. Competitions.
 Trade Stands, Pond for 'Have a Go'

Admission £6.00 (Adult), £2.00 (Child under 16), Children under 5 free.
 Doors Open 10.00 am, Close 5.00 pm Saturday & Sunday.

Refreshments and Snacks Available. Free Parking. Disabled Facilities

For further details contact Mrs Jean Barlow,
 phone: 01492 583433 mobile: 07789 348817
 e-mail: barlow777@btinternet.com

Also see our website at **WWW.MODELBOATCONVENTION.CO.UK**

BERKSHIRE
WINDSOR

Mantua Model UK Ltd 179 Dedworth Rd,
Windsor SL4 4JN www.mantua-model.co.uk
Tel: (01753) 856321 Fax: (01753) 857444
Specialist in cars, planes, boats, Tools and Wood centre
Mon - Sat: 9.30am-6.00pm

LANCASHIRE
SKELMERSDALE

Scale Hobbies Unit 20, Sandy Lane, Skelmersdale,
Lancashire WN8 8LQ. Tel/Fax: (01695) 732800
Mon-Sat. 9.30am-5.00pm. Closed Tues & Thurs
Mail Order! • Building and Repair Service
ALL MAJOR CREDIT CARDS ACCEPTED!

LEICESTERSHIRE
LEICESTER

Midway Models
157 St. Leonards Rd, Leicester LE2 3BZ
Tel: (0116) 2701609
For boats & fittings. Catalogue: £3.50 UK £5 Overseas.
Tues - Sat: 9.30am-5.30pm

TYNE & WEAR
**Gladston's
North Shields Model Centre**

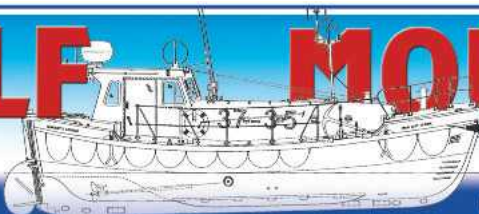
99, Bedford Street
North Shields
Tyne and Wear
NE29 6QJ
T: 0191 257 0335
F: 0191 257 4546
W: www.modelkit.co.uk
E: sales@modelkit.co.uk
Mon-Sat 9am-5pm
Mail order available
Boats, subs, cars, aircraft,
hulls, static or RC. Materials,
tools, accessories, we just
about have the lot!

WEB GUIDE

 Call **01689 869 852**

METCALF MOULDINGS

Manufacturers of
Scale Model Boat Kits



www.metcalf-mouldings.co.uk
email: metcalf.mouldings@virgin.net

Reade Models

Your One-Stop source of high quality injection moulded
model ship and aircraft fittings, fabric flags, vinyl decals
and lining products

www.reademodels.com



www.maritime-models.co.uk

Stockists of kits from Caldercraft, Mamoli, Krick and
Aerokits plus Aeronaut fittings, Becc accessories, tools
paints, props, propshafts, couplings & much more.

Check out the web-site for more details.
Commissions and restorations also undertaken.

E-mail: info@maritime-models.co.uk or Telephone: 01432 263 917



www.lambert-plans.com

Tel: 01525 864862

Website: www.lambert-plans.com

Email: lambert.plans@btinternet.com

JOHN LAMBERT

NAVAL ILLUSTRATOR & AUTHOR

Warships & Naval Weapons of 'DD' size and below

For the warship buff, scratchbuilder
and naval historian.

www.makeamodelboat.com



Visit our web site for model
boat plans and a construction
manual based on designs
from the Selway Fisher
catalogue of full-size canoe,
dayboat, motor boat, steam
launch and yacht designs.

Tel/fax: 01225 705074
E-mail: paul@makeamodelboat.com



ALWAYS IN STOCK:

Huge range of
miniature fixings,
including our socket
servo screws.

ModelFixings.co.uk

also the home of ModelBearings.co.uk

- Taps, Dies & Drills • Adhesives
- Engine & Miniature bearings • Circlips, etc. etc.

Tel/Fax +44 (0)115 854 8791 Email: info@modelfixings.com

MMB is a well-established company based in Newport, South Wales



Marks Model Bits

Manufacturer of the foggy smoke generator,
MB kits, fittings, prop-shafts etc.

www.marksmodelbits.com

Tel: 01633 843949 * email: mmbshop@hotmail.com
Unit 1, Herbert Road, Newport NP19 7BH.

Famous lifeboat kits, 1/8th scale Bluebird K7 for Jet power
New fully functional 1/16th Landing craft

New fast electric club racer. **New** 200mm Fairey Huntsman

www.speedlinemodels.com



Restorer of Ships, Galleons, Steam
Engines, Toy Trains, Toy Steam
Plants and more.

Models made to order

JSB Model Restorations

Rolling back the playworn years

www.jsbmodelrestorations.com

E: Jeremy@jsbmodelrestorations.com T: 01738 441975 M: 07748 186812

HOWES MODELS

Fast Mail Order **01865 848000** Overseas postage at cost
Unit 2C & 2D Cherwell Business Centre
Rowles Way, Kidlington OX5 1LA (Part of Station Field Industrial Estate)

www.howesmodels.co.uk

Tugging Ahead.....with
MOBILE MARINE MODELS
MODEL TUGNOLOGY.....at its Best

tel: 01522 730731

Britain's Leading Manufacturer of :-
Tugs; Workboats; Hulls; Kits; Propulsion Gear
Fittings; Winches; Lighting Sets; Budget Boats

Pioneers of the **The Budget Building System**

www.mobilemarinemodels.com



model Boats
www.modelboats.co.uk

www.SERVOSHOP.co.uk
Servos and accessories from...
Futaba
Sanwa
J.R.
Hitec
Saturn
Protech
...as well as many many more!
Also model kits and accessories from
World Models, ENYA engines and
more. Items added regularly! Safe and
Secure online shopping!



100s of items reduced online!

Order at www.dollshouse.com or call 01332 912989 now!



Many more offers online at dollshouse.co.uk/modb13



98% service rating for
the past 6 months



facebook.com/dollshouseemporium



twitter.com/dollshouse



pinterest.com/dollshouses

dollshouseforum.co.uk

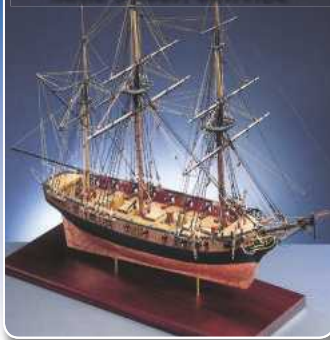
dollshouseblog.co.uk



Good to know: We share our customers' enthusiasm for their hobby – regularly posting pictures of their projects online on our company blog. Quite simply, it's something we enjoy!

100s more items on offer only online! visit www.dollshouse.co.uk/modb13
to order or call 01332 912989 now!

**SECURE ON-LINE
SHOPPING AND WORLDWIDE
MAIL ORDER SERVICE**



CORNWALL MODEL BOATS

www.cornwallmodelboats.co.uk

Unit 4D, Highfield Road Industrial Estate, Camelford, Cornwall PL32 9RA

Telephone: **01840 211009**

MAIL ORDER ONLY

FREE UK SHIPPING ON ORDERS OVER £150

**WE STOCK A WIDE RANGE OF RADIO CONTROL
AND STATIC DISPLAY KITS, FITTINGS, TOOLS & PLANS.
SECURE ONLINE SHOPPING AND MAIL ORDER SERVICE**

Amati Kits

Arno XI Ferrari 800kg Hydroplane	£329.00
Arno XI Ferrari Pre Built Hull	£384.00
Chinese Pirate Junk	£84.95
Endeavour 1:35 Wood Hull	£259.00
Endeavour (Wood Hull) 1:80	£76.95
Endeavour Pre Formed Wood Hull 1:50	£239.95
Enterprise Pre-formed 1:80	£77.00
Grand Banks Motor Yacht	£397.00
Greek Galliot	£105.95
HMAV Bounty 1787 1:60	£222.00
Mayflower, English Galleon 1620	£159.95
Oseberg Viking Ship 1:50	£99.95
Rainbow (pre-formed) 1:80	£76.90
Rainbow (Wood Hull) 1:80	£79.90
RMS Titanic	£379.00
Robert E Lee	£243.99
Viking Ship	£99.95

Artesania Latina

Bounty Jolly Boat	£58.99
HMS Victory 1:84	£679.99
King of the Mississippi	£143.00
Titanic Lifeboat	£58.99
Santa Maria	£121.50
US Constellation, American Frigate 1:85	£277.00
Swift 1805	£89.00

Billing Boats

Absalon	£450.00
African Queen	£138.00
Andrea Gail 1:60	£89.95
Bluenose	£125.95
Boulogne Etaples 1:50	£149.99
Building Slip	£44.98
Calyppo Research Vessel 1:45	£365.99
Colin Archer 1:40	£85.00
Cutty Sark 1:75	£266.95
Fairmount Alpine	£324.95
HMS Reknown	£75.95
HMS Warrior	£449.99
Nordkap 1:50	£269.94
Smit Nederland 1:33	£319.99
Smit Rotterdam 1:75	£266.95
Viking Ship Oseberg 1:25	£111.98
Waveney Lifeboat	£39.95
USS Constitution	£188.99
Will Everard 1:67	£71.94

Caldercraft RC Kits

Alta Liebe	£264.95
Branneran	£299.95
Cumbræ	£266.95
Imara Twin Screw	£458.95
Joffre	£251.95
Marie Felling Single Screw	£395.95
Milford Star	£228.95
Northlight	£251.95
Resolve	£508.95
Sir Kay	£294.95
Talacre	£251.95
The Motor Fife "Amaranth"	£121.94

Caldercraft Static Kits

HM Bark Endeavour	£224.95
HM Bomb Vessel Granado	£204.95
HM Brig Badger	£165.00
HM Brig Supply	£134.95
HM Cutter Sherborne	£71.95

HM Gunboat William	£167.95
HM Mortar Vessel Convulsion	£89.95
HM Schooner Ballahoo	£59.95
HM Schooner Pickle	£124.95
HM Yacht Chatham	£83.95
HMAV Bounty	£184.95
HMS Agamemnon	£588.95
HMS Cruiser	£193.96
HMS Diana	£440.95
HMS Jalouse	£204.95
HMS Mars	£183.00
HMS Snake	£193.96
HMS Victory	£709.50
Mary Rose	£242.00

Constructo Kits

Albatros	£76.94
America Schooner	£99.73
Cutty Sark	£179.54
HMS Bounty	£176.11
HMS Victory	£331.73
Le Pourquoi-Pas	£189.98
Louise	£82.07
Mayflower	£176.11
Robert E Lee	£167.57
USS Constitution 1:82	£297.53

Corel Kits

Berlin	£330.00
HM Endeavour	£196.00
HMS Bellona	£299.00
HMS Neptune	£264.00
HMS Resolution	£169.00
HMS Unicorn	£205.00
HMS Victory	£317.00
HMS Victory Cross Section	£99.00
Prince William	£334.00
Ranger	£66.00
Reale de France	£540.00
Scotland	£66.00
Wasa	£405.00

Dumas static kits, RC available

Ace racing Sloop	£29.99
Chinese Junk	£19.99
Chris Craft 1930 24" Runabout	£53.99
Chris Craft 1938 27" Triple cockpit	£53.99
Gondola	£17.99
Viking Ship	£19.99

Euromodel Como Kits

Ajax 18th Century European Frigate 1:72 Scale	£518.95
Derfflinger 17th Century Felucca 1:66 Scale	£260.95
Falmouth 18th Century "East India"	£594.94
La Renommee 18th Cent Frigate 1:70 Scale	£602.95
Lyde 18th Century Schooner 1:70 Scale	£296.95

Joysway - Ready to run models

Magic Cat 2.4	£47.50
Magic Vee	£47.50

Sea Drifter EP Brushless	£360.00
Caribbean Yacht 1:46	£52.00
Dragon Force Yacht	£148.99
Explorer Yacht	£148.99
Focus 1 meter yacht	£218.99

Krick Kits

Alexandra Steam Launch inc Fittings	£300.00
Anna Steam Launch	£100.00
Borkum Steam Launch inc Fittings	£339.00
Felix	£88.93
Lisa M	£104.95
Gulnara	£271.99
U-Boat	£326.95
Victoria Steam Launch inc Fittings	£355.00

Mamoli Kits

Blackbeard Pirate Ship	£110.00
CSS Alabama	£202.00
Golden Hind	£180.00
HMS Beagle 1:64	£173.00
HMS Bounty 1:64 Scale	£211.00
HMS Endeavour 1:100 Scale	£115.00
HMS Portsmouth 1:64	£156.00
HMS Prince	£256.00
HMS Surprise	£305.00
HMS Swift	£126.00
HMS Victory 1:150 Scale	£260.00
L'Orenoque	£300.00
Roter Lowe	£283.00
Valiant	£173.00

Modellers Shipyard

Colonial Sloop Norfolk 1798	£203.95
Colonial Schooner Port Jackson 1803	£249.95

Mantua Kits

Amerigo Vespucci	£296.00
Armed Swedish Gunboat	£140.00
Astrolabe. French Sloop 1812	£197.00
Bruma Open Cruiser Yacht 1:43	£165.00
Golden Star	£77.00
HM Endeavour Bark 1768 1:60	£156.00
HMS Victory 1:200 Scale	£103.00
HMS Victory 1:98	£283.00
Mercator	£145.00
Mincio	£94.00
Le Superbe	£322.00

Occre Kits

Albatros	£79.00
Apostol Felipe (Galleon)	£216.00
Bounty with Cutaway Hull Section 1:45 Scale	£257.00
Cazador Xebec	£180.00
Diana (Frigate)	£216.00
Dos Amigos Brigantine Schooner 1:53 Scale	£106.00
Gorch Foch	£320.00
Nuestra Senora del Pilar 1:46 Scale	£450.00
Mississippi Paddle Steamer	£180.00
San Marcos (Galleon)	£215.00

**SPECIALIST ADVICE
AVAILABLE!**



**AEROKITS, AERONAUT,
AMATI, BILLING BOATS,
CALDERCRAFT, DUMAS,
COREL, GRAUPNER,
PANART, KRICK,
MAMOLI, MANTUA,
OCCRE, ROBBE, SERGAL**

Santisima Trinidad	£358.00
Santissima Section	£115.00
Ulises	£195.00
London Tram	£105.00
Dennis Bus Type B	£95.00
Stephensons Rocket	£72.00

Panart Kits

Amerigo Vespucci 1:84	£670.00
Anteo Harbour Tug	£329.00
Armed Naval Pinnace	£132.00
HMS Victory 1:78 Scale	£389.00
HMS Victory Bow Section	£173.00
Section Deck	£130.00
San Felipe	£583.00
The Royal Caroline	£265.00

Pro Boat - Ready to Run

Impulse 26	£170.00
Westward 18 Sailboat	£139.50

Robbe Kits

Dolly Harbour Launch 1:20 - New Version	£129.95
Dusseldorf 1:25 Almost Ready to Run	£374.95
Magin One Black Race edition	£189.98
Magin Two	£190.00
Paula IV	£165.00
Sylt Police Boat	£549.95
Rapido 600	£139.99

Sergal Kits

Cutty Sark	£358.00
HMS Bounty	£174.00
HMS Peregrine	£182.00
HMS President Light Frigate	£77.00
HMS Racehorse	£77.00
Mississippi 1870	£356.00
Soleil Royale 1669	£710.00
Sovereign of the Seas	£710.00
Thermopylae	£77.00
Wasa	£710.00

Thunder Tiger

ETNZ 1M Racing Yacht	£219.95
Naulantia 1M Yacht	£149.99
Team china 1M yacht	£219.95
Desperado Jr. ARTR Catamaran	£119.99
Outlaw JR OBL Power boat Combo	£165.95

Victory Models

HM Granado	£261.95
HMS Fly	£289.00
HMS Pegasus	£344.00
HMS Vanguard	£684.00
Lady Nelson	£117.95
Mercury Russian Brig	£354.00

Plastic models also available in:

Airfix, Revell, Trumpeter and many more!!

ALSO: ALL THE HARDWARE, BUILDING MATERIALS AND RC EQUIPMENT REQUIRED TO COMPLETE YOUR MODEL

Visit the website for our full range of kits:

www.cornwallmodelboats.co.uk

email: sales@cornwallmodelboats.co.uk



All prices correct at time of going to press

Mtroniks

marine rc products for all

24 month warranty

NEW! SOUND MODULE FROM Mtroniks

Why buy a sound module from Mtroniks?

The new digiSOUND5m sound module from Mtroniks is the worlds first 100% waterproof, plug in and go, realistic sound module designed specifically for the RC model boat market. It is easy to install and even easier to set up.....because there is no set up! You simply plug it in and use your model as normal, only now it will sound real!!

Features:

- 100% waterproof
- Incredible small size and weight
- Built in amplifier
- 6 to 12V operation
- Realistic sound reproduction taken from real boat engines
- Volume control
- Plug and go operation
- No set up or PC interface to confuse
- Auxilliary horn sound
- Splashproof speaker and all connections included



digiSOUND5m

SRP £59.99

Why buy from the Mtroniks marine range of speed controllers?

All Mtroniks marine controllers are 100% waterproof, all have a built in failsafe, all have intelligent current limiters. These three features make the Mtroniks marine controllers the safest and most reliable on the market.

With the addition of the new tio marine controllers, that include LiPo battery support, to the already existing Viper range, there is now a speed controller for every type of model boat and every type of model enthusiast.

Features:

- 100% Waterproof
- Built in failsafe
- Current limit protection
- 6 to 12V operation
- Lipo safe (tio controllers only)
- Forwards/Reverse - Symmetrical
- 5.0V/1.2A BEC
- Ultra fine throttle response and slow control

NEW! tio

Marine speed controllers
Li-Po battery support!



SRP £26.99

SRP £39.99

SRP £22.99

SRP £22.99

SRP £27.99

SRP £34.99

SRP £49.99

For more info see www.mtroniks.net

Mtroniks marine products are available from all good model shops, we are always available for advice direct

High quality speed controls designed and manufactured since 1987 in the UK



41A Ilkley Road, Otley, LS21 3LP, UK
Tel: +44(0)1943 461482 Fax: +44(0)1943 468335

www.mtroniks.net
enquiries@mtroniks.net

25 years of know how