

Headcorn Aerodrome, Kent





A Dunkirk 'Little Ship' (FREE PLAN)



Model Dockyard



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Deans Marine Kits

Compass Rose. Corvette1:96 673mm H.M.S. Solebay.Destroyer 1945 1210mm MGB77. 71.6ft BPB 1:24 920mm 73ft Vosper Type 1 1:24 scale 965mm £249.74 £269.46 £105.51 £176.14 £290.13 £91.66 £136.95 £288.37 7stt Vosper 1ybe 11-24 scale secomm Fronnington, minesweeper 1:100 465mm Steam Yacht Medea 1904, 1:48 870mm H.M.S. Cossack Destroyer 1938 1200mm Response. Steam Picket Boat 1:36 460mm Royal Marine. Minesweeper 1:100 619mm Landing Ship Medium 751, 1:72 scale 910mm Helen. Henley Steam Launch 965mm Skirmisher Sentinel Class Cruiser 1143mm ASR 130. 631 BPC £181.51 £280.27 ASR 130. 63ft BPC ASR 174 . 63ft Whaleback A.S.R £180.37 £177.31 This is just a selection of the huge range available.

Plastic Kits

Trumpeter HMS Hood 1;200 scale Trumpeter HMS Nelson 1:200 scale Trumpeter HMS Rodney 1:200 scale
Trumpeter HMS Rodney 1:200 scale
Trumpeter USS Missouri 1:200 scale 1352mm
Merit USS Hornet 1:200 scale £251.99 £314.99 £287.99 Trumpeter Bismarck 1941 1:200 scale 1265mm Trumpeter USS Arizona BB-39 1941 1:200 Trumpeter USS Arizona BB-39 1941 1: Heller HMS Victory 1:100 scale Heller Le Soleil Royal 1:100 scale Heller Le Soleil Royal 1:100 scale Haler Schnellboot S-100 1:35 Iltaleri MTB77 1:35 scale 632mm Haleri PT109 Torped D Bat 1:35 scale MTB Vosper SI. Nazzirer Raid MTB 74 Trumpeter HMS Repulse 1941 1:350 Trumpeter HMS Hood (1941) 1:350 Trumpeter Prinz Eugen 1945 1:350 Trumpeter Prinz Eugen 1945 1:350

Plastic Kit Upgrades

HMS Dreadnought 1907 Railing Set 1/350 HMS Hood detail sheet pack 1:350 scale Bismarck etched detail Tamiya Bismarck 1:350 Prince of Wales cranes & railing 1:350 S-100 Schnellboot gun detailing etch 1:35 Jeremiah O'Brien Liberty Ship etch 1:350 Prinz Eugen etched set. 1:350 scale £22.60 Vosper MTB 1:72 scale
Prince of Wales etch sheet pack 1:350
Admiral Hipper etched sheet set 1:350 scale
U-boat VIIC/41 for 1:72 scale Reveil lit
Gato class submarine for 1:72 reveil lit
Elco PT596 1:35 scale
Triptz (desliped to be used with Tamiya kits)
Wooden deck & Etch for Bismarck 1:200
DX Wooden deck & Etch for Bismarck 1:200
DX Wooden deck for HMS Hood 1:350 scale
DX Wooden deck for FMS Hood 5:360
DX Wooden deck for FMS Flood 5:360
DX Wooden deck for FMS Flood 5:360
Wooden deck for FMS 5:360
Wooden deck for PSID Fluen 1:350 scale
Wooden deck for PSID Fluen 1:350 scale Vosper MTB 1:72 scale £22.60 Wooden deck for Prinz Eugen 1:350 scale
DX Wooden deck for Prinz Eugen 1:350 scale
DX Wooden deck and etch for Missouri 1:200
DX Wooden deck and etch for Hornet 1:200
DX Wooden deck and Railing for Warspite 1:350 £53.80 DX Wooden deck and Railing for Warspite 1:350 ES
DX Wooden deck & etch for Arcona 1:200 2:26
DX Wooden deck and etch set for Hood 1:200 2:26
Wooden deck for FMS Hood 1:200 1:200
Wooden deck for Graf Speet 1:350 scale 5:20
Wooden deck for Graf Speet 1:350 scale 5:20
DX Wooden deck for FMS Repulse 1:350 scale 5:20
DX Wooden deck and Railing for Bismarck 1:350 5:27
Flower Class Corvette Deck & Fittings Set 1:72 2:37
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Hull and Plan Sets

Shirley Ann Inshore Trawler 1:16 scale 685mm Victoria Steam Launch 1:12 scale 762mm Pilot 40. Pilot boat 698mm Bluebird Of Chelsea . 1:24 scale 554mm Director Paddle Tug . 1:48 1003mm Guardsman Customs Iaunch 1:32 scale 571mm Smit Nederland Hull 558mm St Louis Belle Mississippi Steamer 838mm Liverpool Lifeboat I 905mm 1:12 s Cervia, Thames Tug 1:48 scale 711mm £101.00 Tyne Life Boat 1:19 scale 787mm Brave Borderer 1:32 scale 914mm

Harold Underhill Plans

Cutty Sark Clipper Ship 698mm £32.40

Marie Sophie of Falmouth 1033mm Lady of Avenel. Wood. 850mm 74-Gun Two-Decker (Circa 1813 1422mm Lady Daphne Thames Sailing Barge812mm 12-Gun Brig-of-War. Lines, 1187mm Cunard Liner Servia, 1:192 scale 850mm 40-Gun Frigate (Circa 1790 831mm Valerian. Brikham Trawler 1069mm. Diesel Ring Net Fishing Boat 615mm Three Brothers. Rye Fishing Smack. 797mm Muirneag. Scottish Zulu-1612mm Clyde Puffer Sealight, 588mm Mulrieag, Scottish Zulu- 1612mm Clyde Puffer Sealight, 588mm Leon, Wood Brigantine 514mm Iron Paddle Tug 1:48 scale 863mm This is just a selection of the range available

R/C Boat Plans

R/C Boat Plans

MM1348 Miranda Steam Launch-42in
MM1348 Miranda Steam Launch-42in
MM1040 Enterpise: 1:12 Northumbrian Coble
MM1390 Tyne Lifeboat; 740mm 1:19 scale
MM1269 H.M. S linfexhibe hatter-curiser 1:192
MM1265 H.M. S lomend destroyer 1:96
MM609 Brave Borderer: 36in Vosper P.B
MM607 L.M. S Hood: 1:192 scale
MM1367 H.M.S Hood: 1:192 scale
MM1367 North Wherery: 1:48 scale
MM1267 L.H.M. S Ark Royal: 1:192 scale
MM1290 Tank Landing Oraft MKIV: 1:48 scale
MM1290 Tank Landing Oraft MKIV: 1:48 scale
MM159 Dinyth's 16 tot salling dinyty2 fin
MM412 Range Safety Launch: 1:12 scale 43in
MM1290 Director: navy paddle tug. 1:48 scale
MM1395 Celia Jane: Salling Barge: 1:24
MM1365 Celia Jane: Salling Barge: 1:24
MM367 Cervia: Thames tug in 1:48 scale
MM1397 T.M.S. Kent: 1:98 early crusier S8in
MM1920 L. Stent: 1:98 early crusier S8in
MM1920 L. Stent: 1:98 early crusier S8in £17.50 MM897 H.M.S Kent: 1:96 early cruiser 58in MM1202 H.M.S Dreadnought 33in MM1310 Clochlight Clyde Puffer 1:36 MM1448 Liverpool Lifeboat: 1:12 scale MM268 St. Louis Belle: stern-wheeler 33in. MM3178 Inchcolm Clyde puffer 1:32 scale MM1787 Reives Brixham saling trawler 1:60 MM1788 Victoria: Thames steam launch 1:12 MM378 Telleren motor fishing boat 1:24 MM1444 Pilot 40 police/pilot launch 271/6 MM500 Cossack: 38in Tinbal class destryer als MM1305 Victoria: Thames 1:24 scale MM1407 Smit Nederland: 1:28 scale tug. This is just a selection of the huge range availa £22.50 £29.00 This is just a selection of the huge range available.

Static Display Kit Plans
1004 Greek Bireme plan 560mm
1006 Vikingship, Osjberg plan 1:50 440mm
1009 Santa Maria plan 1:65 scale 540mm
1013 Mayllower plan, Scale 1:60.
1016 HMS Prince plan 750mm
1019 Greek Galley plan, Length 560mm
1019 Greek Galley plan, Length 560mm
1021 Chinese Junk, plan 1:100 400mm
1028 HMS Victoryplan , 1:100 950mm
1028 HMS Victoryplan , 1:100 950mm
1028 HMS Vountyplan 1:60 720mm
1040 New Bedford Whaler plans 1:16. 550mm.
120003 Riva Aquarama plan 1:10 scale 860mm
120010 BC Adeavour J Class Plan 1:35 1130mm
1200182 Endeavour J Class Plan 1:35 1130mm
1200182 Endeavour J Class Plan 1:35 1130mm
1200183 Titanic Plan 1:250 1070mm
1100108 HwS File Plan 1:46 800mm
1100104 HMS Fy Plan 1:46 800mm
1100104 HMS Vanguard Plan 1:72 1171
1101005 HMS Pagasse plan 1:64 800mm Static Display Kit Plans £13.80 £24.50 £9.33 £8.58 £49 49 £26.11 1100/06 Mercury plan 1:64 860mm 969 HMS Victory plans, Scale 1:78. £29.95 969 HNS Victory Jans, Scale 1:16.
975 Victory Bow section, plans, Scale 1:16.
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900 Victory Long Boat, plans, Scale 1:18.
This is just a selection of over 1000 plans available £19.50 £27.95 £19.95 £28.50

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Viper Marine 40 amp speed controller	£
Viper Marine 25 amp speed controller	9
Hi Tech Mega Arm Sail Winch 19.8kg/cm	2
Viper Marine 20amp speed controller	9
Viper Marine 15amp speed controller	9
Viper Micro Marine 10amp speed controller	9
Viper Marine 15 Plug Play speed controller	9
Mtroniks High PowerMicro Switcher	9
Programmable mixing module	2
Waterproof mixing module (w-tail)	9
Full range of R/C installation equipment available	

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Motors	

Schottel drive unit 40mm dia prop	£72.12
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Schottel drive unit 70mm dia prop	£110.34
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Motor mount for MFA 800/850 Motors	£4.50
385 Motor 6 to 15.0 Volt with mount	£6.89
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MFA 385 Motor and 2.5:1 Gearbox 4.5 -15v	£18.43
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951 series 951 Motor and Gearbox 298:1 6volt,	£9.44
800/850 Belt Drive Reduction Unit 2.1:1	£42.84

Rudder Assemblies

GR2367 Becker Rudder 43 x 38mm GR430/35 Rudder assembly 35mm x 29mm GR430/45 Rudder assembly 44mm x 38mm GR430/55 Rudder assembly 54mm x 47mm MA306240mm x 27mm Rudder Assembly RO1433 Steerable Kort nozzle with 50mm I/D £9.90 £10.18 RO1487 Fixed Kort nozzle with 60mm dia prop RO1591 Rudder assembly 30x27mm U1 45mm x 30mm Rudder U2 53mm x 36mm Rudder U3 67mm x 44mm Rudder **Coupling Assembles**

Single Universal Joint Coupling E8 Double Universal Joint Coupling £14 Coupling £14 Coupling set includes one UJ. 2 inserts of your choice and an allen key, Inserts sizes £20, £3, 3.0, 4.0, 5.0, 6.00mm plain M3, M4, M5 thread \$250, \$2

Standard M4 Propshafts			
4in long tube 4mm threaded Propshaft	£7.55		
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7in long tube 4mm threaded Propshaft	£8.70		
8in long tube 4mm threaded Propshaft	£8.95		
9in long tube 4mm threaded Propshaft	£9.30		
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Water Proof Propshafts

300/00 WP	Propeller	Shaft M4	290mm	£29.82
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Bow thruster unit with	motor 19	9mm I/D		£39.00
Bow thruster unit with	motor 22	2mm I/D		£44.75
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Mini Bow thruster uni	t with mo	tor 10mm I/I	D	£31.20
Bow thruster unit with	motor 30	mm I/D		£93.48

Acet CAR Meguette Eittin

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CAP/R114 Modern boat fender, 56mm long	£6.09
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CAP/A83 CQR Plough anchor. 60mm long	£6.07
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Hull Markings Imperial, Colour: White, Size: 1:72	£4.8
Hull Markings Imperial, Colour: Black, Size: 1:72	£4.8
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Hull Markings Imperial, Colour: Black, Size: 1:96	£4.8
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GB02 White Ensign, Size: B 25mm	£3.20
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GB02 White Ensign, Size: D 50mm	£4.16
GB02 White Ensign, Size: E 75mm	£5.20
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GB02 White Ensign, Size: H 150mm	£10.41
Also available, Naval ensigns in Red, Blue as well	and
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Quavcraft Ship's Boats

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QD20 1:24 Scale 10ft Clinker Dinghy QD38 1:32 Scale 16ft Clinker Dinghy, QR25 1:95 Scale 25ft Motor cutter QL37 1:32 Scale 25ft Motor cutter QL37 1:32 Scale 16ft Clinker Ship s Lifeboat QR16 1:96 Scale 12ft Lifeboat double ended QR16 1:96 Scale 14ft Clinker Dinghy QR26 1:96 Scale 14ft Clinker Dinghy QR26 1:96 Scale 14ft Clinker Clinghy £17.39 £8.45 £18.78 £10.33 QRZ0 1:59 Scale 2011 Fast Indictor Uotal QRZ0 1:72 Scale 16ft Clinker dinghy, QRL37 1:48 Scale 24ft Clinker Ship s Lifeboat QL43 1:48 Scale 18ft Clinker Lifeboat QL53 1:48 Scale 20ft double ended lifeboat £16.63 OL53 1:48 Scale 20th double ended lifeboat OR32 1:98 Scale 20th Cutter post 1920 OP27 1:48 Scale 27th Royal Navy Whaler OP25 1:48 Scale 25th Motor cutter 162mm OAP12 1:48 Scale 12th Clinker dinghy OS75 1:72 Motor cutter 2 cabins 109mm OP16 1:48 Scale 16th Royal Navy dinghy OP14 1:48 14th Cinker dinghy 89mm This is just a selection of over 100 boats available £14.38 £23.44 £33.52 £11.71

Deans Marine Weaponary

GK10 40mm Bofors Gun 1:24
GK11 Rolls Royce 40mm on Mk19 Mount 1:24
GK12 Twin 20mm Oerlikon /MkV mount 1:32
GK13 Twin 20mm Oerlikons/MkIX Mount 1:32
GK14 Single 20mm Oerlikon with mount 1:32
GK15 Twin Vickers on tub ring 1:32
GK16 40mm Boffin Gun 1:24 scale
GK21 6pdr gun on MkVII Mount 1:24 scale

Robbe Fittings

RO1485 Ships crane with 160mm reach	£34.16
RO1562 Fire-fighting monitor 80mm high	£25.72
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RO1560 Control Pulley set	£18.70
RO1565 Ship's boat crane 90mm reach	£16.81
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RO1553Door set 5mm x 25mm (Pack of 6)	£10.80
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Reade Vintage Fittings
LESP14 Naval Searchlight 26mm dia
LESP15 Naval Searchlight 20mm dia
LESP16 Searchlight 13mm
LESP21 Lifebelt 25mm
LESP22 Lifebelt 19mm
LESP24 Ship's Wheel 25mm dia
LESP3 Cowl Vent 40mm high
LESP4 Cowl Vent 32mm hih
LESP5 Cowl Vent 27mm high

1:72 scale Warship Fittings

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Flower Class Corvette Deck & Fittings Set 1:72 Flower Class Corvette Type 'C' Bridge Set 1:72
Flower Class Corvette Depth Charge Set
4in Gun Mark IX Breech Loading Gun 1:72"
Coastal Forces Guardrail Set
21in Torpedo and Tubes Set (2)"
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This is just a selection of the range available

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1:24 Standing officer in wet weather jacket	£8.12
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Crew member, leaning on rail 1:48 Scale	£7.56
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11mm 3 rail stanchions & railing 840mm 1:96	£10.
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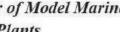
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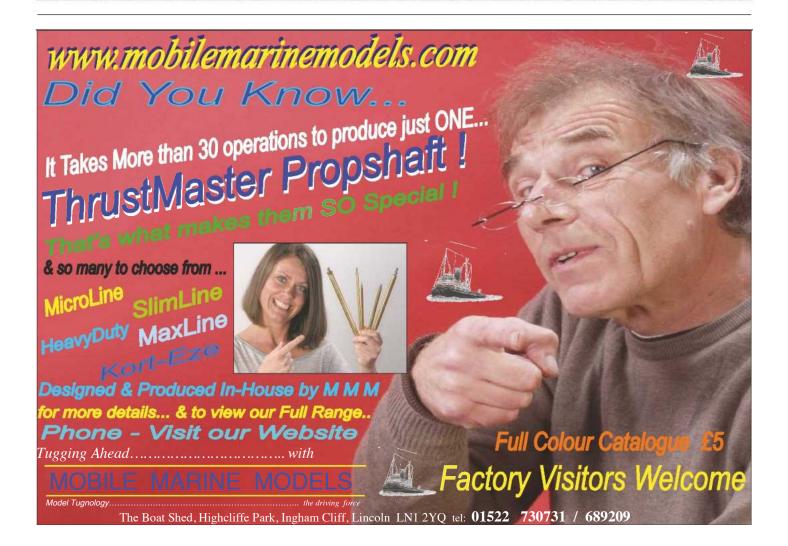
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elcome to the December 2019 edition of Model Boats Magazine which, as always, aims to dip its toe into as many aspects of our hobby as possible. It would and sometimes can, be very easy to become a little depressed this time of year following the changing of the clocks and the relentless rain that this autumn is bringing to us so far (if you're not getting it, you are extremely lucky!). However, this is a great time of year to consolidate where vou are in the hobby and to take a look in the workshop to see what projects need finishing off, or maybe starting from scratch. If you anything like me, I know for a fact, before I even walk into the workshop, that I've got at least three projects to finish off and a couple of repairs before I even contemplate a new project; there is always something to be done. Personally, by the time I've done these jobs, spring will be knocking on the door again!

Despite this month's mag being the 76 page version, I have surprised myself how many features we have managed to cram in. This has mainly been aided by the usual, near end of year flurry of show and event reports which are proving to be popular with the readership. It's a nice and easy way to promote model boat clubs and individuals who do not usual appear in the magazine as part of build or 'how-to' type article. Diary dates is understandably bereft this month but please start sending your 2020 plans to me ASAP so I can plan my own calendar for the year, which is already beginning for fill. We need more 'Your Club' contributions as well please, not to mention 'Reader's Models'; keep them coming!

Martyn Chorlton

COMPASS 360 Our news round-up from the model boating world

Editorial Contact: You can reach the Editor, Martyn Chorlton, via e-mail to editor@modelboats.co.uk. The editorial postal address is Martyn Chorlton, Model Boats, MyTimeMedia Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent, TN8 6HF. Tel. 01689 869840.



ABOVE: The fleet, race team and family supporters.

at Waldringfield



Matthew Lake '32' gets away with a port tack start.

ood winds, tide and sunshine allowed this unusual and spectacular radio sailing event on the tidal River Deben to be thoroughly enjoyed by competitors and spectators alike. 17 entries travelled from three MYA districts to sail 16 races in almost perfect conditions in front of the Waldringfield Sailing Club, who were hosting the event. The BOTTLE boat is a simple high-performance one design radio boat that allows keen competition between juniors and sailors of several dinghy classes and there were seven different winners.

The Stollery race team set a simple windward/leeward course parallel to the beach, which gradually increased in size as the tide went out. Starting with the tide against the southerly wind was not a problem for these competitors and there were very few general recalls at the starts. Previous winner and Wayfarer sailor, Mike Pert set out his stall by winning the first race with junior Topper sailor Jos Glen in 2nd and Graham Viney 3rd. Graham then went on to win Race 2. There were a few technical problems with the wind increasing and several competitors changed to the small rig. Bernard Kufluk won Race 3 and OK sailor Jonathan Fish won the next, after having repaired his technical issues. This was a similar story for RS 200 and Laser sailor, Stephen Videlo, who won Race 5. Young Topper sailor, George Moss finished the morning sailing with a win.

At the lunch break Bernard was top of the leaderboard with 20 points followed by Graham 25 and Mike 26 with last year's winner, Matthew Lake with 27 in 4th

In the early afternoon there was more spectacular planing speeds as the brisk sea breeze filled in. Jonathan won both Race 7 and 11 and in Race 8 top Footy sailor, Peter Shepherd beat his fellow Abington Park clubmate,

Peter Jackson from Northampton into 2nd place. However in Race 9 Peter Shepherd was beaten into 2nd place by Stephen. Mike came back to the top in the next and last race before the tea break was won by Bernard in the first of his hat-trick of wins.

The top of the leaderboard had not changed except for the William Ogden/Giles Themans team moving up to 3rd with 50 points and a tie between Jonathan and Peter Shepherd on 52 in 4th.

There was all to sail for in the last few races with Bernard's six-point lead being challenged by Graham's consistency, finishing with two seconds and a win. As the tension rose Bernard had a 7th in the penultimate race and he could so easily have lost the championship, but in the final race his 4th place tied his points with Graham. The tie was broken with Bernard taking the championship trophy as on countback he had 4 wins to Graham's 2.

At the prize-giving WSC Commodore lan Videlo thanked the family race team of Roger, Susan, Peter, Linda and Adrian for organising another successful event.

With the limit 'big rig' wind conditions Adrian Price was a key team member and not only recovered boats in trouble, but throughout the event filmed the racing with a camera attached to the bow of his inflatable kayak. He put together a film which is now on YouTube with the following link: https://m.youtube.com/watch?reload=9&v=ecyWw7zUazw.

Roger Stollery



Champion Bernard Kufluk collects his trophy from Ian Videlo.

Top 6 results:

_			
Pos.	Skipper	Club	Points
1st	Bernard Kufluck	WSC	45
2nd	Graham Viney	Guildford	45
3rd	Jonathan Fish	WSC	48
Junior BOTTLE boat champion was Joc Gwen			



ince 1980, Mid Thames Model Boat Club and Beale Park have enjoyed a mutually beneficial partnership, with MTMBC basina its headquarters and model boating activities on the inner and outer lakes. The MTMBC has been a source of companionship, socialisation, information and knowledge sharing, model boating events, connection with model boat clubs and attraction of tourists, an additional modest revenue stream for Beale Park, contributing to the local economy. The value of the club cannot be underestimated.

On 14 July, 2019 the MTMBC Chairman received notification by email of the decision taken by the newly formed trustees of Beale Park, requesting MTMBC to vacate the park and to cease all activities, no later than March 2020.

The strong tradition and history of model boating at

Beale Park was endorsed and positively encouraged by the cofounder of Beale Park, Richard Howard, who sadly passed away on 18 March, 2017, MTMBC are saddened to see the breaking up of Richard's historically valuable boat collection, which was, until May 2019, housed at Beale for the enjoyment of the visiting public. The exit of MTMBC will mean that the long-standing model boating heritage will be lost. The request to exit Beale came as a massive shock to the MTMBC with no prior warning. Beale trustees had tentatively agreed that the club, in conjunction with Kent Model Boat display team, should proceed with planning for the 'Beale Park Model Boat Show'. Plans were being made to theme the 2020 show around the 75th anniversary of VE day. MTMBC had started negotiations with other stakeholders.

Over the last 39 years MTMBC has been responsible for introducing the younger generation to the joys of model boating, which translates into many avenues, e.g. fast electric, steam, sailing, tug towing and 'Club 600', unique to MTMBC. The skill sets required in model boating range from model making and electronics and something which old and young alike have participated in for mutual enjoyment. The membership has dedicated thousands of hours into the building, maintaining and running of their crafts and it is unconscionable that this should cease.

Other achievements over the last 39 years have been, exhibiting at many shows and other clubs that include model boating (Kew museum for example), delivering 'Have ago boating' for Beale Park 60th anniversary, co-hosting for several years 'Beale Park Model Boat Show' with KMBDT on behalf of Beale Park.

In 2018 members were involved in supporting a project to produce a 3D-printed model boat capable of crossing the English Channel autonomously. The aim was to deliver an engineering project that schools and universities could reproduce at reasonable cost to promote engineering and science. A spin off from this is a Guinness record yet to be claimed for the furthest a 3D printed model boat has gone in 24 hours.

MTMBC are now urgently looking for a venue where they can be based to continue their activities and to hand over the precious legacy which they have built up to the next generation. If you can help please contact Tony Simons, email tony406@btinternet.com.

Bart's Bash; Biggest Little Boat Bash





art's Bash; Biggest Little
Boat Bash is a charity
event set up especially for
radio sailing by MYA president's
son, Shaun Priestley, who
works for the Andrew Simpson
Foundation, which is promoting
this world wide event, which took
place on 14 September, 2019.

As there was virtually no wind, we raced Footys round

the Footy Internet Course (FIC), because they go amazingly well in light winds as a result of their big sail area and lightweight displacement. The course is a special windward/ leeward course, exactly 50ft long because the windward mark attached to the ground in the normal way connected with a 50ft underwater line to

the leeward mark, which has a sail on it and streams with the wind so that the course is always windward/leeward.

We sailed three times round the course, as is required by the FIC rules to complete a race and we raced six times. Race 3 was good for both competitors, because Roger was timed at 3.00mins dead and Martin at 3.03mins. It was close racing! Our worst results extended Martin's winning time to 8mins 31secs and Roger was unable to finish! Guildford Model Yacht Club is donating a minimum of £50 to the Andrew Simpson Foundation.

Roger Stollery

Guildford Model Yacht Club

Abbey Meads lake, Chertsey Footy Class

Footy Internet Course: total windward/load course length of 300ft (91.4m) Wind: 0-1 mph

Best times

Roger Stollery ICE design Footy 327 - 3.00mins Martin Crysell ICE + design Footy 524 - 3.03mins

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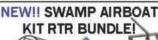
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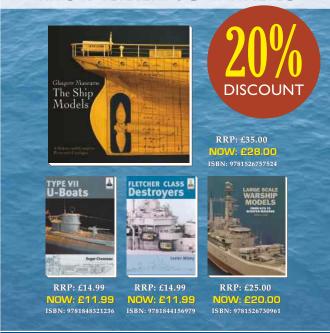
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How to simulate gunfire by Geoff Dixon

have been making models virtually all of my life and like many people started with the Airfix and Revell kits that were both cheap and readily available.

As time went by, my focus moved onto warships and of course Battleships. Once you start building Battleships the obvious question is how can I simulate gunfire. Over the years I have seen numerous methods principally involving black powder, most using a hot element to ignite the mixture. Some of the systems have been quite ingenious, including barrels that unscrew so a preprepared cartridge can be inserted and other systems somewhat less sophisticated!

Such systems are all very well but are typically frowned upon by the authorities and what was acceptable 30 years ago is no longer acceptable as we all live in a very different world. It was with this in mind that I set out to develop an alternative system that was not based on pyrotechnics.

Whilst a little off topic, the other effect we typically seek is smoke from the funnels, the typical unit using a wick of some description with a coil of Nichrome wire to burn off or vaporise a mixture of oil. The problem with such units was the tendency for either the oil to catch fire or for the carbon residue to bake itself onto the element, causing overheating and element failure. There was also a residue issue and a current consumption issue with currents typically being in the 5amp range, so the effect was limited in duration.

There are alternative water-based 'smoke' systems now available but they are outside the scope of this article for reasons which will become apparent.



A good number of years ago I began to experiment with funnel smoke units with 'Fog Fluid' which is used in stage shows and night clubs for effect. Such units worked well with a fire proof wick and Nichrome wire, with one end in a bath of fog fluid and a small PC fan to blow the vapour out the funnel. These units produced significant smoke which is quite durable but again suffer from relatively high current consumption. However, now that we have a way to make a decent volume of smoke on demand, I reasoned that if I built an enclosed box beneath the turrets with a smoke generator inside, it should be possible to blow the 'smoke' out of the barrels and simulate gunfire. The boxes under two turrets were about 8in long x 4in wide and 2in deep, so a sizeable volume to fit into a hull. This system actually worked but there were four problems:

[A] How to blow the smoke out? - I first used powerful PC fans but no matter what I did there was blowback and sequencing issues. I eventually used an old hairdryer motor and fan and complicated pipework to connect all the turrets together but connections still proved a problem





[B] With 12v batteries in parallel and using three smoke units 'A' & 'B' and 'Q' and 'X & Y' (five-turret battleships had these designations fore to aft) I could not get the units to balance, sometimes the front ones worked and sometimes the rear ones – all very frustrating.

[C]The actual effect was reasonable but very gentle so was only suitable for calm days.

[**D**] The key problem was that some of my funnel smoke generators caught fire!

Whilst item [C] was a problem it was the last item, [D] that effectively killed this concept as an internal fire is very difficult to get to and could destroy the model. Further investigation online showed that despite the fog fluid being made of de-mineralised water, glycerine and a certain type of glycol and not having a flash point, if vaporisation wasn't complete, a residue formed and in concentration the residue was flammable; nothing more than a candle flame on the wick but that could be sufficient to potentially destroy a model even if precautions were taken.

I did some further research online to see how the real fog generators work and essentially they have a block of alloy with a small chamber inside and a narrow exit. This is surrounded by an electric heating element covered in insulation. So with the functions being switched on, get to the temperature and pump in fog fluid. The thermal mass of the metal core acts as a heat capacitor and energy dumps and the fog fluid flash vaporises, pressurises and blasts out the narrow exit hole in a jet of fog. Very effective, the key part being the fog fluid never comes into contact with a red hot wire so there is no potential ignition source. Such units are typically the size of a very small suitcase or sewing machine and use mains power so are not suitable for our purposes.

Positive Temperature Coefficient

Further research into the food and chemical industry revealed that whilst they used to use Nichrome wire to heat solutions, they now typically use PTC (Positive Temperature Coefficient) Thermistors as a heat source. These are semi-conductors with specific mineral internal architecture such that when you apply current, the internal resistance

increases, which creates heat, but the important thing is the temperature is self-regulating, so once up to their designed temperature, they stay there. This gives a non-contact heating source which is a key element of the design.

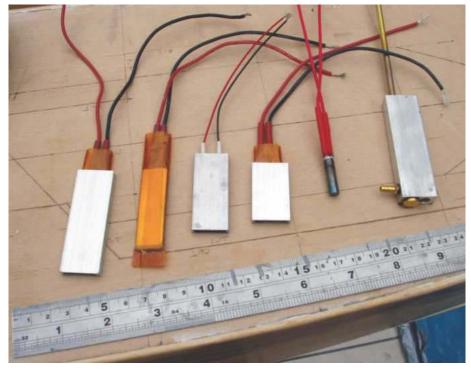
I purchased some PTC Thermistors from Amazon (E-bay is another good source). They are about £4 each so an acceptable experimental cost. Mine looked like a block of alloy 6cm x 2cm x 0.5cm with two wires. On 12v they reached a temperature of 230°C and stayed there. There are different PTC thermistors of all shapes and sizes and temperatures, but I have found you need 200°C to 230°C for best results. Note these are very different from NTC thermistors.

PTC = the internal resistance increases as they get hot and as they get hot the internal resistance increases = more heat.

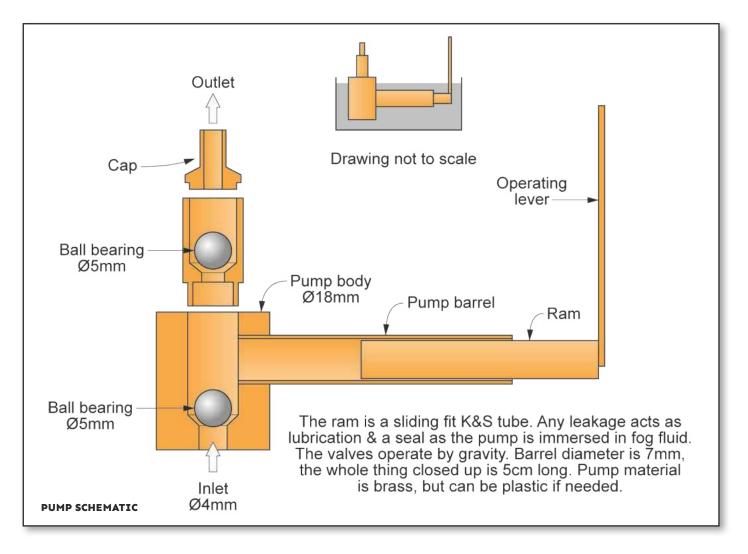
NTC (Negative Temperature Coefficient) = the internal resistance reduces as they get hot – these control the temperature gauge in your car.

So proof of concept was next, would the methodology work in miniature. I used a 6cm x 2cm x 1cm brass block with a 6mm hole drilled lengthwise; nearly to the end and then a 2mm exit hole. The entrance hole was soldered with a narrow pipe to pump in fog fluid using a syringe so I could check what volume was best. The PTC Thermistor being strapped to the back to facilitate rapid heat transfer and all tried it out. It survived long enough to show I was on to something before it fell apart. I had overlooked solder melts at c200°C and the PTC was at 230°C!!

Okay so back to the drawing board and I decided to use alloy of the same size. Copper would probably be best but would be hard to machine and for the size we were working at, alloy was the next best alternative. This time the internal hole was again 6mm in diameter with a longer 4mm exit hole and a 4mm copper pipe some 12cm long sweated in (interference fit). The same went for the supply nozzle at the other end in brass with the rest of the structure being the same.



A selection of PTC Thermistors; the one on the far left was used for Iron Duke. The far right shot shows a heat exchanger and inner barrel. The hole on the right was to test the 3D printer unit; more experiments needed.



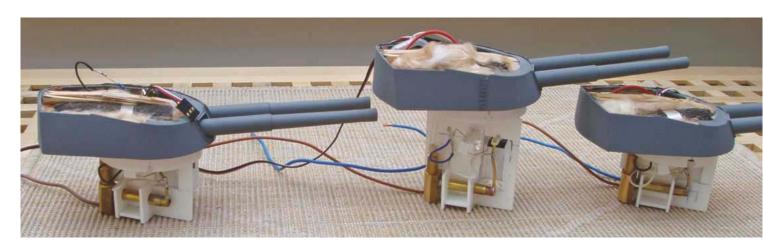
This worked extremely well with a very audible 'whoosh' on firing and more importantly proved to be entirely repeatable. The next question was how to pump the fog fluid in and after much thought I designed and build a small long piston pump to be operated by a small servo. The capacity of the pump was about 0.3cc. I next built a duplicate Iron Duke turret to see if I could fit the internals into the turret and base. My pumps were made of brass but they could also be made of plastic tube with an inner brass tube.

The valves are corrosion resistant ball bearings gravity operated. There are no piston rings or 'O' rings the sliding fit of the brass tube/piston is sufficient to produce adequate pressure with the fog fluid acting as both sealant and lubrication.

The heat exchanger and PTC Thermistor would just fit into one side of the turret using plumbers' mat as the main insulation with loft insulation crammed into the turret. I then hung the servo and pump beneath the turret. This then effectively plugged

into a cylinder which could be filled with fog fluid. The 12cm barrel being insulated with wound string. A small Venturi was soft soldered into the end of the barrel as the restriction increases gas velocity.

On full testing operation using a 12v 7amp hr lead acid battery I achieved just over 100 shots before the battery died. This took over half an hour with shots being fired every 10 to 30 seconds. Early tests can be seen on you tube.



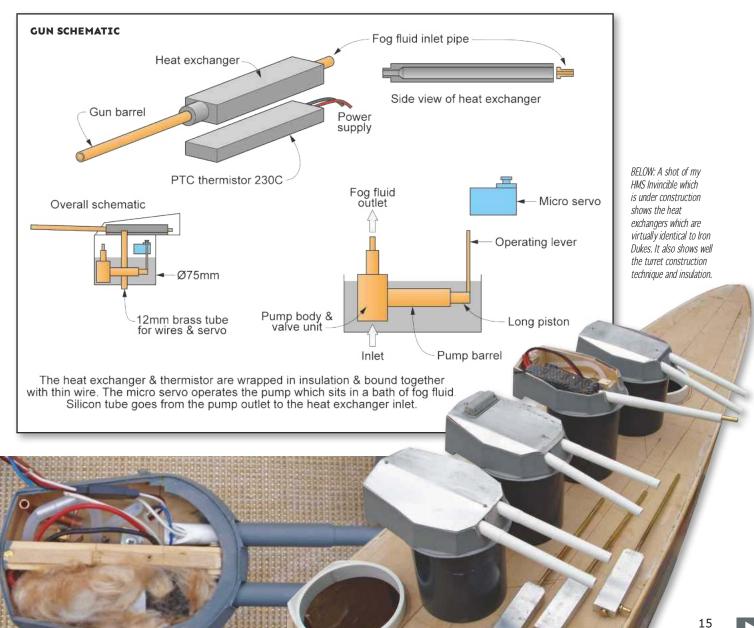
An engineering solution

The next step was to gut Iron Duke and rebuild all five gun turrets to accommodate the new system which candidly took quite a long time and created a number of failure modes all of which had an engineering solution. I had split pipes, servo failures, servo gear chain shearing and various leaks but all were overcome with thought and care. The base line concept remained valid.

I used one 12v 7amp hr battery per turret all on separate circuits. This makes it relatively easy to trouble shoot. I use a standard servo to operate a micro switch which operates five relays to switch on five PTC thermistors. Current consumption for each turret goes like this, 1amp, 2amps readily climbing to 9amps to get the PTC Thermistor to operating temperature then dropping to about 3amps. It takes more energy to get to 230°C than it does to keep it there. After 90 seconds full temperature is achieved.

With the PTC Thermistors left switched on, I operate the pump servos several times to







prime the system. They inject 0.3cc of fog fluid into the heat exchanger in each turret and there is a very audible 'whoosh' effect. The fluid flash vaporises, pressurises and shoots

out the end of the barrel. The supply pipe is silicon tube which takes the temperature and also acts as a safety valve if pressure should ever be too high as it will split and/or pop off the end of the connector. Because the vaporisation process has absorbed energy the temperature of the heat exchanger and PTC Thermistor drops and the automatic architecture of the PTC Thermistor pulls current to get back up to 230°C.

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With fresh batteries I can fire every ten seconds or so but as they get tired towards the end of a session it can take 40 seconds to reach operating temperature. Because I tend to fire in various sessions rather than a single continuous session which would be more economical with current, I typically get 60 to 70 five gun salvos, so 300 to 350 effective shots each sailing session.

I have been using this system for a couple of seasons now and conservatively believe I have fired in the region of over 6,000 shots!

There have been various failures but mostly split pipes at the joints, servo failure and some pump operating problems but with that number of shots I should anticipate a number of issues. I have been modifying the design during this time with a number of changes to improve reliability:

The fog fluid is now injected at 90° at the rear rather than in line as the silicon pipe had a tendency to kink and restrict the flow.

The link between the servo and pump operating arm has been changed to give a much better linear pull thus easing pressure on the small servos and reducing wear on the pump.

Overall the system has proved extremely reliable and effective. As we are creating a jet of fog rather than smoke with the light at certain angles the whole model almost disappears in 'smoke' on firing. Even at a disadvantageous angle the effect is very marked and very visible 60yds away.

Now that operational experience has been gained there are several elements which are worth considering:

The actual operating barrel is 4mm external diameter so can be used in small models with Lipo's provided a regulator is used to prevent over discharge.

If little pump strokes are used the guns puff, puff, puff like anti-aircraft guns.



To conclude fuller details are shown on the Model Boat Mayhem website (Forum) including all the trials and tribulation of this development and the full construction of Iron Duke whereas this article is intended to present a tried and tested system that consistently works.

There are a number of models under construction with this system so in due course we can probably fight a battle!

There are now only two types of Battleship models in existence, those with guns that fire and 'Targets!'

Also some on the water shots with the finished system. The first one at Wicksteed Park and the second at Wings and Wheels.



Video links of HMS Iron Duke in 'action'

https://www.youtube.com/watch?v=qS84P5wSX9U

https://www.youtube.com/watch?v=7lnN82Td2LY

https://www.youtube.com/watch?v=w5qwwQkFF1E



Foiling Multi-Hulls

Our Mini 40 experiments & developments by **Ian Holt** with **David Burke**

LEFT: SECRET SERVICE at full throttle and on its tiptoes in the Philippines.

Introduction

We have tried catamarans, we have tried wand-controlled T foils, we have tried unstayed una-rigs. We have achieved a top speed of 34kph recorded with a GPS tracker. We have capsized many, many times. We have watched our trimaran cartwheel up the beach and over a fence and we have had a tonne of fun!

We are lone multi-hullers in Perth (and Philippines), everyone else here thinks we're nuts, so in the absence of any other R/C multi-hullers in the region we quickly looked towards the challenge of foiling for entertainment, as opposed to designing boats to be quick round a conventional race course. If we had a racing fleet here, we would not be where we are now with our designs.

I am a Naval Architect by profession, with a BSc from Newcastle-upon-Tyne University, where the first words from the head of the faculty when we arrived were "if you have come here expecting to make a living from yacht design, you can leave now...!" 30 years later I became hooked on multihulls when I watched the America's Cup on the internet while working in Shanghai, and the goal of designing and building radio controlled foiling multi-hulls began.

Hired Gun - 2013

It was only in 2012 that I decided it was time to design and build my own Mini 40 trimaran, but with the emphasis on foiling. Hired Gun



Hired Gun flat; sails by David Potter in the UK.





ABOVE LEFT: Hired Gun in its original blue paint job; you can see the large floats (like a Firedragon) but much smaller bow on the main hull. Sails by Andy Taylor in the UK. ABOVE RIGHT: The photo that started it all for me, Mike Dann's Ghost Train foiling down the lake at Gosport; I took one look at this and said to myself, "I want to do that".





Skyfall, foiling, but not as we expected it - heavy and slow, complete with T foils on the floats and big wands up in the bows.

was the result. The floats were like the popular conventional trimarans in those days, lots of buoyancy, especially in the bows, but the main hull was significantly smaller. I made the hulls over plugs and joined them along the centreline of the deck. Cross beams were 14mm stubs on the floats that slid into 16mm tubes bonded to the main hull. This needs an accurate jig to line up the tubes so there is no gripping due to a slight misalignment, but the result is a boat that is extremely easy to dismantle for transporting inside a car.

However, the main change to the norm was the introduction of kinked foils. As far as I could tell at that time, all foils used on Mini 40s were in effect asymmetric rudders, slid into tubes fitted to the floats at 45° to the vertical. This meant that the foils were joining the float hulls down under the inboard bilge line, so were considerably narrower than the maximum overall beam permitted. My idea was to fit vertical cases and have a 45° kink in the foil some 6cm below the underside of the hull. This gave some lateral resistance but also pushed the foils further apart, increasing stability.

Uncertain how to rotate the foils in the cases, I made a complicate slot in the case, and some short stubs in the vertical section of the foil. The foil was fitted from the underside of the hull, the stub engaged in the slot I the case, and a simple pin pushed through the foil at deck level stopped it falling out. The angle of the foil was controlled by screw adjusters on the deck.

The rudder and T foil were fitted so that the T foil was parallel to the waterline, no adjustment. The result was an instant success, the boat started foiling within five metres of launching, and we knew we were onto something interesting. It was a successful boat and changed our whole concept regarding what we thought a Mini 40 should look like.

Skyfall - 2015

July 2015, and I now had the support of Dave Burke in Mandurah, an hour's drive south of Perth, who I first met when he offered to repair Hired Gun after a minor collision one weekend. We stayed in touch and together we decided it was time to try something different. Our definition of 'different' ended up as a single cross beam the shape of a plane's wing, and wand-controlled T foils under the Floats. Simple......

Different it certainly was! The single cross beam was far too heavy, and the wands did not appear to control the foils, they had a mind of their own! We had no idea when or why it might foil when sailing. It was also extremely slow. I tried several different wands for stiffness, length and surface area, but the result was always the same, unpredictable foiling behaviour. Another problem with adjustable T foils is the drag from the links attaching the push/pull rod to the T foil, plus you have double the surface area under water when not foiling, plus the design and construction of the pivot mechanism itself. After a few weeks of trialling, we decided that this was a miserable failure, so out came the saw and the wing cross beam was history, replaced by simple permanent 16mm cross beams, with an overall beam a little bit less



ABOVE: Skyfall out of the water. BELOW: Two One Metres.



than the maximum permitted so I could fit it inside my jeep. The T foils also went in the bin and in their place came some conventional (by our standards) kinked foils, slightly smaller than those on Hired Gun. The result was a nice boat that performed very well in light to medium conditions.

Except for SKYFALL in its original setup, all our boats are using the simple fixed hydroptere-style (or 'V') foils, in a fixed position while sailing, and only adjustable when on the shore. We realise that this is not the ideal, but we are a firm believer in a simple setup, with minimal electronics. This concept has its limitations, especially when sailing upwind, but for a fun boat just for foiling around the lake it is hard to beat.

Box - 2016

The 'Box' One Metre started off as a little experiment to see if we could get a smaller tri to foil, and since everyone knows the one metre IOM class we decided to make it one metre long by one metre wide, to fit in a 'box' one metre long, hence the name. The idea of a smaller boat came from all the frustrations of transporting full size Mini 40s inside cars and scraping the interior lining. So, Dave got out some wood one afternoon and knocked up two hull plugs that 'looked right' and we were in business. Each boat is iteration from the previous, and Dave makes wooden plugs for each design (or concept). He has a natural eye for doing this, and it is faster for him to make a new plug than modify and existing one. As a result, we have racks of wooden plugs! But for the Box, Dave made moulds for everything: the hulls (left and right), and the cross beams which are made in two parts out of carbon; a curved upper surface and a flat bottom section. The Box hulls are made from fibrealass to reduce costs, the intention being to produce a 'sports' boat that would be great fun to sail when the wind was up. Somewhat to our surprise it not only foiled but performed rather well. We gained confidence in what we were doing with this boat and decided to make it available to anyone interested and to date have sold eight. We are pleased with this boat; it's a lot of fun and almost as fast as the Mini 40 in the right conditions. Naturally we soon started to look at how we could make it better, and since width has a significant impact on power, stability and hence speed, we soon developed our next line of foils, as Dave worked out how to construct 'Z' foils that increased the distance between the lifting components of the foils dramatically and really helped foiling in a breeze, but their design meant that the boat had a lot of drag when not foiling, as the horizontal part of the foil was underwater when displacement sailing.

Secret Service - 2017

In 2016 I started work in the Philippines and with SKYFALL sold it was time for a new boat, and thus SECRET SERVICE was conceived.





ABOVE LEFT: The prototype Box; an instant success as soon as it hit the water. ABOVE RIGHT: A Box sailing at Champion Lakes, south of Perth. BELOW: SECRET SERVICE sailing in the Philippines, 2018; the sails are my early attempts at sail making. I still have a lot to learn. To date I have been concentrating on lower aspect ratio rigs with larger jibs compared to the popular rigs in the class. The downside is I need more rig tension to keep the jib luff tight.

Up until then we had made no consideration for a boat that dismantled for international travel, but the need to get the boat to the Philippines, and maybe back to Australia later, changed that. Dave developed a small flange setup on the decks of the hulls and using cut up BIC biro pens as compression struts inside the cross beams, we had a system for bolting the cross beams to the hulls. After a few trials, I developed some forward-raked kinked foils that work like a dream on this boat and have so far managed a top speed (with GPS tracker on board) of 29kph. Not only are they forward raked, but they have two components to the lifting foil section. The upper part is at 45° to the vertical, but the lover section is 35° to the vertical, thus reducing the rate at which the boat rises as boat speed increases. SECRET SERVICE was also the first of our boats to use what we call the 'mini z' foil. After exiting the case, the foil then kinks outwards to get to maximum beam before then adopting a lift section.

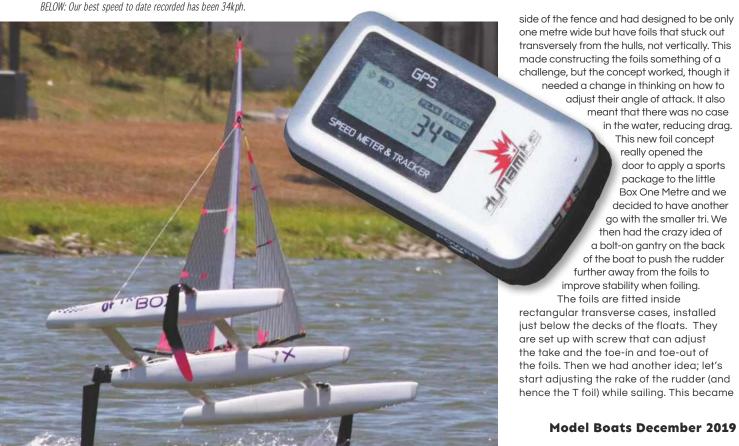
Box-on-steroids - 2018

While I was busy sailing SECRET SERVICE, Dave back in Australia was studying the Box One Metre moulds and photos and suggested we have another go at this boat, making it more competitive. I had been experimenting with a Mini 40 cat in the Philippines, mainly to see if the grass was greener on the two-hulled

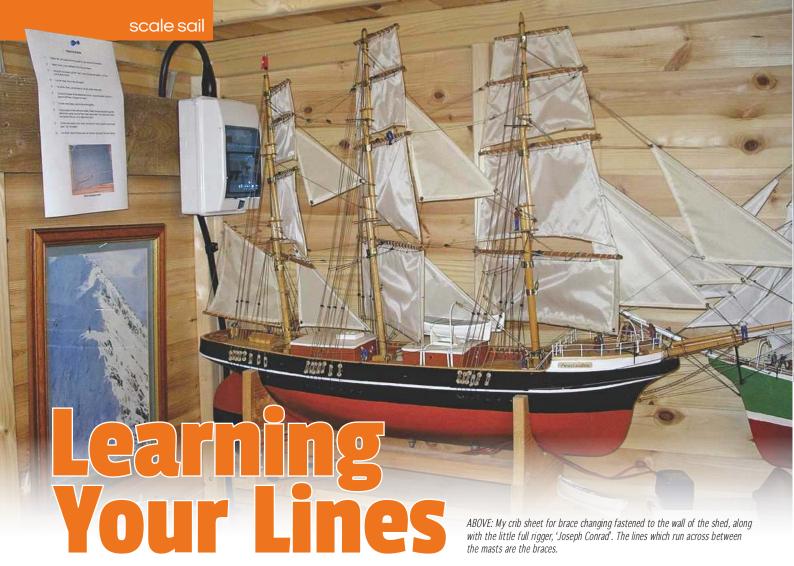




ABOVE: SECRET SERVICE with its #3 rig up and yes, this is the same rig (mast and sails) as shown on the first photo of Hired Gun. This David Potter suit of sails has served me well.







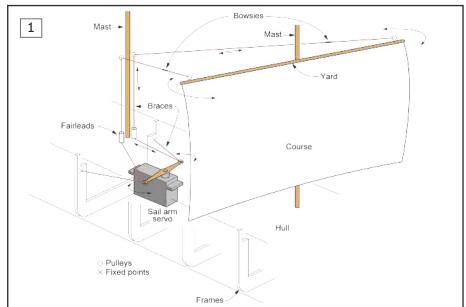
By Neville Wade

Fraying at the edges

On any model that uses sail as propulsion, there will be 'lines', the bits of string that actually do the pulling of the sails. At their best, they are strong, in scale, run well, with little friction and can be tied, and cut easily. When you build the boat, you'll have good access, usually with no deck fitted, so that you can get anywhere with no problem. You'll try to make yourself good access points through the deck, via hatches (Photo 3-5), as you build the hull, but you'll always be mindful that hatches need to be as small as possible, to minimise water ingress and that's where the trouble starts! Your lines will have to get below deck, to their motive power and there they'll take on a life of their own, in the places that you'll never get to, once the vessel is finished and on the water. That's OK for a while, but, inevitably, the lines will become like the old model builder, tired and fraying at the edges. That's our starting point here, how to replace old lines with new, when you can't get at anything anymore.

My problem

I build models of square-rigged sailing ships, whose yards are moved by braces, attached to their ends. On each mast, I fit braces to two yards, one lower and one higher to spread the bracing effort all the way up the mast. With a brace going to each end of a yard, it



This illustrates the run of the braces, port and starboard to a lower yard, on one mast of a square-rigger. It isn't the last word in complexity, but it is complicated enough.

adds up to four braces per mast. On a four masted full rigged ship (square-rig on all four masts) that's 16 braces. You'll see from this that I have quite a problem if I need to change the braces. It's not necessary for you to take on board all my problems of detail, because you'll build your own favourite types of vessel, but my particular circumstances mean that I have some fairly extreme access problems, so I have had to be inventive with how I solve

them and that is why I'm writing this; maybe you can pick up some techniques from what I do, which will help on your boat?

The method

In a past life, I was a Steelmaker working with large overhead cranes. Whenever we wanted to change a crane rope (steel wire, about 30mms. diameter and many metres long), we



ABOVE: This is what makes it all worthwhile. My model of the four masted barque, 'Queen Margaret' beating in a good breeze at Tynemouth. Proper maintenance makes for good sailing, like this.



to the ends of yards by means of pulleys, with the ends of the lines running to the fixed parts of bowsies. So, the first job was to take off a bowsie, to release the end of a line (brace). Having done that, I took a length of new line, more than long enough to do the job and tied it to the end of the old brace. I did this to the upper and lower braces on one side of one mast. Now I used one of my purpose-built tools, made to reach deep into the most far-flung corners of my hulls.

Like many of you, I'm sure, I use a selection of hooks of various lengths and shapes

LEFT: The braces to the foresail of a real model, and in the bottom left hand corner, the braces disappearing through the deck via fairleads. Access to the attachment points below is via a hatch under the deckhouse, below the lifeboats.

BELOW: With the deck part installed, you can begin to see how working on brace attachments through hatches will be difficult.

attached the new rope to one of the old ones and then operated a winch to use the old rope to pull the new one through all the pulleys and drums, around which it had to go. If this is good enough for a 250T ladle crane, travelling almost 200ft above the ground, I reasoned, it's good enough for a model ship. That's true as far as it goes, but the route that a model brace has to take is more complicated than that taken by your average crane rope (**Fig. 1**), so some tricky strategies have to be employed to get the model job done.

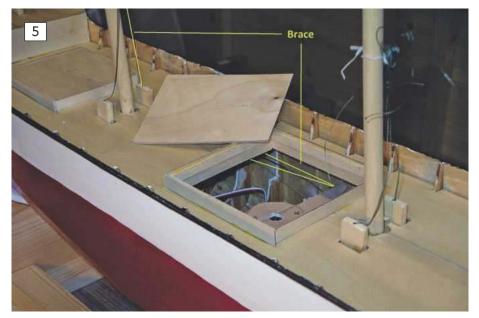
My lines are made from fishermen's 'braid'. It is thin, it runs well and it is very strong. Therefore, any knots tied in it are small and don't catch easily on sharp corners and protrusions, so I thought that tying the new line to the old one looked like an idea whose time had come. If you look at the pictures here, you'll see that my lines are only attached at one end, to hull frames below deck (**Photo 3**). The other ends are linked



ABOVE: Five masted, two topsail schooner, 'Carl Vinnen' running before the strong wind and lively 'sea' at Tynemouth with the real North Sea in the background. You can see why you need lines in good condition!



ABOVE: The sail arm servo is directly below a hatch, but the brace attachment point is well out of reach, out of sight under the deck. BELOW: With the deck now on the difficulties of access are obvious.



(Photo 6) to grab and pull lines and wires to which I need to gain access. In this case, I used a long hook to hook on to the appropriate lines where they were attached to the hull frame. Now I could pull the braces up, through a hatch, to the point where I could hold them with finger and thumb. Doing this had started the process of pulling the new lines through the complicated route that each brace takes on its way from yard to hull attachment (Fig.1 & Photo 2). I continued the pull, bringing the knots, between the old braces and the new ones down through, successively, a ring screw used as a pulley high up the adjacent mast, the fairlead through the deck, the right angle bend after the fairlead, the pulley at the end of the sail arm and finally, up through the hatch to where the pull had started.

With the new braces all the way through the system, it now remained to separate the new from the old, so that the old ones could be cut off and discarded. I cut the new braces free from the old ones, and then tied them off above deck level, so that they could not fall below inadvertently. Now I had to cut off the old braces at a position as near as possible to their attachment point, so that there would not be any excess, useless line left about, ready to tangle with the new braces. To make this cut I had to improvise a new tool, in effect a scalpel 'on a stick' (a piece of stiff wire about 200mm long, with the scalpel taped to it). I used this to saw off the old braces and discarded them. The scalpel tool is illustrated in **Photo 6**. That was the end of the old braces.

I now had to devise a means of tying on the new braces to their attachment point below deck and far from the hatch I was using. My wife uses bodkins occasionally for threading thread (another word for 'line', or 'brace') through difficult places, so it occurred to me that what I needed was a bodkin of my own! Now the stiff wire makes another appearance. I cut a piece of a length suitable for reaching the attachment point without becoming unwieldy and bent it into a gentle curve (see **Photo 6**).



It's not always stormy, the little full rigger, 'Joseph Conrad' sailing quietly on a lovely summer afternoon.

If you remember, we left the new braces tied off above deck, now's the time to return to them. I made a small, tight bend in the end of the bodkin opposite to the gentle curve mentioned above. I tied the two new braces together and looped the knot into the tight bend, made in the bodkin. Next I used pliers to clamp the braces into the tight bend. With my 'needle' thus 'threaded', I manoeuvred the gentle curve of the bodkin down, into the hull, pushed it along, inside towards the attachment point hole and then worked away until I got it to go through the hole. Now, using pliers, tweezers, hooks, whatever I needed, I pulled the bodkin back towards the hatch through which it had entered the hull. Once it was out into fresh air, it only remained to cut off the bodkin and tie a slip knot over themselves, in the ends of the two braces held together. It has to be a slip knot for two reasons, one is that this knot will only get tighter with use, the other is that it is possible to tie it 'remotely', by simply pulling on the braces and making the knot 'move' inside the hull until it tightens on to the attachment point.

Now I had the new braces tied off to their attachment point, I pulled on the braces, above deck level, where they were still in place, up their mast to take in the slack left by tying the slip knot. With that achieved the braces were pulled tight up to their yards, the ends were fitted with their bowsies and then passed through the pulleys at the ends of the yards and finally

led back to the bowsies for adjustment and final tying off. Once the braces for the other ends of the yards were changed the whole lot could be set up for a return to 'sea'. After this, it was on to all the other masts to complete the job.

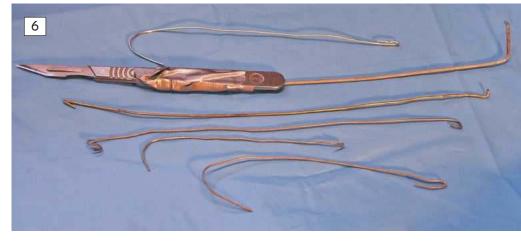
Complicated

In the heat of my first use of this method, I just went ahead and did it. Afterwards, it struck me that if I wanted ever to repeat the performance without having to think it out again, I'd better write some instructions, illustrated with a picture of the tools created just for this job. So, that's what I did, saved

on the laptop, printed out and posted on the shed wall (see page 24) and they have helped me to quickly get down to doing this job on four different square-rigger models.

In conclusion

If I'm telling you what you already know, let me apologise. If not and you've found this useful, here's a word of warning. The above works with the braid that I use for running rigging, if you use thicker lines and therefore make bigger knots it may be more difficult. If you do get it to work write down how you did it, it will help in future. Now get on with your needlework!



The tools, three bodkins with hooks on their ends, in which to clamp lines, a scalpel on a stick and various long hooks.



Are model boat builders avoiding dementia?



By **David J Powell** OBE

he idea that being involved in a complex handicraft pastime such as building model boats can help to prevent dementia did not come from any concern about the potential impact of this dreadful condition. It was not even about making model boats and ships; although I have dabbled in model boats and there is a radio controlled yacht on my bookcase! My interest is model railways, and the catalyst was concern about the future of this pastime and, in particular, the future of model railway clubs and the supporting manufacturers and magazines faced with an aging and decreasing number of active modellers. This is a scenario which is also facing the world of model boat building and sailing.

Often when talking with fellow enthusiasts about the viability of our clubs in particular and the hobby in general, being a holder of a bus pass, conversations would often touch on news of departed colleagues. Through these chats, it became apparent that, although cancers, heart problems, road accidents etc. featured, dementia did not.

With hindsight, hopelessly overoptimistic, back in 2015, I proposed that the great and good in the dementia research establishment should try a new approach by identifying social groups which appeared to avoid dementia and find out why and how this was happening. I suggested that railways modellers could be a place to start. However, I failed to get any useful response. Given that the backers of dementia research, and their shareholders, included the big pharmaceutical and patient care sectors looking for new drugs and more cost efficient care, I couldn't possible comment!

Attempting to press on and do my own thing, I undertook some research at the November 2015 National Model Railway Show at the NEC. This included interviewing representatives of 20 UK model railway clubs, a total membership of some 1,100 modellers and an average age of around 65.

According to the experts, this sample should have produced knowledge of 40 or more cases of dementia among past and present club members. However, my, albeit simplistic survey produced just three (and then only 'possible') cases! OK, one can argue about the detail of the research and the numbers, but what is clear is that, compared with the general population, being an active member of a model railway club does help prevent dementia.

The most significant common characteristic running through this relatively large sample of dementia avoiders is that making models involves concentration when engaged on a wide variety of handicraft skills, cutting out, forming, assembling painting, soldering, operating etc. Although these were railway modellers, from recent conversations, such as with boat modellers and their impressive display at this year's Taunton Steam Fayre, the complex handicrafts involved sound like building and operating scale model boats!

How can model making as a hobby be helping to prevent dementia? Medical professionals should skip the next bit! Think of the brain as having a front office and a back office. When we learn to tie our shoelaces, or play a piano concerto, the learning requires concentration and practice.

This is front office stuff. Once we have 'got it' through repetition, it is passed to the back office. But with model making and operating, whether racing Marblehead yachts at this year's nationals at West Kirby or operating a model railway layout at an exhibition, concentration is essential, or boats will collide and trains derail!

However, unlike the concert pianist, with model making and operating there is rarely any practice or extensive repetition. Furthermore, many skills and the associated hand-tools are only needed at certain stages in building a model. Moreover, as a pastime, we only pick up the paint brush, craft knife or radio controller occasionally. This means that with our respective hobbies, the concentration and the wide range of dexterity skills encountered continue to involve and exercise the 'front office'. This exercise helps to protect the neurons, or nerve cells, the building blocks



of the brain, from dying, stimulate growth of new neurons. The medical term for my 'front office' is the neocortex.

Another important point is that a very big chunk of these grey cells in the front office are there for movement and dexterity. If brain cells are unused, they risk decay or atrophy. Atrophy of the neocortex is more commonly known as Alzheimer's disease, the most common form of dementia. Therefore, much of the dexterity involved in modelling and operating continues to exercise the neocortex thereby preventing this form of dementia. And, this exercising is becoming increasingly significant as we discard the need for dexterity in our computer dominated throwaway world of voice operated controls in the home and CAD and CAM at work!

My crude test of determining if a handicraft task demands concentration is – do you have to stop to engage in conversation? If 'yes' – front office, and if 'no' back office! This could explain why modellers do appear to be avoiding dementia while research has found that members of classical music orchestras, despite the significant dexterity involved, have the same levels of dementia as the general public, a consequence of the need for practice, practice and repetition of hand movement.

The other key common characteristic is that the NEC 'subjects' were all active members of model railway clubs. However, this interaction, communication, and, in particular having to read (albeit subconsciously) body language, only happens occasionally, i.e. at weekly meetings.

Consequently, this social dimension continues to stimulate the neocortex as well as encouraging, sharing, enjoying and motivating modelling skills. Although the NEC research only considered railway modellers, there is every reason to believe that the two common factors of complex handicrafts requiring concentration and social interaction at clubs and societies can be read across to other handicrafts and pastimes, including active engagement in model boat building and operation, as well as sharing ideas and experienced through informal friendships and club membership. Therefore, hopefully, with similar dementia prevention benefits.

So next time you are faced with an inquisition about the large quantity of bits and kits you have tried to sneak in after returning from a model boat show, just point out that it is all in the good cause of investing in dementia prevention!

A mast for scale model yachts

A Scale-Type Sail Attachment system that's tidy and air tight by **Philip Ibbs**



his idea may not be new, I certainly didn't invent it, and it's very similar to the track system used on full size yachts. However, I haven't seen it in Model Boats Magazine, so please forgive me if it is old hat!

I wanted to make a scale model yacht; I used to race Vane free sailing yachts at Birmingham's Witton Lakes with my father during the late 1970's. Now, as an established family man with children who don't want to crew the lake, I have moved to radio, but as with my model aircraft I now favour scale. With various career moves I'm now in Lincolnshire and have found a great club at Boston, with a superb lake. I still sail my vane 36R occasionally, with a grudging daughter on the other side!

36in is a nice size to fit in the car, so this was the start point. Scale yachts should have scale crew, preferably which could be seen sailing from the shore, and I thought the easiest to use was an Action Man and a Barbie Doll, so I settled on 1/6 scale, which for a 36in yacht would mean modelling an 18ft yacht. I settled on the very attractive 'Swift 18' trailer sailer, as I had sailed on a friends and with chines, it would be straightforward to build. In the end I have to confess that exact scale went out of the window, but I am still pleased with the outcome, which I have labelled Swvft.

To make things as easy as possible, I downloaded a copy of Vic Smeed's 'Panache' Yacht. This is 30in long, so on a 2D CAD system I scaled it all up to 36in long, with a corresponding increase in width and depth. Having got the desired length, I then further scaled just the widths to achieve the plan view shape of the full size Swift. This gave a model width of 14.5in – not quite a model racing yacht, but then the full size does have four berths. A scale cabin was added so the hull could be built.

Looking at a brochure for the Swift, I reckoned a one metre high mast wouldn't look out of proportion, so I started to look for a suitable tube.



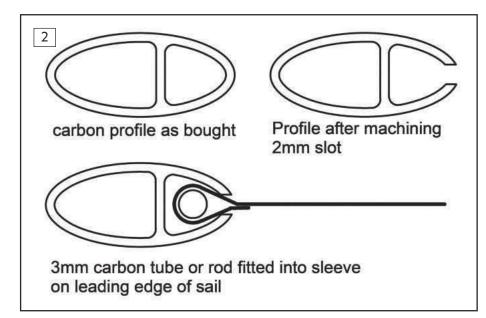




I didn't want to use the round tube with rings at intervals up the mast. This doesn't look scale, and surely air can leak between the mast and sail? Looking around, J Perkins stock a range of carbon tubes, one of which is the one-metre-long elliptic tube shown in **Photo 1**.

I figured that with careful use of a mill, I could cut a slot along the rear edge which could allow a sail luff to slide up. **Photo 2** shows a CAD drawing of my plans for the carbon tube.

A tube was ordered and a 2mm cutter fitted into the Proxxon Mill. The slot was cut in stages as my little mill could only move about 150mm at a time. Once machined, doubled up rough abrasive paper was run up the slot to give a nice clean edge. I now realise I didn't take any photos at this stage... **Photos 3**, 4 and 5 show the finished product. A small sleeve was made in the sail luff, which accommodates a 3mm carbon tube. When









this is inside the sail luff, it can't pull out from the mast slot; it looks neat and is hopefully air tight! The sail itself is simply ripstop nylon cut on a cold metal workbench with a soldering iron.

As another simple idea, I decided to use model aircraft ball joints as a simple gooseneck and kicking strap attachment, seen in **Photo 6**. These small ball joints were just screwed into some 6mm tube which was lashed with carbon fishing thread to the mast base and epoxied. So far there have been no



problems, and it is a nice low friction system. The whole mast system appears to work well, but is only available up to one metre in length.

Photos 7, 8 and **9** show that the finished model has a reasonable semi-scale look, and the sail attachment system is in keeping with the model.



The Model Boat Convention 2019

By Mike Broadbent



BELOW: The Association of Model Submariners likes to sail a different type of submersible; a member of the association is doing just that accompanied by one of the submerged submarines but keeping at periscope depth just in case. Dave Wooley





Steve and Carle of Scale Hobbies of Skelmersdale; one of the few traders at this year's show.





ABOVE LEFT: Guest of Honour Captain Hugh H B Dalglish Royal Navy and his wife accompanied by show president Dr. Nick Jednakiewicz. ABOVE RIGHT: The IOM steam packet car ferry 'Ben My Chree' all scratch built by Manx Model Boat Club member Kevin Fleming. Dave Wooley

he Model Boat Convention 2019 now enjoying its 30th anniversary, and held at the Haydock Race course and has been a firm favourite with the model boat fraternity. This year's convention was attended by 18 clubs, slightly down on previous years, and for whatever reason, this was reflected in the visitor numbers over the whole weekend.

This is the first time I've been asked to report on a Model Exhibition. I did for many years have my own monthly column in the Model Aeronautical press, and Model Aircraft Shows tend to be active in the flying of the models that entertain the crowds. This seems to be lacking in the Model Boat World, and that is due to the lack of water at most shows and while the

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'The beginning of a Model Warship' on the Surface Warships stand which gave the public an insight into how a model is built.

Convention had two smallish pools, this year they seem to be lacking in use; anyway back to this year's Model Boat Convention.

The convention always has a 'Theme' and this year was Naval and Civilian Vessels of the 2nd World War, and there was plenty of scope for exhibitors. There was much activity around the 'Bring and Buy' (or in nautical terms 'Chandlery') with many buyers keeping the Chandlery Staff busy throughout the weekend.

After a quick nose around the Chandlery, I ventured off to visit the traders of which there were nine in attendance and there was plenty of activity, most modellers stocking up for the coming winter projects. I had a long chat with Steve of 'Scale Hobbies' in Skelmersdale on the state of the model trade; a lot of his business is online and he has considered closing his shop, however, if anyone buys over the phone or online he will open up for you to collect your goods.

Then off I went to see what clubs were displaying on their stands and to be honest, not a great deal of new models about, but plenty to admire as usual. If you are the general public then there is plenty to see and always a friendly response from the builder of the model if the public asked any questions.





ABOVE LEFT: Arun No1 (52-01) at 1/12 scale by Arthur Barlow of the Ship Modelling Society. Plank on frame construction. Dave Wooley ABOVE RIGHT: An all scratch-built aluminium plated 1886 Clyde Puffer Otter by George Barrett and rigged with a Gaff Trysail. The original sank in 1893. Dave Wooley





ABOVE LEFT: Southport MBCs stand showing a good collective mix; one of the best stands at Haydock. ABOVE RIGHT: Ever present Don Carton with his huge Northumberland cargo ship. This ship crossed the Mersey in the 1970's along with Father and other members of the Liverpool MBC.

After a first casual tour of the convention on Saturday, on the Sunday I took another wander around and went looking for the unusual and this can be difficult, however, I did spot one or two things. The first was a submarine and a lovely interpretation of the 'Apostoloff'; this design dates from the late 1800s and the designer claimed he would cross the Atlantic in 28 hours!

The second was a model of a warship in the process of being built which there is not much on the stands and gives the viewing public what goes into the construction of a model boat. The third was a delight, a very much modified Club 500 with another boat in its 'Jaws'.

The next tour was looking for that model that stands out from the rest, and with such a high standard of modelling it's very difficult, however the 'Bluebird of Chelsea' was brilliant and proved to be the judge's choice, as well as mine.

The lack of traders this year is I think a trend that is going to increase, as online buying takes over. Another worrying trend is the lack of juniors; this was very visible at this year's convention, as the average age of us modellers is getting older. As Chairman of the Liverpool Model Boat Club, I know how hard it is to recruit new members; the average age of our members is in the mid-60s and the likes of the Model Boat Convention and others shows of this type, should be springboards for many a new devotee, however I for one hopes this changes.





National Fast Electric Championship here is a report on the speed records event. Actually this was held only two weeks after the NATS which I think had an effect in reducing the number of people attending.

As with the NATS report I think some explanations are in order as I suspect that many readers of this magazine may be unsure about fast electrics as not much has been written in the mag about competitive fast electric racing in the past and I am hoping to change this. As I explained in the last article, apart from club racing, the MPBA runs two major events a year, the first being the Nationals, the second is the SAWS.

What's it all about?

Firstly I think the first thing to explain is the term 'SAWS'. This is an acronym which originated in America (as many of them

do) and stands for 'StraightAWay 'which indicates that the boats are run in a straight line over a measured course. As in full size record breaking, the boats are timed over the measured distance and then have to do a return pass up the course. The two times are averaged and then converted to Miles per Hour. In the UK and USA, the distance is 1/8th of a mile, (110yds) each pass. In Europe it is 100m and kilometres per hour.

Classes

There are quite a number of classes available for the UK SAWS, some of which are not on any list as they have not been run and so have no record set. All entrants have to do is enquire before the event as to whether a particular class is eligible. Although on the surface, the class system seems a little complicated, it really is quite simple. It is based on boat type and cell count, all classes

have an identifier which starts with the letter L (don't know why) followed by the number of cells. If you want to know more check out the MPBA-FES website www.mpba-fes.org.uk or please feel free to email me at electro-marine@talktalk.net.

What happened on the day?

Last year, the event was held at Larkfield Tarn which is the club water for the Rawdon Model Boat Club, close to the Leeds Bradford Airport. The facilities here are great, with a large water, a very nice club house with a kitchen and there were lots of interesting models (mainly scale and yachts) stored there.

This year we decided to have the event in the summer (14 July) as last year was cold and wet and windy. The water was quite choppy which is not at all what you need for record breaking. We were told that there was less likelihood of a windy day at this time of year. As Keith Mallam (mpba-fes Records Officer) and I arrived just after 8am to start setting up, the lake was like a mirror and absolutely ideal for fast boats. However by the time we had measured the course and set up the timing equipment a breeze was stirring up the lake a little. This would cause a problem later in the day.

One side of the lake has a row of private houses which we cannot operate from. This year the other side 'our' side, which is all grass, had not been cut and the grass was shin high which made it difficult to measure and lay out the timing gear. Also some of

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Model Boats December 2019

the water's edge plants had grown high enough to partly obstruct the view of the water at certain points. This forced us to move the two marker buoys further out into the lake which meant the boats came out of the shelter of the bank and into the wind affected area - not ideal. However, you can't second guess the weather, so we all just got on with it.

Because of the, at times, quite choppy water, quite a few people did not get completed runs (Me included), but we still managed to break three records and set one new one. Keith had brought the Zonda cat which reached 81.75mph last year with some mods, which he hoped would get him nearer the magic 100mph. This was not to be, as on his only run with this boat it blew over and had to be rescued. As there was water in the boat Keith decided not to risk the £1000 plus boat again, sensible chap. This sort of thing happened to a few people, but by and large, people seemed to enjoy themselves and went away muttering about mods for the next SAWS.

Despite the weather, there were three records broken and one new record set and Keith Mallam retained the Wilkinson Sword Trophy for fastest run of the day. Here are the records set and the class configurations.



Keith with Wilkinson Sword Treophy (again) and his Zonda cat.



ABOVE: The Rawdon MBC club house. BELOW: L4 Mono at speed

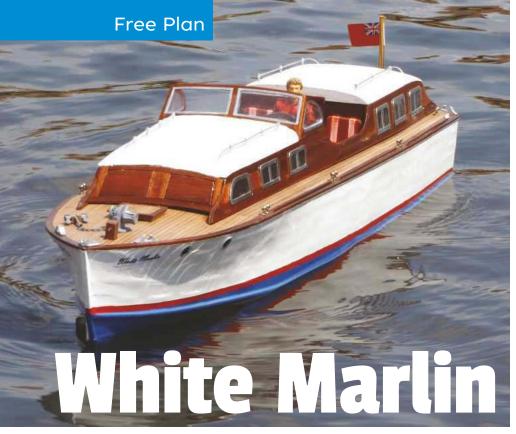


Class	Driver	Speed	Notes
4 Scale Mono	Rob Physick	43.56 MPH	New Record
.2 mini hydro	Rob Physick	34.48MPH	Broke old record
.8 Tunnel (Cat)	Keith Mallam	55.57MPH	Broke old record
.10 Tunnel	Keith Mallam	46.46MPH	Broke old record

Class Battery Configurations

Class	LiPo Configuration	Weight Limit
L1	1s	None
L2	2s	None
L3	3s	None
L4	4s	None
L6	6s or 5s	None
L8	8s or 7s	None
L10	10s	None
L20	10S2P	None
L Open	Any 60v Max	None
Mini Mono, Mini Hydro 8		
Mini Tunnel	2s or 3s	140g

Boat Type		
Туре	Comments	Class
Mono	Any Mono Design Not Scale	(L1-L Open)
Hydro	Any Hydro Design Not Scale	(L1-L Open)
Scale Mon		(L2-L Open)
Scale Hydro		(L2-L Open)
Tunnel		(L2-L Open)
Mini Mono, Mini Hydro &		
Mini Tunnel		(L2-L3)
		450mm max hull length



One of Dunkirk's Little Ships by Ray Wood

Introduction

Modelling a Dunkirk Little Ship has long been an ambition of mine, ever since I saw Dave Metcalf's model of Bluebird of Chelsea some years ago, and it's not every day you get the chance, and talking boats with a work colleague, he mentioned crewing on White Marlin and being a friend of the owner, and knowing of my modelling interest asked me if I would like the original Thornycroft drawings to produce a model!





beaches.

History

to match look no further.

The sense of winning the Lottery springs to mind when the drawings arrived, drawn in 1938 to a scale of ¾in to the foot which converts to 37½in-long model as she is 50ft long in the flesh, with twin propellers and General Motors engines had a good turn of speed. Tracing the drawings for construction started immediately as you can imagine. So it's my pleasure to bring White Marlin to you in model form to preserve the memory of the brave volunteers and RN sailors who crewed her during Operation Dynamo for the evacuation of the troops from the Dunkirk

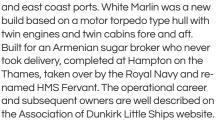
If you are looking for a model of a cruiser not dissimilar to a Norfolk Broads cruiser or an/Aerokits Sea Queen at first glance but with the genuine MTB pedigree and performance

As described many times over the last 79 years the armada of many different types of craft were requisitioned by the Royal Navy

from the Thames and Medway and the south

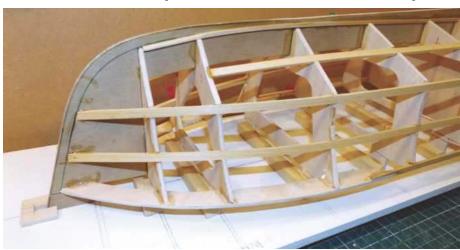
ABOVE LEFT: Complete set of bulkheads cut from 1/8in birch plywood. ABOVE RIGHT: Bulkheads and keel mounted on building board with extensions to common datum.

ABOVE: Rear hull framework with obeche stringers fitted. BELOW: Bow view with breast hook at deck level and stringers.



Model construction

My method of transferring the shapes of the ¼in keel and 1/8in plywood bulkheads is to have a spare copy of the drawing printed at my local reprographics shop to cut up and spray mount on to the cardboard to create a set of templates to check the shapes and positions of the stringer notches. They are also easy to draw round onto the plywood, they are extended to a common base line which is the building board consisting of a length of 22mm MDF window board which if a good flat surface for the foundation of our build. The bulkhead positions are marked on the building board along the centre line with a square, the ply bulkheads have ½in x ½in wooden strips are glued across for mounting on the board, all vertical with the exception of the transom which is a slight angle. Obechi strip 1/8in x 1/4in is great for the inwhales and chine stringers as its strong and flexible and can be glued and pinned in place easily, having recently completed a Vosper Thorneycroft MTB I'm familiar with double diagonal planking with two layers of strips at 45° to each other to form the hull sides and bottom skins, but White Marlin is different in having the first layer at 45° and the second layer laid as carvel planking is that is horizontal strips from stem to stern, an interesting method I believe is for aesthetic reasons as she was designed to be a pleasure craft. This makes the topsides look less like a thrupenney bit as the MTB's

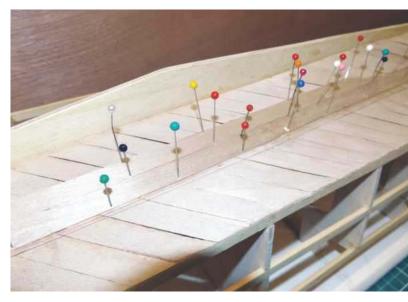


did over the years as the individual planks move and distort. My model is built of two layers of 1/64th ply, as it's price if high 1/32in will be equally good, the gluing and pinning of each 1/2 in wide strip is a laborious process but worth it in the end as it is an authentic form of construction. The spray rails on the chines are 1/8in x 1/8in obeche my favourite material leaving a sharp edge to help her stay dry when up on the plane. The transom has horizontal formers to achieve the curved shape of the original. The beauty of twin propellers is the simplicity of the central keel with only doublers required to receive the bottom skins. The down side is having to estimate the position of the opening slots

for the twin stern tubes which are also in line with the twin rudders, and should be parallel to the to the centre line of the hull. To gauge the correct angle of the shafts I cut some circular ply discs of 35mm and centre drill a clearance for the 4mm shaft and position the discs where the 30mm propellers will be, If at this stage you have your chosen motors and couplings to hand you can assess the best location for the motors which are under the central cockpit area. Once happy with the angle 5-min epoxy from Poundland will secure them, I use simple balsa cradles for the motors to sit in these are lined with RC aeroplane foam wing seating tape to allow some movement and sound isolation from

Free Plan





ABOVE LEFT: First of the base layer of diagonal planking at 45° to the keel. ABOVE RIGHT: Commencement of second carvel layer of planking length ways bow to stern.



ABOVE: Starboard side first layer of diagonal planking.

The inner deck line is demarcated by the 1/8in x 1/4in deck stringer which will fit into the bulkheads, the deck on the original model had 1/32in ply layer glued on then overlaid with 1.00mm mahogany from Mantua Models with the planks drawn in black ink pen to simulate the Sikaflex deck caulking. The rear section of the deck is removable for access to the rudders, the cabin is built in position with false cockpit bulkheads at the front and back of the cockpit, having traced the cabin sides onto 1/16in plywood and cut to shape including the window openings and tack glued to the centre and forward and aft bulkheads the sides need slight shaping to ensure a good fit on the deck, this is rather a trial and error process caused because the cabin sides are angled and not vertical

which would have made life much easier. The cabin sides on the full size boat are made of many different sections of a hardwood, so I have also overlaid with mahogany sheet and strip to create the effect, but could easily be simplified. The cabin roofs are formed from 3/8in balsa sheet which is razor planed to shape and sanded to achieve the curves at the front and rear the rain strip at the roof edge is 1/32in ply strip glued onto the cabin sides before the roofs are attached, and gives a good sharp edge. The cockpit floor is a 1/32in ply sheet located on obeche rails with a central engine access hatch cover. The original engines were much larger units and the central cockpit didn't really exist it was

LEFT: Completion of carvel planking parallel to the keel.

a walkover area with a skylight and ladder access, I have endeavoured to model White Marlin in her present condition. The seats and helm areas are fabricated from mahogany and bits and pieces from the scrap box.

Windows, fixtures and fittings

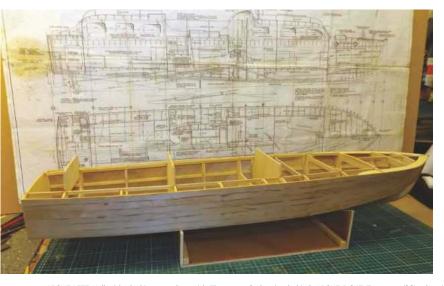
The full size White Marlin's window frames are chrome plated brass, quite a challenge in our miniature size and not breaking the bank with brass etchings and nickel plating, so you guessed it cardboard and chrome foil self-adhesive tape saved the day, the window frames are traced and transferred onto card, carefully cut out and the foil tape applied then cut around leaving a margin to fold round the edges of the card, and hey presto! With acetate glue to the frames with RC aeroplane canopy glue which dries clear, we have glazed windows to contact glue into position. Prior to this stage I had given the cabin sides four coats of gloss varnish so the windows adhere well. The mooring bollards are chrome with timber rails which is achieved using 3½in gauge locomotive handrail knobs from Maidstone Engineering with stained and varnished rails, the fairleads are commercially available and save time but these could be made from scratch if the time is available, I think the small details add character and are well worth the effort.

Painting and decorating

The hull is sealed internally with a coat of West epoxy resin at an early stage, to prevent any water which accumulates in the bilges from soaking into the hull. The outside is also coated with West, but could equally be varnished to seal the ply, the planked deck has to look like teak and the perimeter margin and gunwhale rubbing strip and toe strip varnished mahogany, too achieve the different tones on the same material the planking is coated with water based varnish, and the edges are coated with oil based varnish which gives the deeper colour. With









ABOVE LEFT: Hull with planking complete with Thorneycroft drawing behind. ABOVE RIGHT: Transom 1/32in sheeting glued and pinned in place. BELOW LEFT: Twin propeller shafts in location with one prop fitted and ply blank ready for epoxy. BELOW RIGHT: Twin rudder linkage and steering servo in place.









ABOVE LEFT: Stern view with deck and cabin in progress. ABOVE RIGHT: Bow view with cabin superstructure in place.



ABOVE: Hull and cabin complete in primer and filler

Radio installation is fairly standard and there is plenty of room, double-sided tape the Rx and ESCs to the bulkheads and have the on/off switch somewhere handy. The battery position is variable to suit how the boat looks in the water. If space is an issue, I have used 3-cell 2200mha Lipo's which are smaller than NiCads. Oil the motors and stern tubes and rudders and she is ready for the water.

On the water and crew

The beam to length ratio produces an easily driven hull with a classic line, I have to find a suitable crew to occupy the cockpit so at ¾in to the foot we are looking for a figure 4½in tall I find Doctor Who figures turn up at charity shops are cost effective and fit the bill. As she is long she will not turn on a sixpence, but looks good at speed.

Cockpit detailing

This makes the boat come to life in my book so attention to detail is key, the helm dashboard is quite complex with all the dials etc. the spoked wheel is worth making from scratch, if you have the time.

There are fitted joinery seats and cushions on the rear cabin bulkhead facing forward and a clever two way seat behind the helms position with a pivoting back rest so it can be used in either direction as trams did back in the day. I used blue Styrofoam carved to represent the seat cushions and painted with matt colours.

The engine room and radio installation

40

The motors fitted are re-cycled 480 size from a couple of old ready to not run boats which had issues! But the motors were worth saving so with Huco-type red couplings turning 30mm 3-blade brass propellers handed left and right, I have used Mtronics speed controllers in a destroyer on a twin motor set up, so I have used the same 20amp version for White Marlin. The NiCad pack is a 5000mah capacity and gives 15mins running time. As the original craft was capable of 20kts we need her to get up on a majestic plane, but not go ballistic, this is why I didn't bother with brushless motors and Lipos.





The Southern Model Show

Headcorn Aerodrome, Kent, 7/8 September, 2019 by **Kim Belcher**



ith 20 model boat clubs attending, this was a well-supported event and made for a large 'marine village' around the pool for the two days. Correctly advertised as 'The Southern Model and Craft Show (and formerly the Southern Model Air Show and previously mainly held at the

Hop Farm), the model boats support has increased year on year. There were a couple of traders within the village area, but down the 'flight path' (with hundreds of model planes both very large and smaller) there were many others, whose wares were equally usable for us boat modellers. The activity in

ABOVE: Tony Woodford spent both days manning the Phoenix Marine Model Club's stand, answering visitor's questions, especially regarding the 1/16 model of 'James Stevens 3', the first lifeboat with a propeller.

show report

the air over the flight path could easily be seen from our area too, so two Shows for the price of one, but with just a one-minute walk, all the aircraft activity could be seen. Weather wise, Saturday was quite cold and blustery, with a little rain that did not spoil the day and Sunday saw sun, with moderate wind. I shall mention a few of those models that caught my eye across the two days and also allow the photographs to show you a few more and also the general layout.

Ray Wood had his superb 1/24 scale Thames barge 'Veronica' on the water during Saturday, when the wind was quite strong at times. It had been built by Peter Simmonds from the Isle of Wight. He is a member of both Cygnets MBC and also AMBO. He had made the sails and keel and upgraded other parts and regularly races it successfully. He was also sailing a small yellow and white Graupner Micro Magic yacht, which caught the eye of a few youngsters visiting.

Phil Locke had his, newly acquired from the Child Beale collection, Graupner 1/45 Condor 9 catamaran passenger ferry, which was produced in the 1990s. This was powered by two brushed motors driving two waterjets. Phil has upgraded the two motors to brushless Turnigy 1,100kV, both off one 14.8v LiPo battery. The actual vessel was built by Aluminium Ship Builders Ltd. and was used to ferry 450 passengers between Weymouth and the Channel Islands.

Adam Maplesden likewise had two recently acquired models, one of the Tamar Class lifeboats, this being based on the Model Slipway 1/16 version. Also during the weekend he sailed his large Finnjet Cruise ship out of Helsinki, from the Silja Line. The turbo engine sound system used on this model, which was built by Paul Chilcott of the Southern Model Display Team, sounded so realistic and attracted much attention!

Martin Oliver from the Chantry MBC had his 1/32 SWATH hull research vessel 'Lady of Glenmorrow' on their stand. It was good to see this again, as I can remember it some ten or so years ago at the show's former venue, where it was in its early stage of build. It is of his own design with a completely scratchbuilt wheelhouse and in all it took 16 years to complete. It's powered by brushed motors from a 7.2v NiMh battery source. The people give it some 'action' and are from Graupner, Preiser and Scalextric.

Jim and James Bradley (father and son respectively) had a great display of model boats on their stand, which represented Sheppey Miniature Model Engineering Society. The real 'dream of the Show' for me personally,





ABOVE LEFT: The Shepton Mallett MBC's small, but engaging stand being manned by Carol Sadd. ABOVE RIGHT: Looking at the pond from behind the Grays Thurrock MBC stand.







ABOVE LEFT: Just some of the many exhibits on the large stand provided by the Chantry MBC, with Martin Oliver's 'Lady of Glenmorrow' three rows back with the helipad on top of the wheelhouse. ABOVE RIGHT. A close-up of the detail and figures on Martin Oliver's 'Lady of Glenmorrow' vessel, just part of the huge Chantry MBC's display.







display, but on the water too. A few details of one was RFA A135 'Argus', an auxiliary support ship that is still in service today. Neil acquired this from the Child Beale Trust collection, originally built by Barry Freeman to 1/96. The model has a Harrier jump-jet on the stern area that 'lifts off', flight deck areas that move, the helicopter rotors rotate and there is

and now a new owner lovingly cleans and tidies them up and puts them not just on

ABOVE: Ken Norman and some of his colleagues on the Capstan MBC's stand. ABOVE RIGHT: Members of the Stevenage MBC engage with the public. BELOW RIGHT: Ray Wood's magnificent 1/24 Thames barge 'Veronica'. BOTTOM: Phil Locke demonstrates

the stability of the impressive 1/45 Condor 9 ferry at high speed, during his twice daily demonstration.

a unit that has many authentic sounds. Mike Cummings, of Vintage Model Works, was there with his latest offering. This was a 1/10 (36in length) version of their already famous 24ft version of a Metropolitan Police Thames launch c1950. The construction is much the same as the original Vernon model, but much more detail can be found at vintagemodelworks@hotmail. co.uk. I liked this, as I have had a number of trips out on one of these both from the Teddington Metropolitan Thames River Police Station and that at the Westminster Metropolitan Police

ABOVE: The dynamic duo; Alan Poole (MBA-Dover) giving his commentary on Phil Locke's demonstration of the brushless motored and water-jet powered Condor 9 ferry. BELOW: A 1/16 scale Tamar class lifeboat, recently acquired by Adam Maplesden and being demonstrated by him during one of the lifeboat slots on the water.

Thames Division station.







An interesting, educational and lucid commentary was given throughout both days by Alan Poole (MBA-Dover Secretary) for the public, clubs and exhibitors around the pool area. This was of real benefit and should be continued in future years.

I shall name those clubs attending, as it demonstrates that they were not all from those areas within close proximity to the venue: Black Park, Chantry, Cygnets, Crowborough, Eastbourne, Southend, Stevenage, Grays Thurrock, Countrywide, Capstan, Shepton Mallet Drifters and Crawley MBCs, then Kent Model Boat Display Team (Hosts), Southern Model Display Team,

Association of Model Barge Owners, Phoenix Marine Model Club, Model Boat Association – Dover, Happy Hobby Modellers, Hanwell & District Model Society and Sheppey Miniature Model Engineering Society.

In all, I counted some 220 models on display, a number of which ventured onto the water, where 'slots' for free sailing, warships, lifeboats, sailing craft and demonstrations had been allotted. This, too, helped for an organised and enjoyable event. The organisers have confirmed with me that the 'footfall' was up 30% on last year. If you or you club missed it, look out for next year; you can always camp there overnight too and enjoy the Saturday night firework extravaganza!

ABOVE: This tug was always entertaining on the water, throughout both days. BELOW: James Bradley's paddler steamer 'Rochester Castle', which was finished to a high standard of build.





ABOVE: Another of Adam Maplesden's large 'fleet', this being the Finnjet cruise ship of the Silja Line, out of Helsinki and originally built by Paul Chilcott from the Southern Model Display Team.

BELOW: Each time a demonstration slot was on the water the audience got larger. Here Martyn Prior from the Crowborough MBC fires a motorised torpedo from his Type XXIII U-Boat 2336 at an American Liberty ship – this time successfully hitting it! INSET BELOW: Martyn Prior's Type XXIII U-Boat 2336 submarine and one of the motorised torpedoes.



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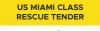
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Wheelhouse

The "Richmond Ribberdale" steam plant together with its associated equipment fits well within the hull

construction (plank on frame)



Bow section showing planking and part of the 10,000 copper rivets in the hull

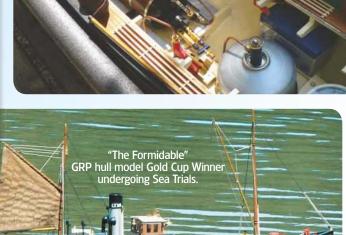
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Stern view





Fleetwood, 28/29 September 2019 by Roger Stollery



ABOVE: The iconic Fleetwood Bridge with the fleet at the leeward gate at the end of the run downwind.

BELOW: Close racing on the beat to windward with 57 Stephen Haywood's STARKERS nearest.



ortunately, the forecast of gales did not materialise, but nevertheless there were strong winds blowing straight up and down the lake, which gave 22 competitors some fantastic racing on this mecca of a radio sailing lake. 16 races were sailed on Saturday and twelve on the Sunday, well-orchestrated by RO Derek Priestley and his team.

Saturday

An 18-mph breeze, sunshine, blue sky and clouds set the scene for some wonderful sailing and close racing. There were seven different winners and the first was Peter Stollery sailing his UPFRONT in C2 rig, followed by Andrea Roberts sailing her infamous pink STARKERS SQUARED sailing in C rig. James Edwards, who was sailing his GRUNGE consistently well, won both Races 3 and 5, but then let Darin Ballington get the first of his four wins in Races 4, 6, 8 and 11 sailing his GRUNGE. In Race 7 Roger Stollery sailing UP came to the front after technical problems at the start of the event.

Darin was top of the lunchtime leader board with 15 points followed by Peter with 17 and James 20. Peter started the afternoon racing with the first of his three wins in Races 9, 13 and 15, followed by Rob Walsh sailing his STARKERS into first place in Race 10. Darin won the next one and Dave Potter sailing his STARKERS CUBED won the first of his two wins in Race 12 and 16. By this time the wind had lightened enough to use the tall A rig and Bill Culshaw was the first to put one on his GRUNGE to win Race 14.

All the competitors got together in the evening for drinks and a meal to recover from

the day's racing. Fleetwood Lake is the length of two football pitches and as there were three laps there was a lot of walking and offwind there was a lot of running to keep up with the speed of these Marbleheads. One skipper's smart watch recorded a distance of 13km!

Sunday

This was a completely different day with wind blowing in the opposite direction, but with heavy rain all day. There was still an 18-mph wind at the start, which gave some excellent

Top 6 results:

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Pos.	Skipper	Club	Hull	Points
1st	Peter Stollery	Guildford	UP	33
2nd	James Edwards	Yeovil	GRUNGE	43
3rd	Rob Walsh	Fleetwood	STARKERS	51
4th	Dave Potter	Birkenhead	STARKERS	70
5th	Martin Roberts	Birkenhead	STARKERS	72
6th	Graham Bantock	Chelmsford	QUARK	78



racing in the lower rigs. Once again Peter kicked off with the first of his seven wins and then shared this place with Martin Roberts, who was sailing the pink STARKERS. Between them they won all but one of the races. Their mastery of the conditions was broken in Race 6, when Tony Edwards won, sailing a GRUNGE.

At lunchtime the top of the leader board showed Peter with eight points, Martin 15 and

James Edwards 20. RO Derek asked the wet and bedraggled looking competitors whether they wanted to continue racing in these appalling conditions. Everyone agreed to do another four races to make the total twelve. As it happened the wind was gradually becoming lighter and moving to the north square across the lake and not providing good windward leeward racing. Once again

Peter and Martin shared the winning slots, with two wins each.

At the prize giving, Peter thanked Derek and his team doing a fantastic job despite standing all day in the rain and wind. We were all pleased to stop!

These two events wrap up the 2019 ranking series and with the best four results of the seven events including the National Championship counting, the end of year results are not surprisingly: 1st Peter Stollery 400 points, 2nd Darin Ballington 386, 3rd Graham Bantock 378, 4th James Edwards 361, 5th Martin Roberts 342 and 6th Tony Edwards 328. Along with current World Marblehead Champion, Brad Gibson, who gets an automatic place, all these are certain qualifiers for the British team for the Marblehead World Championship at West Kirby in June 2020.

98

GBR

GBR



ABOVE: Roger & Peter Stollery's UPs 117 & 39 rounding the spreader mark together and chasing Dave Potter's STARKERS 20.

RIGHT: Top boats running neck and neck offwind, 98 Darin Ballington, 82 Rob Walsh, 95 Graham Bantock and 122 Martin Roberts.

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IOP	o resorts.			
Pos.	Skipper	Club	Hull	Points
1st	Peter Stollery	Guildford	UP	17
2nd	Martin Roberts	Birkenhead	STARKERS SQUARED	28
3rd	James Edwards	Yeovil	GRUNGE	36
4th	Graham Bantock	Chelmsford	QUARK	41
5th	Tony Edwards	Yeovil	GRUNGE	52
6th	Rob Walsh	Fleetwood	STARKERS SOUARED	64

GBR

Reader's Models

We are receiving an increasing number of images of completed models by contributors who do not feel like producing an article but would love to see their 'pride and joy' in print. If you have a model that you would like to see in this new version of Reader's Models, please send to editor@modelboats.co.uk

HMS YORK

One of my latest works is this scratch-built model of the British cruiser HMS York in 1/200 scale. The model was built for a series of conferences about Italian Navy Special Forces during the Second World War. The HMS was seriously damaged in the spring of 1941 in Souda Bay, Crete by a one man small explosive motorboat carried with other similar craft by the destroyers, Crispi and Sella. The so called 'barchino esplosivo' were not a suicide craft; the pilots, after blocking the rudder against the target, could eject themselves at a proper distance to avoid the effects of the dangerous explosion wave on their bodies. Below the model is visible a much small model

Note the small craft mounted on the base; this represents a 'Barchino Esplosivo' which crippled HMS York in Souda Bay on 26 March, 1941



ABOVE: Another very impressive scratch-built model; this time a 1/200 scale rendition of HMS York by Aldo Petrina.

LEFT: A great example of scratch-building.

of the explosive motorboat in scale with the ship. HMS York was then totally lost by German air attack and scrapped after the war by an Italian shipbreaker in 1952. The model was built using the plans of the Polish Profilemorskie firm and several important details were copied from the drawings of the similar cruiser HMS Dorsetshire by the famous Norman Ough. Hoping you are interested, my best regards and my congratulations for the quality of the magazine.

X-BOW TANKER

Please find attached a photo of my son's latest build, X-Bow Gas Tanker. Having decided a commercially available hull was out of his price range, he scratch-built this model using balsa, Plasticard and P38, over a period of three months. The photo shows the tanker on its maiden voyage at our Knightcote MBC water. **Peter Munday (Snr)**





BELOW: Scratch-built Volvo Penta engines conceal a pair of 540 electric motors.



PRINCESS 65

Here is my scratch-built, 1/14 scale Princes 65; the model was made mostly from 3mm, 1.5mm and various balsa. I went a bit 'OTT' and constructed all internal cabins and bathrooms. A pair of scratch-built Volvo Penta engines cover the 540 electric motors. The main lounge has cherry veneer as per the real boat, it has extensive LEDs throughout. The idea was to fit radio control, but once I finished the cabins and superstructure, I decided not to and kept it as a display model. Princess were very good and gave me a couple of brochures and with the help of photos from the web, I completed it in four years. It started out as a rehabilitation project after heart surgery. **James Thompson**



CONSTANT FAITH

Here are some photographs of my model MFV Constant Faith PD.344. The model is scratch-built plank on frame, using builders plans (Buckie) plus photos of the real vessel for reference. The real boat sank in June 2000, thankfully all crew were rescued by a nearby fishing boat. John Webster





Soobrazitelnyy-Russian Corvette

Building the new Russian multi-purpose corvette RFS Soobrazitelnyy by **Dave Wooley**

The boat davits, recovery hoist and sonar crane

oving on first to the construction of the davits, Soobrazitelnyy supports one RHIB and a single enclosed fast launch. To deploy these two craft two identical davits are installed both port and starboard adjacent to the hanger. The principle of operation is for the centre section of the davit to extend upwards whilst the davit and boat is hydraulically

tilted forward, clearing the bulwark ready to be lowered as demonstrated in issue MB69-826 (Photo 8).

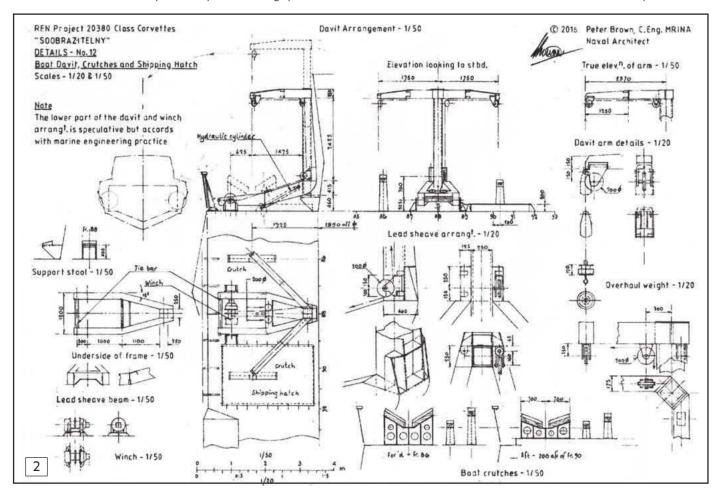
Photo 1 shows the enclosed fast launch stowed on chocks on the starboard side. A similar principle of deploying the RHIB is used by the Royal Navy using a single lifting/lowering purchase and incorporating an antiswing system.



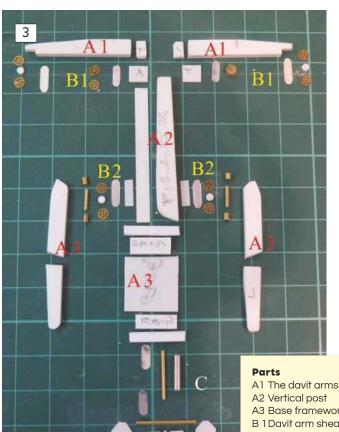
1: Starboard davit arrangement with enclosed launch.

Construction - boat davits

As in previous parts of this build series a detailed drawing has been produced which makes identifying part of a fitting lass problematic. Unfortunately, there are no pictures showing the detail around the base of the davit and drive train. However, Peter Brown has extrapolated information and added his wealth of technical experience to



2: A detailed ancillary drawing for the construction of both port and starboard boat davits.





- 3: For ease of construction each of the parts for the davit are grouped together is defined segments.
- 4: Grouping the parts together that will form the starboard davit frame.
- 5: The port assembled davit.

- A3 Base framework and winch motor housing
- B 1 Davit arm sheaves and holders
- B2 Lower adjustable sheave
- C Winch and hydraulic cylinder

Material

Evergreen 168, 2x4.8mm Evergreen 257, 3.2 x 6.3mm

Evergreen 168

3mm dia. sheave, 25mm thick Litho plate As above + 0.8 inner brass tube + 1mm outer Evergreen tube 224, 3.2mm dia. + 1.5mm od brass tube, 1mm brass wire centre shaft.

provide what would be a functioning davit, given the parts that are visible. On that basis, a model of the davits can be made (Photo 2).

The first task is to identify all of the parts, choose the appropriate materials and decide the method of construction. Although there appears to be many parts, the plain fact is much of what you see is repeat fittings. For example, all the sheaves are the same size and are from a PE fret. The sheave holder is from Litho plate but vary in depth to suit the location. For ease of build I've reduced the assembly of parts down to a simple 'A', 'B' and 'C'. 'A' is the davit, 'B' the sheaves and 'C' the winch and hydraulic cylinder. These can be sub-divided as in Photo 3.

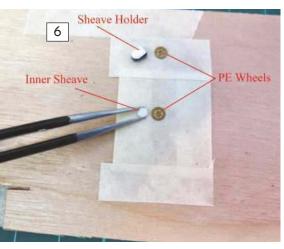
All the parts referenced 'A' are assembled first. It's worth noting that there is a small inboard extension to the davit arm A1. This is chamfered to sit neatly into the top of the

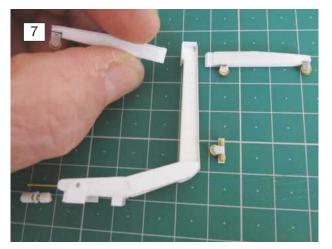


vertical post to maintain the 'V' angle of the davit arms. Also, the edge of the base frame that is joined to the lower part of vertical post is chamfered (Photo 4).

In **Photo 5**, the main part of the davit is assembled to the davit arms temporarily, as these can be removed for fitting the sheaves. There are two sheaves to each arm, each set comprises of two etched wheels with the inner sheave formed by using a leather punch wheel. The sheave holder is formed using strips of Litho plate folded over a template that matches the width of the sheave, each of the prepared sheaves and holders are then added to the davit arms (Photo 6 & 7).

Each of the sheaves mounted either side of the vertical post are also added. These are made to have a limited amount of throw and can be adjusted to suit when rigging the falls (Photo 8). This is followed by assembling and installing the winch. It is worth noting that the winch is not fixed into place as it will need to be painted separately and rigged at a later







6: Making use of masking tape as a simple but effective method for assembling the sheaves. 7: Fitting three types of sheaves to the davit arms and vertical post. 8: Locating the lower adjustable sheave to the vertical post.



9: Inserting the centre shaft into the cable winch. 10: Locating the port davit onto the support stool. 11: Portside recovery hoist as fitted to Soobraziltelnyy.

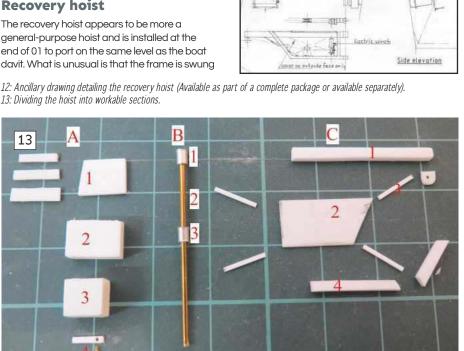


stage (Photo 9). With the davit prepared it can be positioned into place and supported at its base by an angle shaped stool fixed to the side of the hanger as shown in Photo 10.

Recovery hoist

general-purpose hoist and is installed at the end of 01 to port on the same level as the boat

12: Ancillary drawing detailing the recovery hoist (Available as part of a complete package or available separately).



Parts

- 1 Hoist support bracket
- 2 Electrical boxes
- 3 Slewing gear housing
- 4 Slewing handles

- 1 Upper bearing
- 2 Common slewing shafts
- 3 Lower bearing

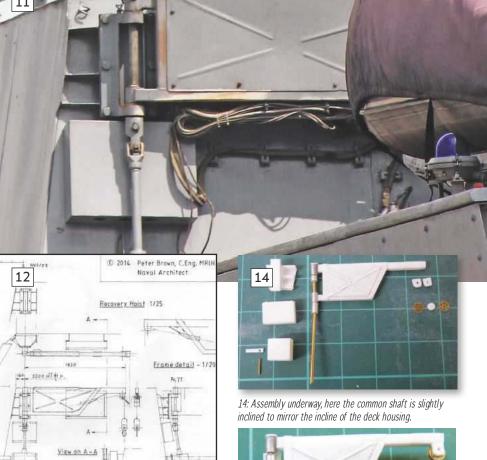
- 1 Upper frame section and sheave support
- 2 Outer cover plate
- 3 Stiffeners (x4) 4 Lower frame sections

Material

.50mm thick styrene .50mm styrene sheet Evergreen 254, 6.2 x 6.2mm sq. section .25mm styrene/.33brass wire

2mm od aluminium tube 1mm brass rod 2mm od aluminium tube

2mm x 1.8mm styrene strip +25thick Litho .50mm styrene Evergreen strips 111, 0.4x0.75mm 2mm x1.8mm styrene strip.





16: Recovery Hoist temporarily located into position.

through 180° to clear the bulwark and is hand cranked into that position with power provided for lifting. Part of the hoist can be seen in **Photo** 11 with the RHIB in the foreground.

Although not complex in construction it would be difficult to extrapolate information for a build using images only. Thankfully a detailed drawing is produced as part of a series of drawing, available separately or combined with the GA and Lines plans; here the drawing is at 1/25th. It's worth noting that there is a universal joint connecting the common shaft to the hoist. This is fitted to allow for the slope of the deck housing onto which the slewing handle is fitted with the frame and purchase remaining level (Photo 12). As no universal joint is fitted to the model and to follow the drawing the common shaft was carefully inclined at the point where the universal

Once again for simplicity of construction the model has been divided into three sections (Photo 13):-

Next the deck housing hoist support is prepared. A further two smaller bearings are then added to the shaft. This is followed with the assembly of the frame, cover plate and

Model Boats December 2019

Parts

- A The jib
- B Hand winch
- C Sheave, large for sonar, small for hoisting
- D Crane pillar, strut and mounting

Material

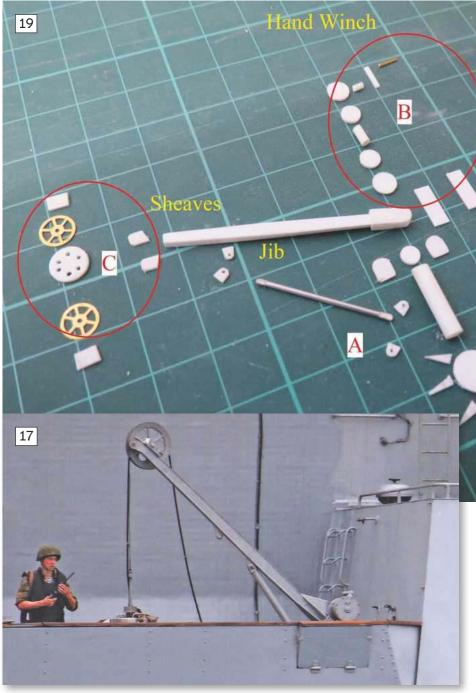
Evergreen 157, 1.5x4mm styrene

Styrene tube 3.2mm mm od, brass tube 1.5mm od

6mm dia., 4mm dia.

3.2mm dia., styrene tube, 1mm od aluminium strut, 7mm dia., styrene disc mounting

19: Reducing the pre-assembled parts into four sections 'A', 'B' & 'C'.



.0.

Pillar & Mounting

18 oject 20980 Corvettes.

#AZ/ITELNY

DETAILS - No.15

Anapa - M. Sonor & Crose and Recovery Heist
Scales 1/20, 1/25
Issue 1 03/2015

18: Having these constructional drawings is a big.advantage.

17: Crane and sonar recovery hoist.

engineering practice. The principle use for this hoist is to deploy and recover a sonar unit, although it can be used for other recovery jobs. Like the Recovery Hoist, there is no motor drive for slewing, deploying or recovery of the sonar. These actions are performed using a hand powered winch mounted on the lower end of the jib (**Photo 17**).

The drawing provided is well detailed with enough information to produce a reasonable facsimile. Although the run and supply of the sonar cable are clearly evident, it can be assumed that the lift and purchase are through a sheave at the head of the jib down to the hand winch (**Photo 18**).

ine/ Identifying the parts (Photo 19)

As with the previous fittings and for ease of identification and construction he sonar hoist was divided into parts 'A', 'B', 'C' and 'D'.

stiffeners. The assembled frame is then fixed to the upper and lower bearings allowing the hoist to move freely as shown in **Photo14**. The final part of the assembly required the frame and common slewing shaft to be fitted to the hoist support bracket and into the slewing gear housing. The slewing handle is then fixed to the front of the gear housing (**Photo 15**). Like all the fittings, I prefer to temporarily position the fitting prior to airbrushing using a short length of .45mm brass wire as a locating pin. This ensures

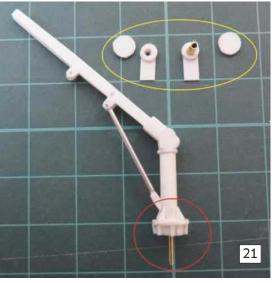
the adhesive used is concentrated on the pin only and not on any part of the fitting, thus reducing any prospect of seepage which is the scourge of finishing any model (**Photo 16**).

Anapa-M sonar and crane/ recovery hoist

First and foremost, in the absence of any specific details as to how this hoist functions, thus comments regarding this are based on



20: Assembly is quite straight forward commencing with the jib joined to the pillar both being connected by a strut.



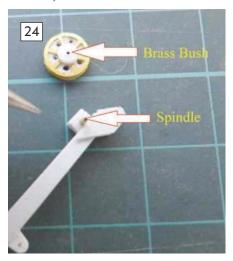
21: Flange pieces are added to the crane mounting and the hand winch is ready for assembly.



22: Fully assembled hand winch which can be added to the jib.



23: Masking tape useful in holding the sheave in place during final assembly.



Assembly

The first task is to assemble the jib, pillar and mounting as illustrated in **Photo 20**. The flange pieces fitted to the mounting can be seen ringed in red in **Photo 21**. With assembly of the hand winch ringed in yellow well underway. The two halves of the hand winch are joined and the hand wheel fitted as in **Photo 22**.

Remembering that this hoist has two different types of sheaves fitted at the head of the jib. One is for deploying and recovering the sonar the other for feeding the sonar cable from the drum winch. It is the latter that is shown here. As demonstrated previously the method used



24: Preparing the fitting of the large sheave to the head of the jib.

25: Sonar crane ready for airbrushing.

for assembling any sheave is to place one of the PE wheels onto a strip of masking tape sticky side up. Place the wheel onto this surface and using a very small amount of cyanoacrylate added to the centre sheave (1mm thickness punched styrene). Next, carefully add the remaining PE wheel as shown in **Photo 23**. When firmly set and using a pin vice, a centre is drilled to insert a brass bush. A spindle is then inserted into the head of the jib ready for the sheave to be fitted (**Photo 24**).

Assembly is completed minus the rigging but that will have to wait until the sonar cable drum and sonar cradle are made (**Photo 25**).

Next month, forming the bulwark as fitted to the bridge and 01 deck.

References and acknowledgements

Ref - Severnnaya Verf, St Petersburg, Russian and Almaz central marine Design Bureau Project 80382 Tiger.

Thanks to Mark Findler for the use of his images of the Soobrazitelnyy; Kurt Grainer Warships Underway USA and to Peter Brown former naval architect Vosper Thorneycroft for his help and assistance.

A GRP hull is available from Fleetscale, www.fleetscale.com. Detailed plans are also available from Jecobin www.jecobinplans.com; Albion Alloys www.albionhobbies.com and Sylmasta mould making and casting materials, www.sylmasta.com.





for any of these































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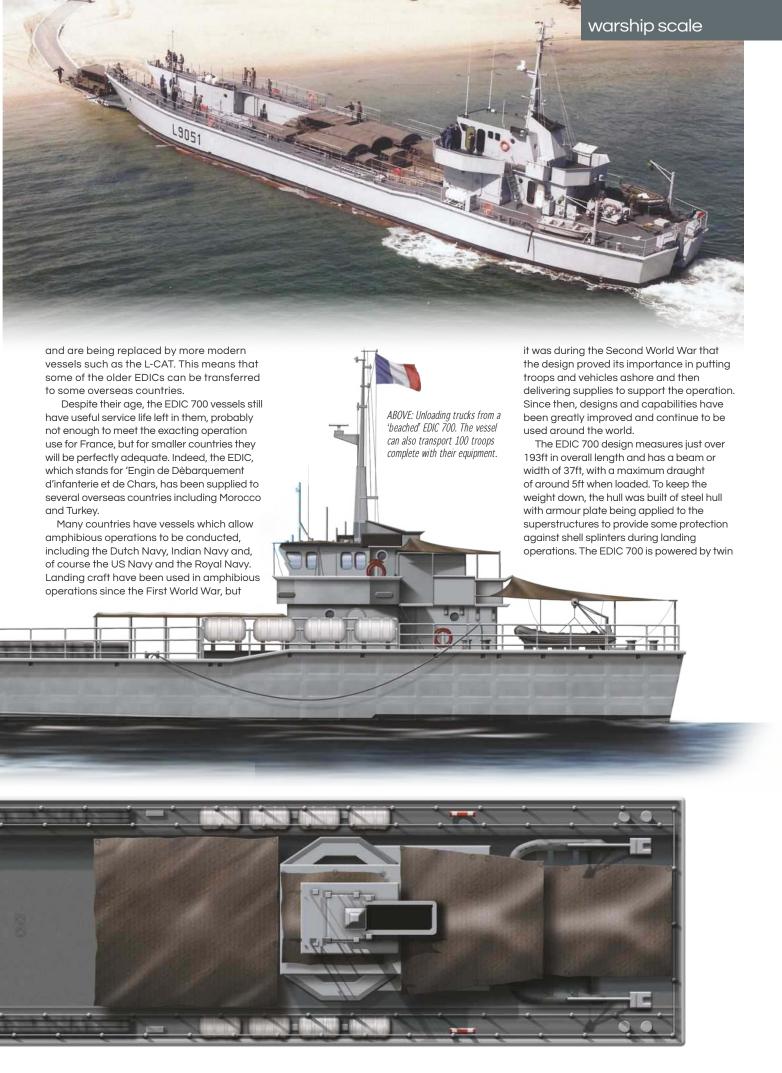
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Diesel-SACM UD30V12 engines, developing a combined output of 1,400hp, driving two fixed-blade propellers to produce speeds up to 12kts with a fully loaded capacity of 726tons. The design has an operational range of more than 1,800 nautical miles with the ability to replenish at sea to extend its range of operations.

The EDIC 700 is operated by a crew of 18, who are trained in the loading and unloading of vehicles and cargo. The main bridge housing the controls and radar is situated at the rear of the vessel leaving the forward portion for cargo and measures 93ft 6in in length and 26ft 3in wide. This provides enough room to accommodate up to twelve large trucks or eight armoured fighting vehicles, such as light tanks or armoured personnel carriers. The vehicles can be driven off directly from the vessel by means of the bow ramp which has a width of 14ft 9in.

An alternative capacity, depending on operational requirement, could be 100 troops and five main battle tanks. Landing craft are utility vessels and their designs have always

been proven to be versatile, which, in the case of the EDIC 700, can transport vehicles of all sizes, including engineering equipment, that can be landed to support either military operations or civilian emergency operations. It is only the width of the ramp which regulates the width of vehicles which can be carried.

Being a support vessel, as opposed to a warship, the EDIC 700 does not require heavy armament. During operational deployment these landing craft would rely on defence against attack by either naval vessels or aircraft being provided by larger ships, such as frigates or destroyers, which would normally sail as an escort. The weapons carried are for self-defence when beaching and unloading; a point when it is at its most vulnerable. Among the weapons carried is a single 81mm calibre mortar on the forward starboard side and a single 20mm cannon on the forward port side. Mounted on the wings either side of the bridge are single .50in calibre heavy machine guns. This is just one option for armament and the type of weaponry can vary depending on the navy or other force, such as marines, using the craft.

The special design of the EDIC 700 means it can be sailed directly to a landing point on a beach, depending on tidal conditions. The ramp is lowered to allow the vehicles to be driven directly ashore and troops to disembark on foot. When the tide comes in, the vessel can be sailed off. The size of the vessel means it can also operate easily within a harbour installation where its crane booms can lift palletised cargo and vehicles directly onto the dockside. Troops can walk ashore for rapid deployment. The vessel carries lift boats and service boats for liaison duties with other ships and there is a small boom-type hoist at the rear to lower these craft into the water and recover them after use. At the time of their service with the French Navy, the EDIC 700 vessels were modern and well suited to the military roles in the late 1980s. France has since sold several vessels of the EDIC 700 Class to overseas navies including the Lebanon, Senegal, Ethiopia and Djibouti where, in addition to their military role for amphibious operations they can be used they can be to support emergency services during natural disasters such as floods when aid has to be taken to an area in large quantities.

SS JARRIX







Scale: 1:48

L.O.A. 39.75" (1010 mm) Beam: 6.25" (160mm) Displacement: 14lb (6kg)



Jarrix launched by Cochranes and Sons of Selby 28.10.1916. For Robert Rix and Sons of Hull. Used for general cargo work.

The kit is to the usual high standards of all our fleet and includes building manual, GRP hull, Superstructure and lifeboats, other materials, full size plan and of course white metal fittings.

Price £295

MOUNTFLEET MODELS

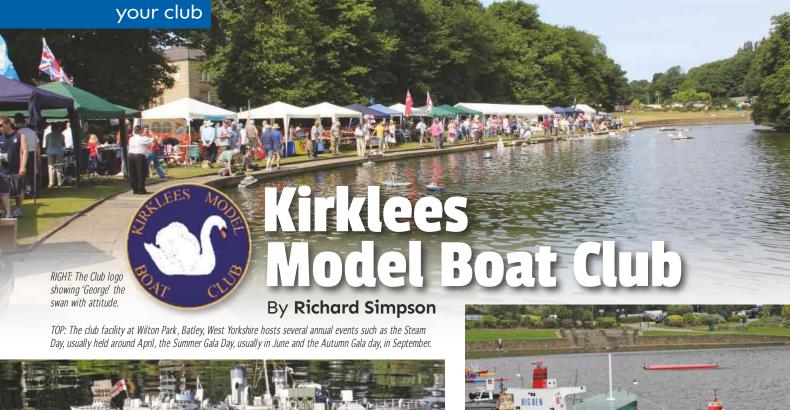
















ABOVE LEFT: A popular means of getting a model on the water is to convert a plastic kit, of which there are a good number in the club. Here two Atlantic adversaries meet in calmer waters, the Revell 1/72nd U-boat and a 1/72nd Corvette. ABOVE RIGHT: One off events have also been trialled in the past such as this tug towing event. The tow can prove challenging, especially when a gust of wind catches the extensive side area. BELOW LEFT: Yachts are also popular at the club and while racing events are frequently held there are also several superb scale models such as this beautiful example. BELOW RIGHT: Tugs have always been a popular subject for the modellers in the club as with this scratch-built model of the Beno demonstrates.





he Kirklees Model Boat Club started out life in February of 1978 with the grand total of just twenty members, based, where it has always been based, at Wilton Park, Batley, West Yorkshire, WF17 8JH, with the first Chairman and founder member being Joe Strand.

Originally known as the Kirklees Model Club the intention was to include cars, boats, armoured vehicles and even round the pole flying however subsequent years saw a shift in interests to mostly radio controlled model boats so the name was changed to The Kirklees Model Boat Club and the club logo of 'George' the large white swan was adopted. George, by all accounts and in line with most Yorkshire men, was a swan with serious attitude who used to frequently attack and even sink members boats. He was eventually 'decoyed' with a polystyrene dummy boat with the main challenge then becoming to get

the dummy boat away from George. Partly in honour of George, his descendants and his many friends in the shape of Canada geese and ducks and with respect to the very good relationship the club has fostered with the local council over the years the club does not allow the use of internal combustion engines or very fast electric models.

Nowadays the club can boast a membership of frequently up to 180 and meet at the pond



ABOVE: Warships of every possible configuration and age are well represented starting off with this old Sirmar kit of a minesweeper, the M1804. In 1748, she makes for a very convenient model that still looks good on the water and a 7.2v NiMh battery of reasonable capacity will keep her going all morning. RIGHT: As with a lot of clubs there are many members no longer with us however their models live on, providing inspiration for future generations. Such are the models of Keith Hayes such as this scratch-built Moorcock tug with scale riveted plating overlaid onto the hull planking.



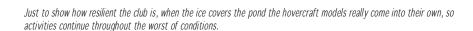




ABOVE: Keeping very old models serviceable and reliable is not always as easy as it might at first seem but when they do appear on the water, they really do look good. This raised quarter deck coaster must be in the region of over 50 years old now and the 'natural' weathering is some of the best you will see.

side twice a week, on Sunday mornings and on Wednesday afternoons. Annual events include a Steam Day, a Summer Gala Day, an Autumn Gala Day and a Christmas Lunch and throughout the year you will see a number of yacht races, Club 500 races, Endurance Races, all on top of the regular free sailing activities. The club also very actively supports steam models with steam testing being available at any time, on request, on top of the Steam Day, and on hand advice for any would be steam modellers.

The facilities at Batley include free parking only a few steps from the water's edge, on site public conveniences and cafe facilities, access to a very nicely kept and maintained public park including some excellent dog walks and an extensive children's play area. On top of



this the pond is of a significant size, is generally weed free and can comfortably accommodate both sailing models and powered models separately and simultaneously. The footpath is only a few inches above the water level making launching and retrieving safe and easy.

There are also monthly club meetings, including an annual AGM for the membership,

held at the Batley Sports Club, which are used for members presentation, guest speakers and even hiring of the sports hall for indoor flying.

All details about the club and its activities with relevant contact information can be found at their web site:

http://kirkleesmodelboatclub.weebly.com/club-history.html.

Test Bench

A round-up of all the latest kits, books and blingy bits

Test Bench is a service that we provide free of charge to manufacturers, distributors and retailers of model boat-related products. Covering all disciplines, anything from books to balsa is accepted for these pages. To submit material, e-mail the editor via editor@modelboats.co.uk with the relevant information or send samples direct to the editorial address in the front of the magazine.

Krick 'Antje'

New from Krick is this delightful 1/20 scale cutter named 'Antie'. part of the German companies re-issued 'RoMarin' series. This style of boat, which includes a capacious hull, is ideal with regard to installing radio gear, motor and battery etc. with plenty of room to spare. It would also make an excellent display model as the components are of a very high scale standard whilst its size makes it very useable down the local pond – it will not take up too much room in the boot.





Inside the box the first thing you will see is a good quality vacuum-formed ABS plastic hull which conceals a one-piece deck made in the same way. Once these are joined together and the strakes fitted, a very sturdy combination is achieved and as already mentioned, there are no obstructions within the spacious hull. There are six laser cut wooden sheets (one for the boat stand); they include the deck planking (one piece covers the entire deck) and all the necessary components for the wheelhouse and companionway. A large, single sheet of plastic card is also laser cut and the masts and yards are bagged separately. All fixtures and fittings, including

propeller, propeller shaft, R/C components, brass fittings, thread, sail and much more are all bagged up ready to go. There are two sets of instructions, one in German and one in English; the former is in full colour. There are also three loose A3 sheets with some helpful line drawings and a full size plan of the entire boat in profile and from above. All in all this is a very tidy kit, whether you choose to go for display or on the water, you will be rewarded with a very attractive vessel.

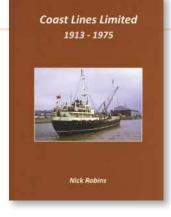
Thanks very much to JoTiKa Ltd for supplying this excellent kit. JoTiKa are the UK distributor for Krick kits. For more company details visit www.jotika-ltd.com.





Coast Lines Limited 1913-1975 by Nick Robins

'It does what is says on the tin', a familiar phrase to many and one that immediately sums up what this solid, quality book from Coastal Shipping Publications is all about. There are no airs or graces about Nick Robins book, its gets stuck into a great subject, delivered in a readable style, backed up by quality black and white photographs throughout. There is one colour page with a company advert, passenger lists and menu. The book is a good old fashioned solid hardback, printed on quality glossy paper and designed in a straight-forward,



workman-like way so you can find all the facts and figures you are looking for in no time.

The subject is Coast Lines Limited, a company with a complicated history, to such a degree that this is the fourth book by the author on this subject. Spread across twelve chapters, the story begins with formation, travels through the First World War, the struggles of the 1920s, becoming an independent company during the 1930s, the Second World War, re-organising in the 1950s and the 'Mini Liners' of that decade, the unit load era and finally 'Roll-On Roll-Off and P&O; it really is a fascinating journey. To the rear of the book, pages 118 through to 146 is a detailed fleet list which presents the name of the vessel its service period, gross tonnage and comments, the majority of the latter are extensive.

This is a great subject present extremely well by the publisher who has certainly not shirked on the printing costs and I'm sure the reasonable RRP does not leave much room for profit – highly recommended.

Thanks to Bernard McCall at Coastal Shipping Publications for supplying Model Boats with this quality book.

Owen Cooper

ISBN: 978-1-902953-95-3

Pages: 150

Price: £16.00 (RRP) Format: Hardback – A4

Publisher: Coastal Shipping Publications Website: www.coastalshipping.co.uk

TOP STATE OF THE SEAS OF THE S

Top Trumps – World Famous Ships

I remember clearly when Top Trumps were first launched back in 1978; I was into them straightaway! The brand has continued to grow and the

range of subjects available today is huge, while packs from the past are still being collected. One of the latest covers World Famous Ships from the huge cruise liner 'Allure of the Seas' through to the 'Titanic' and a whole lot in between. I started playing the game as soon as I stripped off the protective packaging, noting the size of the crew for the 'Allure of the Seas' was a huge 2,384; only the RMS Queen Mary II came close with 1,253 crew so I one that round off the bat! Each card (30 in total) has the name of the ship at the top of the card complete with

its native flag, a photograph of the ship, a short history called 'Top Trumps File' on the lower left handside and opposite, six key facts which will be employed to play the game. The latter are the year, approx length in metres, speed in knots, beauty, maximum crew and finally a Top Trumps rating. It is interesting to note that 29 of the 30 ships have a Top Trumps rating of between 80 and 90; only the infamous 'Exon Valdez' which caused one of the world's worst environmental disasters receives a rating of just 30. Once the dealer has shuffled and dealt if you have the Cutty Sark in your hand, don't forget to play the 'Beauty' figure; this

lovely clipper gets an unbeatable score of 97!

Very addictive and fills your head with facts and figures you may never have known without realising it – great stuff! Thanks very much to Claire Simon for supplying these excellent Top Trumps – please visit www. winningmoves.co.uk to view this and many other great games.

David H Smith

EAN: 5036905026529

Pages: 192 Price: £4.99

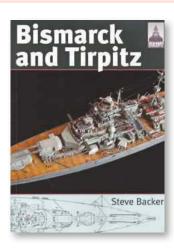
Dimensions: 85x140x20mm Publisher: Winning Moves

Website: www.winningmoves.co.uk

ShipCraft 10 – Bismarck and Tirpitz by Steve Backer

First published in 2008, this is a reprinted edition from a series that aims to provide modellers with all they need to know about a famous class or type of warship and the associated model kits.

The subjects of this volume, are the famous German sisterships whose fates were so different – Bismarck had a short but glorious career, first sinking HMS Hood, the pride of the Royal Navy in the Denmark Straights before being sunk herself by the Home Fleet shortly afterwards, while Tirpitz spent most of the war sulking in the Norwegian fjords before being sunk by RAF Lancaster.



With sections on design, armament, building data, modifications and career history, together with a large number of highly detailed line drawings, scale plans, photographs of ships, fittings, weapons and equipment, this book offers the modeller an unparalleled level of information, including paint schemes and camouflage, featuring colour profiles. The modelling section reviews the strengths and weaknesses of available kits, lists commercial accessory sets for super detailing and provides hints on modifying and improving the basic kit. This is followed by an extensive, full colour, photographic gallery of selected high quality models

in a variety of scales. The book concludes with a section on 'selected references', including books and relevant websites.

In short, this book is, without a doubt, the essential reference source for anyone contemplating, or in the process of building a model of one of these famous battleships.

Many thanks to Charlie Simpson at Seaforth Publishing for the review copy of the book which is available at www.seaforthpublishing.com.

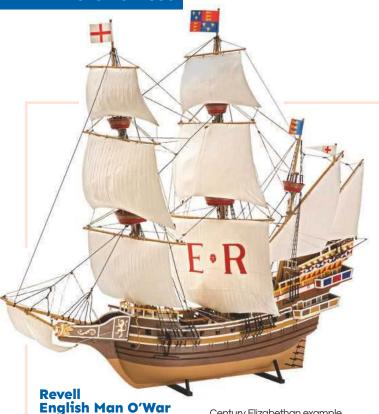
John Deamer

ISBN: 978-1-84832-005-5

Pages: 64

Price: £14.99 (RRP)

Format: Softback – 297x222mm Publisher: Seaforth Publishing Ltd Website: www.seaforthpublishing.com



Man O'War was a general term used by the Royal Navy between the 16th and 19th Centuries for a warship or frigate. The Man O'War presented by Revell here is a 16th Century Elizabethan example which would have seen action against the Spanish Armada. Revell have produced a number of Man O'War-type vessels over the years and this one may have its





roots in the 1970s but on opening the box, the contents look pretty fresh to me.

This is a big model contained within a big box which it more than fills. The impressive 394 parts are made up of five main hull sections, two very large sprues filled with brown-coloured parts, a single sprue for the rigging, another pair of sprues filled with crew (40 in all), two large sheets of unfurled sails, four rigging yarns (including cannon ropes) and an anchor thread, a small decal sheet and set of paper flags. Full colour instructions are provided in an A4, 48 page booklet which guides you through an 80 stage build.

The kit is well-detailed, the two-piece hull in particular and a quick dry fit of these parts

gives a pretty good fit. The deck has been moulded with a wood look, all of the superstructures are nicely detailed and a full complement of cannons is included. This kit really has a presence once complete and at 1/96 scale is big, which is good news for those who like to modify or add extra detail. As always with this style of ship, the rigging can be easily replaced with thread and the sails with real cloth. Whichever road you choose to go down with this, there is no doubt that you will enjoy building this impressive kit.

Revell model kits are available from all good toy and model retailers. For details visit www.revell.de/en.

MC

Product: Construction kit

Ref: 05429 Scale: 1/96

Size: L, 747mm, H, 638mm, W, 270mm

Parts: 394

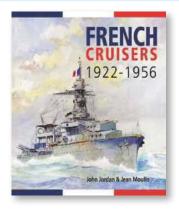
Price: RRP €99.99 (approx. £85)

Manufacturer: Revell Website: www.revell.de

French Cruisers 1922 -1956 by John Jordan & Jean Moulin

The French produced some of the most striking and innovatory interwar cruiser designs. A large amount of new information about these ships has become available over the past 20 years in France, but this book is the first to make this accessible to an English speaking readership.

Part I explains the design philosophy behind each of the classes built after 1922 and outlines the characteristics of each type. The text is accompanied by detailed data tables and illustrated by a comprehensive set of specially



drawn plans and schemas based on official documents, as well as carefully selected photographs from both French naval sources and private collections. Coverage includes the 'De Grasse', laid down in August 1939 and completed post-war an AA cruiser and also the heavy cruisers of the 'Saint Louis'-class intended to follow her, about which little has been published.

Part II deals with the historical side, covering not only the eventful careers of these ships, but also explaining the peacetime organisation of the Marine Nationale, the complex politics of this turbulent period and their impact on the navy. This section is illustrated by maps specially drawn for the book and by contemporary photographs.

Like its highly successful

predecessor, French Battleships 1922 – 1956*, this beautifully presented book subtly blends technical and historical analysis to produce what must become the standard reference work for naval historians, enthusiasts and model makers alike.

Many thanks to Charlie Simpson at Seaforth Publishing for the review copy of the book which is available at www.seaforthpublishing.com.

John Deamer

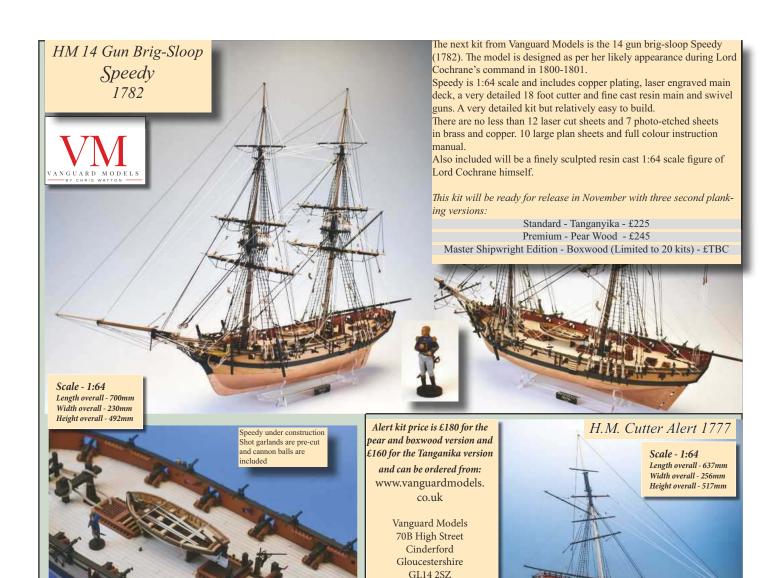
*Also available from Seaforth Publishing.

ISBN: 978-1-84832- 133-5

Pages: 232 Price: £40.00 (RRP)

Format: Hardback – 296x256mm

Publisher: Seaforth Publishing Ltd.
Website: www.seaforthpublishing.com



Vanguard Models is now the UK distributor of Master-Korabel kits and fittings, a relatively new manufacture based in Russia. The kits are 1:72 scale and are very pre-fabricated, with some kits, even the hull planking is laser cut and treenail holes etched into each plank, including the decks and inner bulwarks. We also stock the very realistic looking machined pear wood blocks and deadeyes. Visit our website at www.vanguardmodels.co.uk to see the full range

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of kits and fittings.

Brigantine PHOENIX 1787, wooden kit Length: 590 mm. Height: 440 mm, Width: 220 mm. Included Lifeboat MK0101 All hull planking and details are laser cut. Price - £225



UK
Tel - 01594 824610
Email - sales@vanguardmodels.com
chriswatton66@gmail.com

Shooner POLOTSK 1788, wooden kit Length: 580 mm. Height: 456 mm, Width: 175 mm. Included Lifeboat MK0102 All hull planking and details are laser cut. Price - £188



Deck-Boat St. Gabriel 1728, wooden kit

All hull planking and details are laser cut.

Length: 350 mm. Height: 300 mm, Width: 150 mm.

Price - £130

Tender AVOS 1806, wooden kit Length: 420 mm. Height: 420 mm, Width: 175 mm. Included: Lifeboat MK0103 All hull planking and details are laser cut. Price - £149 without sails and £194 for

the pear wood planking and pre-sewn sails version

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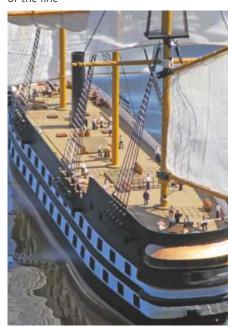
A look at how gas turbines in model

Gas turbines

Facelift for an old lady Restoration of a 1960 16in tug



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BILLINGS COLIN ARCHER 414 RS No.1 fibreglass hull, approx 1270mm long, about 50% complete. Major amount of deck work complete, genuine reason for sale, £300. Also a few other completed vessels, phone Terry on 01217092279 for further details (Solihull)

HMS HOOD Graupner Premium Line ARTR, Instruction Book, £480. ARTR Brave-Class PT1-1011, £120, buyer collects for both, call Bill on 0191 5147173 (Tyne and Wear)

KYOSHU SEAWIND Booms/mast. sails etc. New P J Sails last year, VGC, excellent performance, £225, buyer collects. Lead bulb with alloy fin, 5lbs 2oz by P J Sails, £25. Call 07484104451 (Lancs)

GUARDSMAN CUSTOMS Launch 'Searcher', 32inx7inx18in, single screw in good condition. Electrics recently modernised for 2.4 radio. Radio and battery not included, offers IRO £300. Call David on 01243 374467 (Hants)

BNIB MARVON steam drifter Saito Polar Star; Robbe Wotan Dusseldorf; Westeriff Schnellboot U-47; Graupner Westeriff; Krick Victoria Norstrand; Mountfleet C642, all with fittings kit, e-mail Steve, wheeler70@e-mail. com or call 07770 915360 for details, pictures & prices.

TECHNOBOTS engine sound simulator, unused, £10 inc. P&P. Call John after 6pm on 01225 315453 (Bath)

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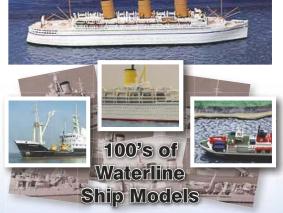
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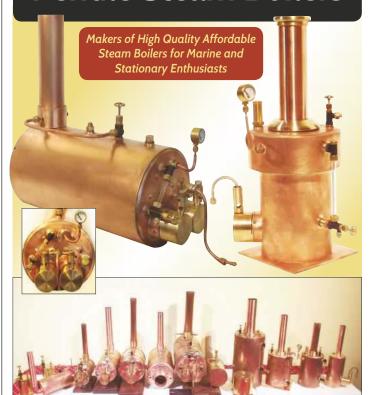
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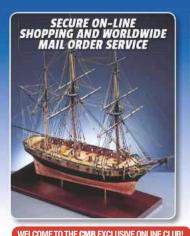


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