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Heller HMS Victory 1:100 scale £149.95
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Plastic Kit Upgrades

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HMS Hood detail sheet pack 1:350 scale £35.80
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Hitec Optic 5 channel (2.4 GHz) combo £72.50
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Tamco 6 Channel 2.4GHz combo £49.95
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Motor mount for MFA 800/850 Motors £4.50
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540 Motor 6 to 12.0 Volt with mount £10.36
RE800 Motor 12.0 Volt with mount £27.49
RE850 Motor 12.0 Volt with mount £27.49
Motor mount for 540/500.550 and 600 Motors £2.75
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Brass Propeller (A Type) 50mm -3 Blade-M4 £14.58
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QD34 1:32 Scale 14ft Clinker Dinghy £17.76
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QR25 1:96 Scale 25ft Motor cutter £9.84
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Lime Strip 1 x 10mm x approx 1 metre long £0.55
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Lime Strip 1 x 3mm x approx 1 metre long £0.38
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Period Ship Kit Builders Manual £16.95
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Mantua Spar Lathe. 12V £99.00
Mantua 12v Electric Fret saw 12v £110.00
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Building Slip £54.95
Amati Electric Plank Bender £31.54
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Swann-Morton 3 knife ACM Tool Set £22.61
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20 piece twist drill set .3 to 1.6mm £13.23
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Pin Pusher £9.07
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Zona Ultra Thin Kerf Razor Saw 52tpi £11.76
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Zona Ultra Thin Kerf Razor Saw 32tpi £11.94
Zona Medium Kerf Razor Saw 24tpi £11.94
8 piece twist drill set .5 to 2.0mm £7.38

CONTENTS

APRIL 2017 - ISSUE 361

COVER STORY
SEALIGHT
The Clyde Puffer can be classed as a classic work boat that mainly plied the trade of delivering goods to the remote islands around Scotland for many years and could be seen in other parts of the UK, including the Bristol Channel. With the flat bottom design this craft could land on remote beaches and wait for the tide to go out before unloading. This kit by Mountfleet Models has been around for sometime but has recently been re-released and can be described as a legend in kits.

Regulars

Features

MESSAGE FROM THE ENGINE ROOM

EDITORIAL CONTACT

MMI generally publishes commissioned articles, but will consider other contributions including news items and factual articles. It is important that contact is made with the editor before any material is written, as duplication of items may result in articles being rejected. Prospective contributors can email or write for a copy of the MMI Notes for Contributors via Traplet Publications Ltd.

Any other Editorial queries can be made by telephone to 01749 347172 during normal office hours.

HI EVERYONE,

At the time of writing the weather is rather cold and damp. As a result the usual Sunday sailings with my club are a bit hit and miss. So I have tended to sail my most reliable boat, leaving the more demanding ones at home until conditions improve. The boat that serves me very well is the Etoile, built from the plan MAR 2324, and written about in the May 2016 edition.

This boat appeals to children and always gets ribald comments from parents about the condition of the action figure as he is very exposed to the cold. Having run it for the fourth time in a row one of the club members said, "she goes well, you are lucky to have such a reliable model". This left me thinking "was luck involved?" Had he forgotten the number of times the club had assessed the performance of the early versions of the craft as "pathetic"? What was it that made this particular model such a good runner?

The Etoile is a very reliable craft

To answer my own question I think there are three main issues. Firstly, the build quality of the boat. I had spent some time ensuring that the hull was completely watertight. I also made sure that any electronics was well out of the way of water splashing in from above or seeping in from below. Having plenty of buoyancy material inside the hull was also important.

Secondly, I spent a considerable time getting the best combination of propeller and drivetrain in order to have the boat perform well. It seems that many people are satisfied with their craft 'as built' and fail to go the extra mile to maximise performance.

Lastly, whenever I get back home the boat is thoroughly dried out, the battery charged, and the hull and electronics given a thorough checking over. There is then time to address any problems before the next sailing. So, maybe it is not just luck?

This edition's FREE PLAN is of a vessel which started life as a Stern Trawler and after a number of conversions became the Stand By Safety Vessel, Thor Guardian. The plan is drawn to 1/50 scale and has some simplifications to make construction of a model easier. The second constructional article is of an ever popular Clyde Puffer. Built from the kit by Mountfleet Models the article gives many hints and tips on making an impressive model of Sealight. SLC 'Maiale' is another build article where Mike Williams describes how he adapted Italeri's 1/35 scale model of a SLC to represent No. 221 as closely as possible. He also explains how he adapted some figures to make the model more lifelike.

For those readers who were interested in the history of the unsinkable and self-righting lifeboat 'Insulinde' we have part 2 in which Christian Koenig describes how he scratch built a 1/16 scale model.

Along with other articles of general interest we have the regular features such a Vintage Chatter, which looks at modelling books from the sixties and seventies, and Plastic Kit Scene, which keeps us up to date with the most recent kit releases. Overall there is something for everyone who has an interest in model boats.

Chris Saunders
MMI

MARINE modelling INTERNATIONAL

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TRAPLET PUBLICATIONS

MASTHEAD

NEWS OF INTEREST FOR MARITIME MODELLERS

BEALE PARK SPRING BANK HOLIDAY MODEL BOAT SHOW 29TH & 30TH APRIL – CANCELLED

Kent Model Boat Display Team are sorry to announce that owing to unforeseen circumstances, they are are not able to host the Beale Park Model Boat Show this year. However, the resident club at Beale Park, The Mid-Thames MBC will be holding an open day on Sunday the 30th April themselves. This is open to all Model Boat Clubs and their members and will be a great day out, with a variety of models on display and on the water including Tug Towing, and Fast Electrics. For full details with park instructions and timetable of on the water times contact Tony Simons on 0777 244 7723 or Email: tony406@btinternet.com

MYA INTERNATIONAL ONE METRE NATIONAL CHAMPIONSHIPS

The MYA are pleased to announce that the 2017 championships will be hosted by the radio sailing section of Datchet Water sailing club. To be held over the August Bank Holiday weekend of the 26th to the 28th of August at Datchet Water, this will see skippers from all over Europe competing. The anticipated fleet of over 80 boats will include up to 8 current and former world champions from both the radio and full size sailing community.

MYA
Radio and Free Sailing in the UK

Fleet of One metre class yachts racing

MYA Chairman and Datchet Water RSC member Terry Rensch expanded on the size of the event by saying, "This premier event on the radio sailing calendar is further proof that radio sailing is now an important part of the sailing community; the quality of skippers from the UK and Europe attracted to the event will be second to none." He further added, "many who have not witnessed the close tactical racing will be surprised at the skill and control required to race these boats in large fleets; with up to 15 races in a day the concentration levels required to come out on top are immense."

Entry is now open for this event for all MYA members, but if you are close to Datchet Water during the event why not come along and see what it's all about.

For further information about the event or radio sailing visit the MYA website www.mya-uk.org.uk or call Terry Rensch on 07738 404423.

FURNESS MODEL BOAT CLUB

Formed in 1996 the Furness Model Boat Club looks after the interests of all model boating enthusiasts, be it sail or powered, in the Barrow and Furness Peninsular area. Our location and details of our club are given on our website simply located by entering our club name on Google on the Internet.

We sail on 2/3 days a week with our main meet being on Sunday mornings. We are privileged to enjoy sailing on the park lake within the beautiful Barrow Park overlooked from our Clubhouse, just a stone's throw from the North shore of the lake. We sail semi-competitively IOM yachts on Tuesday afternoons, but all other times the wide range of model interests of members within the club are catered for. To avoid incidents with other models IC yachts are allocated specific times to sail.

We hold 5 regattas during the year each incorporating the model interests of all our members, all held on Sundays starting at 10 am and finishing between 3-3.30 pm with a break for lunch in the clubhouse between 12 pm and 1.30 pm. We welcome anyone in the area, with or without models to join us on our regatta days and our events for 2017 are as follows: 9th April, 21st May, 25th June, 23rd July and 3rd September with a submarine theme, full details can be found in Diary Dates for the month of the event or all events for the year can be viewed online http://thehobbyhub.com/water/magazines/marine-modelling-international/diary-dates

CAISTER LIFEBOAT STATION HOSTS MODEL DISPLAY

Sunday 30th April will be a great day for enthusiasts and supporters of lifeboats with an interest in model boats and trucks, as Caister Lifeboat Station near Great Yarmouth, Norfolk will be hosting a model day. Caister Lifeboat Station operates independently of the RNLI with a history going back to 1791. The current operational lifeboats at the station are the Bernard Matthews II (a Dutch built Valentijn 2000 offshore lifeboat) and the Fred Dyble (a semi-rigid inflatable inshore lifeboat). These are operated and crewed by the Caister Volunteer Lifeboat Service, a registered charity supported entirely by public donation. The museum/visitor centre is also home to the Shirley Jean Ayde, a Liverpool Class lifeboat built in 1952 by Groves & Gutteridge, Cowes. This vessel was the first Independent Offshore Lifeboat operated in the country. The model display is being co-ordinated by Great Yarmouth MBC who will be joined by a number of other clubs from Norfolk and Suffolk. In addition to a profusion of model boats there will also be radio controlled trucks in operation. The main display will be in the large modern boat shed (with catering facilities) and weather permitting the trucks will be performing outside. Entrance to the event is free of charge and will be open from 10 am. Caister Lifeboat Station, Tan Lane, Caister-on-sea, Norfolk NR30 5DJ.

TRANSATLANTIC TALL SHIPS RACE

This series of races of full size tall ships organised by the Sail Training International called Rendez Vous 2017 starts from Royal Greenwich, London on April 16th to Torbay. Race 1 starting on April 18th will be from Torbay to Sines, Portugal, Race 2 Portugal to Bermuda, Race 3 Bermuda to Boston and Race 4 from Boston to Charlottetown. There should be very good opportunities for photographers to catch the action with over 8 tall ships booked in to date sailing around Torbay.

SWINDON MODEL BOAT AND ENGINEERING CLUB

This club formed in 1931 has recently changed its website which is now www.smbec.co.uk. They sail regularly on the Coate Water Country Park in Swindon and welcomes new members. ***MMI***

DIARY DATES

DATES FOR YOUR DIARIES

If you know of any confirmed Maritime related events and you would like us to include them please let us know either by Email mmi@traplet.com or post to MMI Editor, Traplet Publications Ltd, Traplet House, Willow End Park, Blackmore Park Road, Malvern. WR13 6NN. England. We need the Date, Venue, Organiser/who to contact and crucially an Email/Website address and/or a telephone number, a post code would be useful for Sat Nav's. A full listing of events for the year can be found on: http://thehobbyhub.com/water/magazines/marine-modelling-international/diary-dates we do need at least 8 weeks notice to include in the printed magazine.

APRIL 2017 MMI DIARY DATES

APRIL 1

Radio Controlled Model and Craft Show

The Moorhen Model Boat Club will be hosting a radio controlled model and craft show at Roydon Village Hall, Roydon, Harlow, Essex CM19 5HH, between 10 am and 5 pm. Light refreshments will be available to purchase. Entry fee will be £2. Please contact Mr Allan Storrar on 07846 309269 for more details if required

APRIL 1/2

Coalville Model Boat Show

Hermitage Leisure Centre, Coalville. For further info Email: dave@coalvilleshow.co.uk

APRIL 9

Furness Model Boat Club Open Regatta

Park Drive, Barrow in Furness, Cumbria LA13 9BB, from 10 am to 3.30 pm. Contact either Adrian Stanton on Tel: 01229 827709 or Email on adrianstantonroa@btinternet.com or Dave Jacques, FMBC Treasurer, on 01229 831981 or Email: david1jacques@talktalk.net

APRIL 9

Footy Open – Videlo Globe Trophy

Frensham Pond MYG, Frensham Pond Sailing Club, Pond Lane, Churt, Farnham, Surrey GU10 2QA. 9 am – 4 pm. Contact banjo5@btinternet.com or www.sailfootyuk.com

APRIL 16

Six Metre Open – Shearwater Trophy

Broads RYC, Southern Waterfront, Ormesby Little Broad, Filby NR29 3AA, within the grounds of Filby Bridge Restaurant, Round 1 of the MYA Eastern District 2002 Trophy. 9 am – 4 pm. Contact terryb523@icloud.com or www.broadsradioyachtclub.co.uk/index.html

APRIL 22

Extreme Footy Series ACT 2

Abington Park MYC, Abington Park, Northampton NN3 3HN, Footy Class Stadium style racing. 9 am – 4 pm. Contact peter.shepherd62@gmail.com or www.sailfootyuk.com

APRIL 22

Spalding Model Engineering & Hobby Show

Springfields Event Centre, Camelgate, Spalding PE12 6ET, Lincolnshire. 9.30 am – 4.30 pm. Traditional Model Engineering, 3D Printing, R/C Vehicles, Indoor Flying Zone, Flight Simulator, Outdoor Boating Pool, several large railway layouts, 35 plus clubs/societies already booked in, miniature live steam outside, daily steam road run, free car parking and lots, lots more! Entrance Adults £7, under 16's £2, Under 5's free. Contact spaldingshow@gmail.com or 07443 524260 or www.spaldingshow.com

APRIL 22

South West Ship Show

Gordano School Community Trust Sports Centre, St Marys Road, Portishead, Bristol, BS20 7QR. 10 am to 4 pm. For further information contact 01275 846178 or www.coastalshipping.co.uk

APRIL 23

Kirklees Model Boat Club Steam Day

To be held at Wilton Park, Bradford Road, Birstall, Batley WF17 8JH, 9.30 am until 4 pm. Free car parking, refreshments. Steam plants will require up to date paperwork. For further details contact Stan Reffin at kmbc2015pr@gmail.com or 0113 2675790

APRIL 29

Wee Nip Medal Competition – R2

Hollowell Sailing Club, Hollowell Reservoir, Nr Guilsborough, Northamptonshire NN6 8RN. 9 am – 1.30 pm. Race series for Bermuda rigged Wee Nips detail available at www.weenip.org.uk/ or contact peter.shepherd62@gmail.com

MAY 2017 MMI DIARY DATES

MAY 6

Mobile Marine Models

Manufacturer's Bonanza, Manufacturer's Market Day. The Boat Shed, Highcliffe Park, Ingham Cliff, Lincoln LN1 2YQ. Start 10:30 am. Factory-On-View, many Trade Stands and Club Exhibitions. Burger Van. Free entry, free parking. For more information call 01522 730731/689209 or visit www.mobilemarinemodels.com

MAY 13

Knightcote Model Boat Club Model Lifeboat Rally

Knightcote Model Boat Club are hosting a Model Lifeboat Rally. Free Car Parking, clubhouse, hot food and drinks, large sailing water, model railway displays and local RNLI Guild Stand. Two excellent guest speakers are also booked, free entry to these talks. Gazebos and tables provided. The location is New House Farm, Knightcote, Southam, Warwickshire CV47 2EQ. Further details from Adrian Clutterbuck, tel: 01604 846461 or Derek Nelson tel: 01926 640045 or www.kmbcmodelboatclub.com

MAY 13

MYA Six Metre National Championship

Norwich MYC, Whitlingham Country Park, Trowse, Norwich NR14 8TR. 9 am – 4 pm. Contact vinnie.zammit@gmail.com or www.nmyc.org.uk/

MAY 14

Bournville Radio Sail & Model Boat Club Submarine Dive-In

The Boat House, Bournville Lane, Bournville, Birmingham B30 1QS. Open day to all R/C submarine enthusiasts. Refreshments will be available on all events. Toilets. Disabled access and parking. For more information Contact Rob on 07714 517445 or Email: rob4boats@yahoo.co.uk

MAY 14

Edinburgh Model Boat Club Start of Season

Inverleith Park, Stockbridge, Edinburgh EH3 5NZ. All are welcome, start time 11 am. Refreshments and toilet facilities provided. Contact david.jack5@btopenworld.com

MAY 20

Footy Open – Bassett Lowke Trophy

Abington Park MYC, Abington Park, Northampton, NN3 3HN. 9 am – 4 pm. Contact peter.shepherd62@gmail.com or www.sailfootyuk.com

MAY 21

Furness Model Boat Club Open Regatta

Park Drive, Barrow in Furness, Cumbria LA13 9BB from 10 am to 15:30 pm. Contact either Adrian Stanton on Tel: 01229 827709 or Email on adrianstantonroa@btinternet.com ***MMI***

GREAT BRITAIN

SCALE SCENE

FOLLOWING HIS PIECE ON PLANKING, IAN LOOKS AT A FEW DIFFERENT HULL SHAPES

AUTHOR: IAN WILLIAMS (electro-marine@talktalk.net)

Full displacement hull. Nordhavn 63, top speed 9.8 knots, displacement speed 10.1 knots (see text for explanation)

A friend of mine phoned me and said that at their last club meeting (in the pub) they had been debating my last article on planking hulls. Now this worried me quite a bit. Whilst it is gratifying to know that people are reading my scribblings, it's another thing entirely to be 'debated'. However, there were couple of questions that arose from the discussion.

Everybody knows the difference between a displacement hull and a planing hull, but what is a semi-displacement hull? More importantly what is a warped bottom, apart that is, from an episode of the TV series 'Embarrassing Bodies'! There was also another question which arose from my explanations but I'll get to that later.

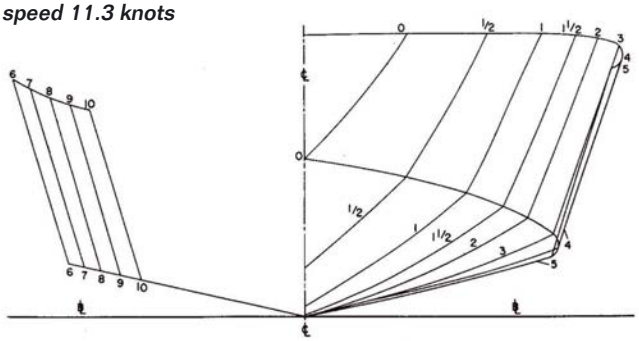
But firstly a couple of things you need to understand. These terms refer to power boat design, not large ships such as Liners and Cargo vessels. However, the terms used can refer to boats from Fast Fishers, through Pilot boats and Lifeboats, Cabin Cruisers and up to Super Yachts.

HAVE YOU GOT A WARPED BOTTOM?

Here is a new word for you, 'monohedron'. Now to be clear we are talking about planing hulls here and leaving aside deep v boats, I am talking about moderate V boats used in recreational craft etc. A monohedron is a hull which, in theory at least has a constant deadrise angle from bow to stern. Whilst this is possible, in practical terms it means that the monohedron hull has constant deadrise only over the aft planing sections and the deadrise in the forward sections is variable, rising to a fairly sharp entry forefoot. The warped plane bottom will have a variable dead rise from bow to stern, with a sharp entry, but often ending with a very shallow V at the stern.

That is of course very simply stated, but basically accurate. So what are the operational differences? That apparently is a big can of worms, but from what I understand, the warped plane bottom offers less resistance in getting onto the plane and that the monohedron bottom is both better and more stable at higher speeds. What speeds are involved? Perhaps up to 25 or 30 mph, the warped hull has the advantage and the monohedron is better above that. Other factors are also involved of course but that is a pretty good figure to work from.

Planing hull. Princess 72, top speed 39 knots, displacement speed 11.3 knots



Sections of a 'monohedron' planing hull with constant dead rise (see text)

Before going on to explain about semi-displacement hulls there is another thing I should explain. All displacement hulls have a maximum speed for a particular hull. The maximum possible speeds for displacement hulls are arrived at by using the following formula. The square root of the waterline (not the overall) length multiplied by 1.34. Generally, the resulting number is the fastest speed in knots a displacement hull can go, irrespective of the amount of horsepower applied to it.

So for example if you have a displacement hull with a waterline length of say, 40 feet, its maximum speed is 8.47 knots. (6.32 x 1.34 = 8.47) Add more horsepower, and you're basically just pushing water ahead of the boat. The only way forward then is to increase the power so much that the boat will force its way 'over the hump' and start to plane.

Apart from the obvious instability issues, the power needed would be so great as to make the whole exercise totally ridiculous, if even possible. As you increase waterline length, you also increase the potential top speed, which is why multihulls and boats with bulbous bows are able to go faster than simple monohull displacement boats.

So the other option to going faster is a planing hull. But, hull design isn't just about speed and interior volume. Stability and tenderness, which is a boat's tendency to rock, also come into the equation. Planing hulls, have hard chines which create port and starboard areas designed to create lift and help plane the boat and also keep it on an even keel. However, these flats also react to the lift created by waves moving under the boat, causing it to pitch and roll. If you must have a boat that goes fast, i.e. a planing boat, this is something you'll have to come to terms with, at least to some degree.

THE COMPROMISE, SEMI-DISPLACEMENT HULLS

When people are looking for a powerboat, it looks like the choice comes down to planing or displacement hull forms. While it is true that a planing hull can operate at a displacement speed, they are usually very inefficient and can be very uncomfortable in any kind of a sea. As an example a 50' waterline length planing hull can operate around 10 knots or so before it tries to climb over the bow wave and plane, but a 30' waterline length hull gets to only about 7 knots.

Pretty slow for most people, who also find that their ideal speed often falls somewhere between the full displacement slow-poking speed and the 25 knots plus of the planing express cruiser, with its poor fuel economy. Apparently the speeds people seem to quote when looking for a boat are somewhere between 15 to 20 knots. So if you don't want blistering speed, do want a stable, 'comfortable' boat, but don't want just to potter about at 7 knots, what's the answer?

Well it is of course the semi-displacement hull (yes I finally got round to answering the other question!). Hull design now being so sophisticated, the term 'semi-displacement' is quite difficult to define, but broadly refers to moderately fast boats that have a fine bow entry, quite rounded bilges and some flatness aft to create lift. (See the photo of the Krogen Express hull under construction) The more rounded sections help improve performance and seagoing comfort at slower as well as fast speeds.

Drawing of Krogen Express 52 showing the underwater lines

The real thing. The Krogen Express under construction, note the hull shape

Krogen Express doing its thing. Top speed 22.4 knots, displacement speed 9.6 knots

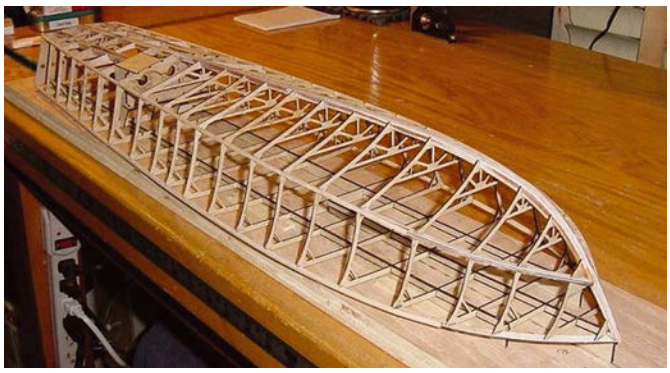
So if these semi-displacement hulls don't actually plane how do you get them to go faster than their displacement speed? Well, careful design of the bow section and the flatter stern section does impart some lift to the hull. This along with a shallower draft and the fact that semi-displacement hulls are generally narrower than planing hulls means that a good semi-displacement hull just rises slightly, there is no 'hump'.

It is true to say from the information I have, that most operators keep these boats in the displacement mode as they are very fuel efficient, much more so than a full displacement hull but with the option to go faster if needed.

It is a fact that a semi-displacement hull can achieve about 35% more speed with the same engine load requirement as compared to a full displacement hull form. The other side of the coin is that at the same speed it will use significantly less fuel and energy. As an example, with a 55'- 65' hull, a full displacement hull approaching hull speed (around 10 knots) will use about 95%-100% of engine load. The semi-displacement hull at around the same speed will only use about 15% of engine load and consume about 400% less fuel! Which is why they are so popular as cruising boats.

FINALLY

At the start of this article I did say I had another question to answer which came after I had answered the other two. (Although not in as much detail as here!) The question was, would building a warped bottom hard chine hull, or a semi-displacement hull be any harder to build and plank than a 'normal' type hull. The answer is of course no! If you've built a planing hull before it more than likely had a warped bottom (see photo) and a semi-displacement hull shouldn't be any more difficult if you plan properly before starting to plank! ***MMI***



Example of a warped bottom planing hull. No apologies for using this picture again as it illustrates the point perfectly

WATERLINES

AUTHOR: KELVIN HOLMES (khwaterlines@btinternet.com)

THE ROYAL NAVY'S REVENGE CLASS BATTLESHIPS – KELVIN CAN'T RESIST JUST A FEW MORE BATTLESHIP MODELS

The naval arms race immediately preceding World War 1 saw Great Britain commit year on year to the construction of five capital ships. Thus the programme for 1911 comprised four dreadnoughts of the Iron Duke class plus the battlecruiser HMS Tiger, followed in 1912 by five Queen Elizabeths (please see Issue 342 – September 2015). The 1913 programme comprised five Revenge class dreadnoughts and that for 1914 a further three of the same class plus HMS Agincourt. The latter had been built at Elswick for Brazil but after launch was sold on to Turkey and then purchased by Britain in August 1914.

War broke out that month and with capital ship construction taking two to three years it decided to reconsider the 1914 programme. Thus one ship, HMS Resistance, was cancelled outright and later in the year after the battlecruisers' success off the Falklands two were re-cast as battlecruisers and laid down in January 1915 (HMS Renown) and January 1916 (HMS Repulse) being completed in the late summer of 1916.

The Revenge class (later often referred to as the Royal Sovereign class) was similar in layout to the preceding Queen Elizabeths. They were, however, initially designed for coal and the engines fitted could only produce 23 kts, even when the boilers were modified for oil as occurred during construction.

The improved Navis model of HMS Revenge as completed in 1916 (NM100N)

HMS Royal Sovereign, 1935, with catapult and crane aft (AR43)

HMS Ramilles in 1943 with extra AA guns (N1103b)

HMS Resolution in 1939 showing the X turret catapult fitted in the 1930s (AR 47)

Main armament was the 15" gun (20 degrees elevation) in four twin turrets with a secondary battery of fourteen 6". The twelve in lower casemates were mounted farther aft than in the QEs and less susceptible to interference from heavy seas.

HMS Ramillies was the first dreadnought to be fitted with an experimental bulge (sometimes termed blister) on completion and the underwater protection afforded was considered a good trade for the loss of 1 to 2 knots of speed. All five served their time with the Grand Fleet during WW1 with HMSs Revenge and Royal Oak present at Jutland expending between them 140 15" shells.

HMSs Revenge and Resolution were given an improved form of bulge in 1917/18, with HMSs Royal Sovereign and Royal Oak similarly fitted in 1920 and 1924 respectively. In HMS Royal Oak the bulges were of a different design, being much higher above the waterline; HMS Ramilles was also given these bulges in 1927 when the original prototypes were removed.

Flying off platforms were fitted to B and X turrets in 1918 and between them the five ships carried 8 fighters and 2 reconnaissance aircraft. HMS Revenge was fitted with a stern walk in 1919. The 15 ft rangefinders on B and X turrets were

HMS Royal Oak in 1939 with a seaplane on X turret (N1103)

HMS Resolution in 1943 (N1103c)

replaced by 30 ft versions between 1919 and 1922. Other modifications in the interwar period included experimental quarter deck catapults (HMS Resolution 1929 to 1931, HMS Royal Sovereign 1933 to 1936) and X turret catapults (HMS Resolution 1936, HMS Royal Oak 1935, HMS Ramilles 1933); extra bridgework, enhanced AA armament and funnel clinker screens (HMS Resolution in 1922, remainder bar HMS Royal Oak in 1938/39).

The catapults on Ramilles were removed just before the war; HMS Resolution retained hers until at least 1944. A further very visible modification applied to HMSs Ramilles, Resolution and Royal Oak only was the replacement of the pole mainmast with a tripod; this structure carried the high angle gun director. On the other ships the director was situated on the aft superstructure.

HMS Royal Oak was torpedoed at Scapa Flow in 1939. HMS Ramillies was with the Home Fleet in 1939 moving to the Mediterranean in 1940. Following service escorting Atlantic convoys in 1941 she was transferred to the Indian Ocean as part of the Eastern Fleet in 1942/43. Returning home in 1944 she was placed in reserve in 1945.

HMS Revenge had a similar career. HMS Resolution as part of the Home Fleet in 1940 also escorted convoys. After a US refit in 1941 she too joined the Eastern Fleet; in 1944 she became a training ship. HMS Royal Sovereign's WW2 career was Home Fleet (1939), Mediterranean Fleet & Atlantic escort (1940-41) then refitted in the US she served in the Eastern Fleet. Taken out of RN service in 1944 she was loaned to the Russians, becoming the Archangelsk; returned in February 1949, she was apparently in rather a poor state and sold immediately for scrap.

HMS Revenge in 1935 (AR42)

HMS Royal Sovereign 1943 (N1103a) (courtesy sammlerhafen.de)

HMS Revenge 1940 (N1103d) (courtesy sammlerhafen.de)

For further, much more detailed, reading about the class British Battleships of WW2 by Raven and Roberts is recommended covering as it does the period 1911 to 1946; alternatively and perhaps easier to find will be British Battleships of WW1 by RA Burt.

Perhaps the most famous WW2 engagement involving the class was that off Calabria in July 1940 when HMS Royal Sovereign in company with HMSs Warspite and Malaya took on the weaker but slightly faster Italian battleships Conte di Cavour and Guilio Cesare, also modernised WW1 veterans now equipped with ten 12.6" guns with a range of 31,280 yards. Albeit firing a lighter shell the Italian ships outranged all but HMS Warspite but when the Guilio Cesare suffered a long range hit from the British battleship the Italians decided to retire. Their service in the Eastern Fleet was also notable in that had the Japanese Navy decided to venture west across the Indian Ocean the 'Rs' would have formed the first line of defence.

Ship	Builder	LD	Comp	Fate
HMS Revenge	Vickers (Barrow)	12/13	3/16	Scrapped 1948
HMS Royal Oak	HM Dockyard Devonport	1/14	5/16	Sunk by U-47 14th October 1949
HMS Royal Sovereign	HM Dockyard Portsmouth	1/14	5/16	Soviet Archangelsk 1944-49; scrapped 1949
HMS Resolution	Palmers (Hebburn)	12/13	12/16	Scrapped 1948
HMS Ramillies	Beardmore (Dalmuir)*	11/13	9/17	*completed by Cammell Laird; scrapped 1949
HMS Resistance	HM Dockyard Devonport	- -	- -	Cancelled 26th August 1914

HMS Resolution 1918 with flying off platforms in B and X turrets

HMS Revenge 1919 with stern walk and long base rangefinders on B and X turrets

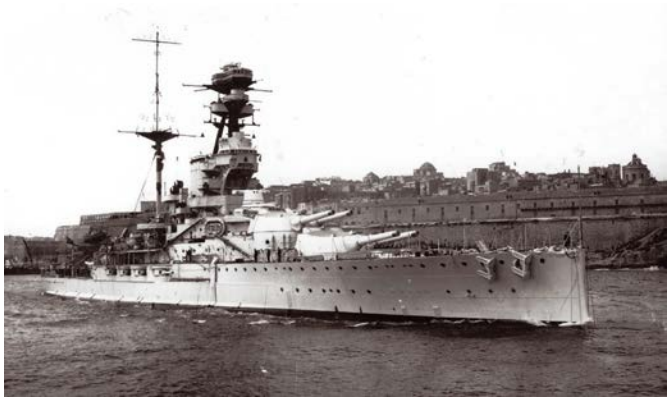
HMS Revenge 1927 with flying off platforms and uniquely the stern walk

1/1250 WATERLINE MODELS

Chronologically speaking the first model is Navis NM100 which is the Revenge class without bulges but with 4 amidships AA guns that were fitted in the 1920s. However, as the bulges would barely be visible at deep load it is not a real problem. Converting the model to a 1916/17 appearance is best achieved by removing the two forward AA guns as the other pair are nearest to the correct position of the 3" originally shipped. These errors have been corrected in the more detailed NM100N as pictured.

Discontinued manufacturer Argonaut produced four interwar versions comprising HMS Revenge 1935 (catalogue AR42 – single 4" AA, no clinker screen), HMS Royal Sovereign 1935 (AR43 – single 4" AA, no clinker screen, catapult and crane on quarter deck), HMS Resolution 1939 (AR47 – twin 4" AA, clinker screen on funnel, catapult fitted on X turret) and HMS Ramilles 1939 (AR115 – model not seen). Some Argonauts are being reissued by WDS but so far none of the above.

Moving on current manufacturer Neptun covers the WW2 era with the following HMS Royal Oak 1939 (N1103 – twin 4", catapult on X turret), HMS Royal Sovereign 1943 (N1103a – clinker screen fitted, much additional light AA), HMS Ramilles 1943 (N1103b – clinker screen fitted, additional light AA dotted around including on B and X turrets), HMS Resolution 1943 (N1103c – clinker screen fitted, catapult on X turret) and HMS Revenge 1940 (N1103d – clinker screen fitted, limited additional light AA).



HMS Royal Sovereign departs Grand Harbour, Malta, in 1933

HMS Ramillies in 1939 with a tripod mast for the aft gun director

HMS Resolution in 1939 retains the original pole mast

HMS Royal Oak 1932; the upper 6" guns on the foc's'le deck have now gone

With the help of Oliver Wichers at the excellent www.sammlerhafen.de it has been possible to illustrate all the classic Neptun models. Finally, a generic WW2 R class is produced by Superior in the USA in good old 1/1200. ***MMI***

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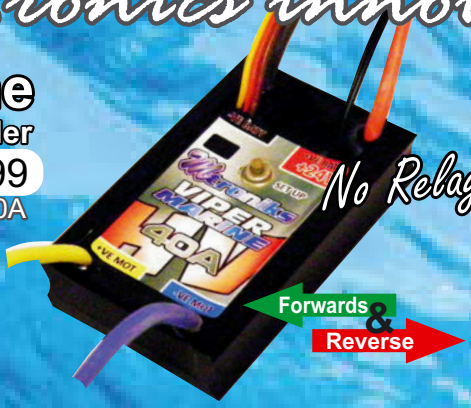

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GREAT BRITAIN

VINTAGE CHATTER (PART 44)

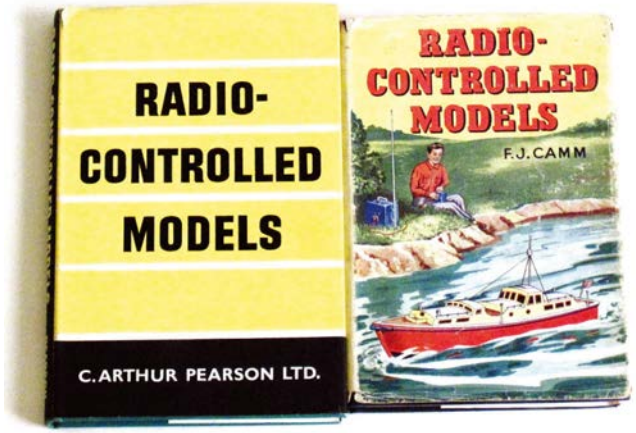
BOOK SHOPPING...

AUTHOR: DAVID WIGGINS

Hello again. For a spring (hopefully) issue I thought it might be nice to leave collectables behind for a bit to take a look at some vintage books. My last look at such modest fare centred on publications of the fifties so I thought that, this spring, I'd move on a decade or two to cover the sixties and seventies. I plan to include the topic at least once more, later in the year.

STARTING BACK IN THE SIXTIES

Let's begin in 1963 with a cheaply purchased revised edition (I paid £1.75 for mine in recent years), of the earlier 1958 title 'Radio Controlled Models' published by C. Arthur Pearson Ltd. The book's preface refers to 'the late F.J. Camm' as the volume's original author and states that – "The popularity of radio controlled models has increased considerably over the past few years" which was correct. Sadly, one has only to turn a few pages to learn that little revision had been done between the mid-fifties and mid-sixties – a decade of mercurial progress in radio control – and the book's content is set firmly in the 'steam radio' era of valves (tubes), ground transmitters and high voltage batteries. Much of the content is similar to that published, even earlier, by the International Radio Controlled Models Society (IRCMS), in their famous 'bulletin'. Even multi-channel reed radio rates only a passing mention and one or two illustrations show radio valves more at home in a 1920's 'wireless' than the 'swinging' sixties of transistorised R/C. In short, this book was hopelessly out of date for 1963 and I've have been quite cross to receive this book as a young apprentice back then I can tell you.



Two editions of FJ Camm's 'Radio Controlled Models'

Two editions of 'Simple Radio Control' by Hundelby and (later) Ives

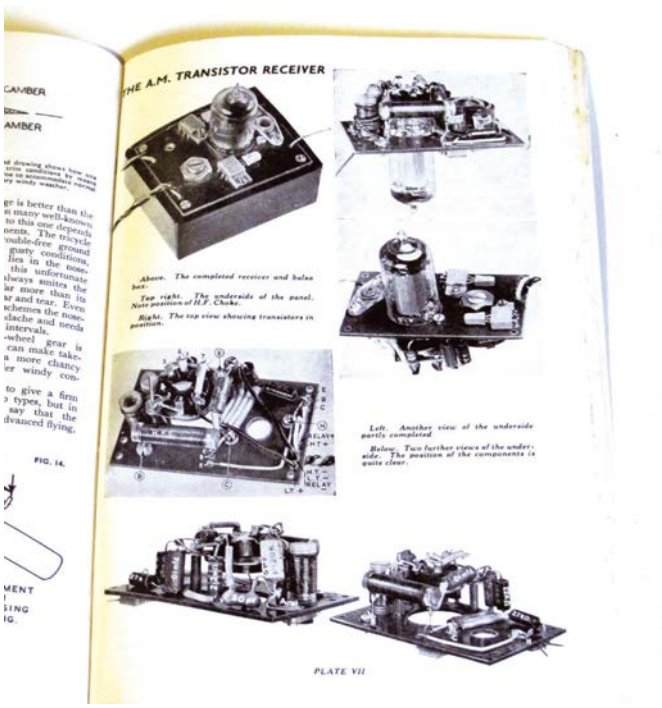
Our next book is, again, a second edition. This time of the more useful 'Simple Radio Control' by Harry Hundelby and Tommy Ives published, priced at 6 shillings (30p), by MAP in 1961. While two years earlier than our first title it's more up to date. Yes, it still has valve circuitry originating from Hundelbys 1955 'MAP Five Shilling Book' but early germanium transistors get a look in courtesy of co-author Tommy Ives and the whole style of the book is more 'modern'.

I had a copy when young and can say that it was an easy to read, much used book with pretty much fool proof designs therein. For example, the 'Aeromodeller' transmitter (pages 31-35) was my first successful home build, aged just 16, and it worked first time once I'd built a wave-meter and the simple test meter described on pages 29/30. Every single component was hard saved for and bought at 'army surplus' shops or at a radio parts store located in Westcliff-on-Sea. Neither type of retail outlet even exists today.

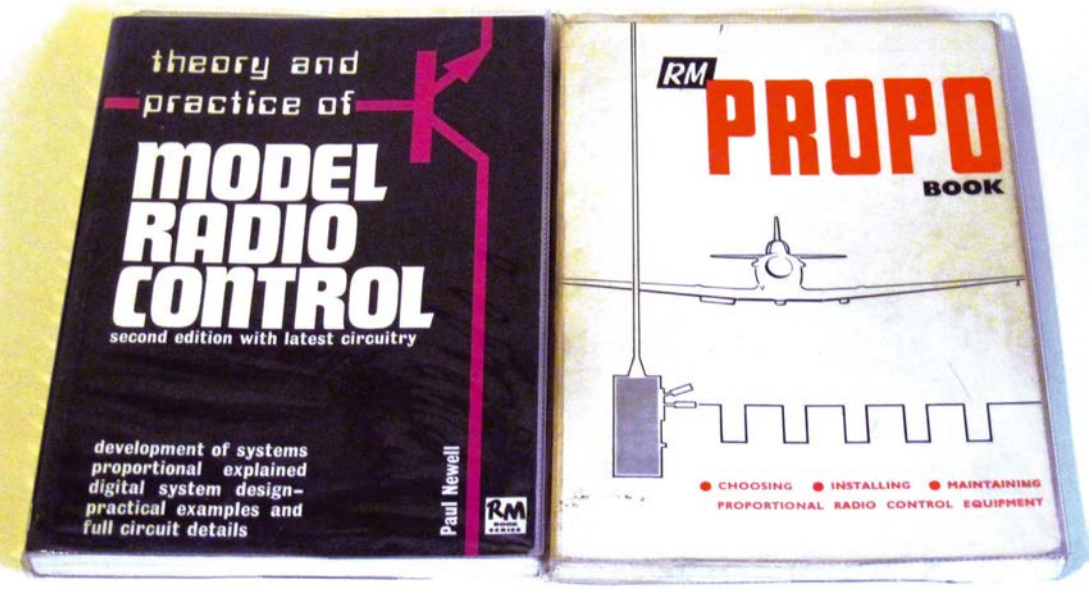
My second attempt at one of the designs in this book was Mr Ives 'AM Transistor Receiver' (illustrated). Using one valve and a couple of transistors I never got mine to work and it was scarce money wasted. I expect, at 16 or so, I simply lacked the knowledge to master semiconductors.

To better illustrate this first pair of transitional 50s to 60s R/C books I am providing a pair of pictures contrasting the first and second edition covers of each. The colourful first edition of Camms 'Radio Controlled Models' depicts R/C boating pretty much as it still was when I joined the hobby in 1963 – with a bulky 'ground' transmitter, huge antenna and semi-scale 'Admirals Barge' model.

The two editions of 'Simple Radio Control' also had different covers. The first shows Harry Hundelby about to release a diesel powered, high wing monoplane with what looks like a large 'vee' antenna equipped, single channel, ground tranny sat behind him while the second shows the huge strides that had taken place as the fifties turned into the sixties and the first hand transmitters came into use. Tommy Ives, who is pictured right on the second edition's cover, did a lot of design work for MacGregor Ltd and he edited RCM&E magazine in its early days.



A sample page from 'Simple Radio Control' features an early hybrid receiver



These two books were published by 'Radio Modeller' magazine during the 70s

BEFORE MOVING INTO THE SEVENTIES

Our third and fourth titles – two in one picture again – were both important volumes for me when I began to dabble in second-hand (what else!) and homemade proportional during the 1970s. The 'RM Propo Book' (published by Radio Modeller magazine in 1971 at £1.25), written by Norman Butcher and David Hughes (co owners and editors of the magazine), was an influential 'buyers guide'. Commercial proportional systems were introduced to the modelling public earlier in MAP's popular 'Radio Control Manual' series. The radios featured then were from the very first wave of proportional R/C (Zel Richies analogue 'Space Control', the first two Orbits and Howard Bonner's 'Digimite' for example). Whereas the 'Propo Book' featured and compared radio sets that will be familiar to older readers of this column. What I'd loosely call '2nd and 3rd generation sets that one can still find and purchase on the internet today.

Flipping through its pages one finds a host of once popular British brands like the RCS (Radio Control Specialists), second generation 'Digifour' and 'Digisix', the first Skyleader 'Clubman', Sprengbrook, Flight-Link, Waltron, Staveley, Fleet and MacGregor radios plus the Teleradio, Pecon and Remcon do it yourself kit lines. These are compared to the American Kraft and Controlaire, the German 'Simprop' and even to the first Japanese O.S. and Futaba radios.

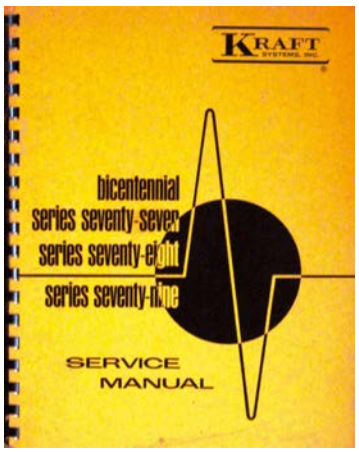
This book was essential for pre-purchase homework for anyone considering spending – or more likely borrowing – what was then a significant sum of money to buy a 'modern' radio. Finally, the book included a useful appendix of full size servo drawings which were handy in an era when most small firms bought-in their sticks and servo mechanics from the major US makers.

Published just a year later and revised again in 1974 (to include integrated circuitry), the Propo-Books companion volume is very different – a simplified electronic R/C design manual no less. 'Theory and Practice of Model Radio Control' by Paul Newell began with a lengthy introduction to the R/C hobby and its focus was the author's 'Microtrol' design (pictured). The book concludes with all the circuitry to build a 5 ch digital, though the writer wisely recommended his readers to purchase one of the kits offered by various independent component houses.

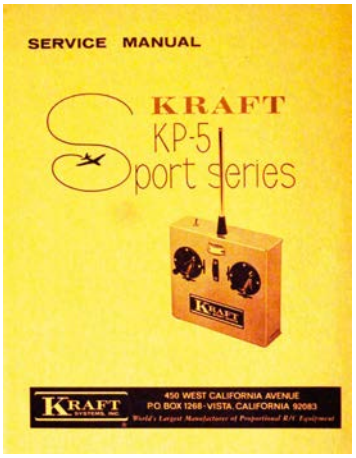
A page from Paul Newell's 'Theory & Practice of Model Radio Control'

Other than for the 'Microtrol' there are some pictures of interest to today's vintage R/C enthusiast one of which, despite my being in the hobby since 1962, I'd pretty much forgotten. A few very early pictures include dear old George Honnest-Redlich (the ED and REP design engineer), a shot of one of the very first British all-transistor receivers and some reed gear sold by small British firm Raven (I admit I'd forgotten them), and from the more famous American firm of Orbit designed by Bob Dunham. Of the two volumes I'd recommend seeking out a copy of the Propo Book if you can find one.

I conclude this month with two sample volumes from my complete set of the factory service manuals put out to approved service centres, most years beginning in 1968, by Kraft Systems Inc of Vista California. As far as I know Kraft were the only company to offer anything as comprehensive as this – a full works manual no less – and this reflects both their total professionalism and their standing as the world's largest manufacturer from 1968 onwards. The most one got from anyone else was a few typed pages and a scrappy circuit (aka schematic); if you were lucky!



A KRAFT service manual for 1976 to 1979 sets



A works manual for the first Kraft 'Sport Series' set

Often, the very small concerns, especially, sad to relate, here in Britain, supplied exactly nothing to service tech's as they desired buyers to return all outfits to them for repair. The two volumes I illustrate are for 1976-79 Kraft radio sets and for the first Kraft 'Sport Series' 5 channel.

Next month I'm changing course a little bit while continuing with the low cost theme, as I look at some (literally) very minor bits and pieces from the history of our hobby. Until then, I'll say cheerio for now. ***MMI***

USA

POWERPLUG

THROTTLE/RUDDER CONNECTIONS MAKE UP THIS MONTH'S COLUMN

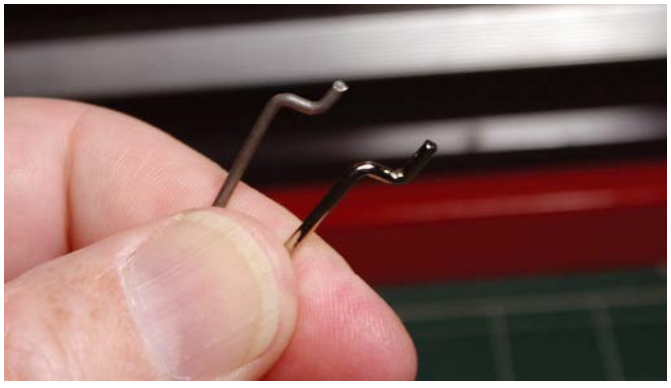
AUTHOR: RICK EYRICH (reyrich99@gmail.com)

Even with the massive improvements in both radio control components and their available/aftermarket pieces, there are still a handful of basic hardware choices to connect your control system to your IC hull's rudder and throttle points. Of course these very different linkage styles will demand a certain level of custom work by the modeller, so this column will be a primer on what options you have to create whatever linkage ends needed on most any powerboat project including a few not normally used on an average nitro/petrol hull layout.

Sometimes something as small as a servo/linkage connector can ruin your day at the lake, so using the right joint is the main focus this month

THE Z-BEND

By far the most common servo-to-rudder/throttle connection is the Z-bend, which is nothing more than two 90-degree bends made in a length of solid wire rod. Widely used on all types of R/C models, the Z-bend is simple and will provide a good linkage connection, but there are limitations when using this design. As a 'solid' joint, the Z-bend has almost no adjustment point beyond moving the bend to another hole in your hull's servo arm. You can purchase pushrods with the Z-bend already situated in the rod ends, however it's also possible to create your own Z-bends in whatever solid rod you use on your IC boat. Du-Bro Products (and others) actually sell a tool to make Z-bends; plus, I've seen some online videos of modellers who show you how to construct a simple Z-bend jig for your workbench.



Many RTR IC boat radio systems use metal Z-bend ends to join the servos to the hull's rudder and throttle arms but there is no adjustment point with this type connection

On a more basic level, I have produced fairly good Z-bends using a pair of locking pliers and/or a second pair of regular pliers and the finished rod end was usable on most types of model marine control arms. Your goal will be to create two sharp, smooth 90-degree bends in the wire rod that will also keep the rod's end straight, which is needed to prevent any binding problems with the completed bends.

A too extreme set of bends can cause binding between the linkage end and the servo arm especially on those boats that require a long 'throw' on their links. Wear on the servo, rudder or throttle arms can also be a problem with a Z-bend end, so keep that in mind on those boats with Z-bend rod ends.

THE STANDARD CLEVIS

Made up from either a steel or brass material, a standard clevis connector is again a regular item used on all kinds of R/C models including an IC vessel. Both threaded and solder on versions of the standard clevis are found at your hobby dealer. However, for our purposes we will stick with the threaded clevises as they allow for tweaks in your hull's onboard control system.

Made from a spring steel and/or brass material, a standard clevis connector can be either threaded on a suitable link arm or soldered directly to the control rod itself

To affix the clevis to a servo or throttle/rudder arm, you'll need to expand its dual arms so that its locating pin slips through the arm hole you've chosen. A snug fit is found with the standard clevis end, so you'll only have a slight amount of give with this connection. To prevent any chance of a dis-connect it's possible to add a short piece of fuel tubing over the clevis arms as this will reduce any spreading of the clevis arms under a load.

Other things to watch with this connection is to avoid threading its linkage rod too far into the clevis itself and/or attaching the metal joint directly to a steel carburettor or servo horn. If allowed to penetrate too far up the clevis body the rod could lock up your system, or a metal-to-metal connection can induce a radio glitch situation as well.

THE LOCKING COLLAR

Mounted directly to your boat's linkage points, this connector can be used with either a solid rod or cable type linkage, depending on your marine craft's control layout needs. Attached via a simple locking washer this round collar is available in several different sizes so that you can match up whatever diameter rod or cable you're using on the boat. Your rod/cable end will be retained by either a

Linkage connectors can receive both metal rod or flexible cable style linkages and are normally joined to a servo, rudder or throttle arm via a small pinch washer

grub or Allen head screw and the linkage can move freely as it's the arm's pivot point.

Collars are useful if your hull requires some 'give' in its linkage routing, as you can easily position a slightly-offset throttle/rudder rod with this style connector. You will need to properly lock the collar to your control arms, as their locking washers can be a bit tough to line up correctly. The same can be said of the locking collar's rod opening, so using a drop of thread locking compound on this fastener might be a good idea especially on the vessel's throttle linkage that can be subjected to a lot of vibration.

THE BALL JOINT

In those cases where both an adjustment point and a certain level of linkage movement is needed on a control rod, the ball joint connector may be the best overall pick. Made up from a nylon or metal threaded body that holds a steel round ball, this connector is again solid in a number of different sizes, both in its linkage and arm mounting holes.

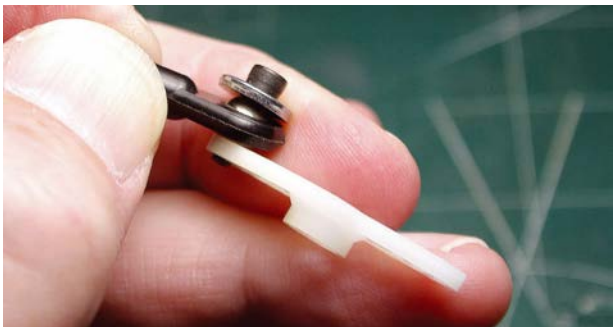
Sporting a free moving metal ball connection point, ball joint ends create a lot of available and freedom of movement points in the average IC boat linkage

In general, your lowly scribe will use the largest possible ball joint connector whenever possible, as even a small nitro boat can stress out any type of control rod end. I would avoid using a metal bodied ball joint at any metal arm pivot point as this could induce the radio gremlin mentioned with the metal clevis end.

Another positive with the ball joint is that you can normally affix it to either side of your hull's pivot arms providing it doesn't bind up the rod as it exits the radio box/hull openings and sealing grommets.

TIP OF THE MONTH

With the use of a good aftermarket ball joint connector, you can greatly improve its ability to remain secure on your vessel's servo or rudder/throttle arm with a simple metal flat washer. Positioned directly on the connector's ball/screw junction, this washer prevents the ball itself from popping free of the joint which is possible if an excessive level of force pushes on the ball joint. Either straight or at an angle, a sudden jolt from a large rudder blade that's just hit a big wave can dislodge even a superior grade connection, so that simple flat washer can help prevent a loss of rudder control during a rough water day at the pond.



Adding a small flat washer to your ball joint connector screws helps to prevent any sudden detachment of the ball itself which can occur should the connection take a sudden hard hit

PRODUCT OF THE MONTH

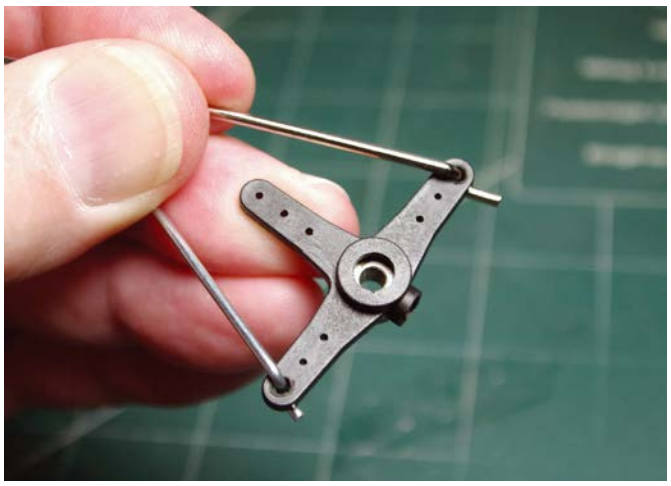
As many of you know, your Powerplug scribe is also an avid angler, so this product review comes largely from my latest addition to my ever growing tackle bag. As a long time user of braided fishing line, both for angling and R/C sailboat rigging duties I've purchased several so called 'braid cutters', however none of these tools was really a capable cutter of the very tough braided cord, especially if you needed a clean cut to tie a hook or a yacht's sail set cord.

For Christmas 2016 my son Jason gave me a small cutter tool called the Boomerang Snip and I have already used this small cutter on both my fishing trips and for creating new mast/sail cords for a couple of model sail craft on my workbench. Produced by Boomerang Tool Company (hence the name), the tool's 420 stainless steel cutters make it a one hand cutter and I've easily trimmed 80 pound test braided line with this unit. Although this Powerplug section doesn't directly deal with IC hulls, this tool would help any model yacht builder when he/she is rigging out a new sail set.

Made to cut braided fishing line this Boomerang Line snip is also useful for making clean ends on R/C yacht rigging cords that demand routing through very small sail/mast fittings

DOUBLE ROD LINKAGE

Sometimes used on those marine craft that demand extra long control arms, the double rod arrangement is just that two lengths of solid rod that are usually Z-bend equipped and held together by a pair of aircraft-style metal wheel locking collars. Often setup with two 'pairs' of linkages, the double rod setup only has the collars as an adjustment point; or, you can add more tweak locations by adding locking collars to the rod ends.



Double control arm rudders may be required on some IC hull layouts, but a single, heavy duty rod/connector can likely do the same job

To avoid any flexing, using the largest possible piano or music wire will add some extra strength to the linkage, but you'll need to clearly check their movement range to avoid any contact with sealing grommets, exhaust systems, fuel/water lines and any other solid object inside the hull. I have seen this style connection used on small nitro outboard tunnel hulls as they can end up requiring extra long rudder linkages and the double rod design can make it easier to create a strong and adjustable control rod.

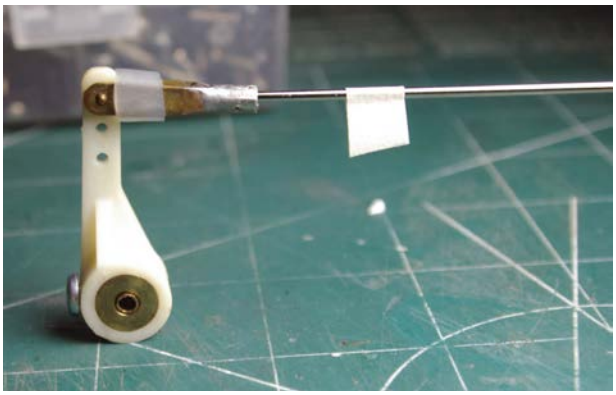
SINGLE OR DOUBLE LINKAGE?

As a tie-in to the aforementioned double rod connection, we should discuss the option of using one or two linkages on your boat's servo control system. Due to their limitations, early servos had both low torque output and rather flexible control arms, so it would sometimes be a good idea to double up the link/rods to ensure you'd have a solid joint to your boat's control hardware pieces.

Extra long by design a double rod/collar linkage also takes up more room than a single rod setup and also needs more movement space to avoid contact with a exhaust, fuel/water lines etc. around its placement in the hull

TRICK OF THE MONTH

Due to the length and possible long throw nature of some IC boat control linkages, you can end up with too much movement on a rudder or throttle rod and this could cause a servo to lock up during a run. Watching your servo's action and noting any excess 'flop' will usually give you enough feedback, but adding a piece of masking tape to the control rod can help as well. If your onboard radio box is large enough, the tape marker can go inside the container and after powering up the radio system you can simply run both servos through their full range of motion, especially at each end of their available trim adjustments. Sometimes that small amount of trim range can put a linkage rod too far over the top of the servo arm/connector pivot and your masking tape indicator will likely show up this glitch point.



Placing a piece of regular masking tape on your servo rods can give you a better idea of their movement range especially at the limit of the transmitter's trim levers

Today's servos, especially the digital high torque models have a lot of power, plus they also tend to have equally strong composite control arms as well. Unless you just prefer to setup your vessel with a double rod arrangement most all IC boat control linkages can centre around a single rod setup.

ROD COUPLERS

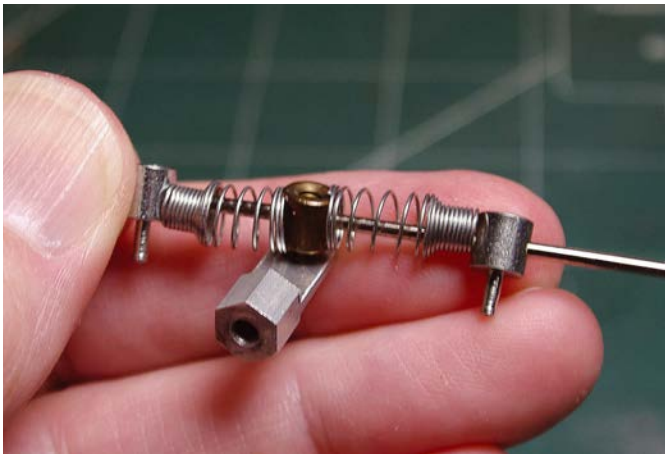
While not the direct connection on your boat's control links, the use of a solder on coupler end is needed on solid rod arms to create a thread on point for whatever clevis/ball joint design you rely on. Made up from both brass and steel, these couplers must fit your solid rod without any excess slop, plus they must be soldered correctly to avoid gremlins down the road. Silver solder and a bit of paste flux will work, as will the use of a high watt output iron that features a wide chisel tip.

Soldered on a brass or steel threaded coupler rod, this arrangement will demand a proper solder, flux and iron combination to maintain the connection

Excess solder can cause the coupler to push out from the rod end, so clamping it and the rod before you apply heat/solder to the parts may be required. Sweated on properly, the coupler can then be equipped with a threaded clevis or ball joint and fitted onto your control rods.

OVERRIDE/SPRING CONNECTIONS

Most commonly found on IC engine carburettor connections, the override spring setup creates a built-in return action within the linkage's mounting point. Installed at either end of the throttle control rod, this two spring/collar arrangement can be adjusted to help ensure the carburettor valve opens and closes properly mainly when you move the transmitter trigger/stick to its engine shutdown position. One positive note with the override connection is that it helps prevent putting excessive stress on the servo itself when it's pushing or pulling on the throttle arm to its maximum levels.

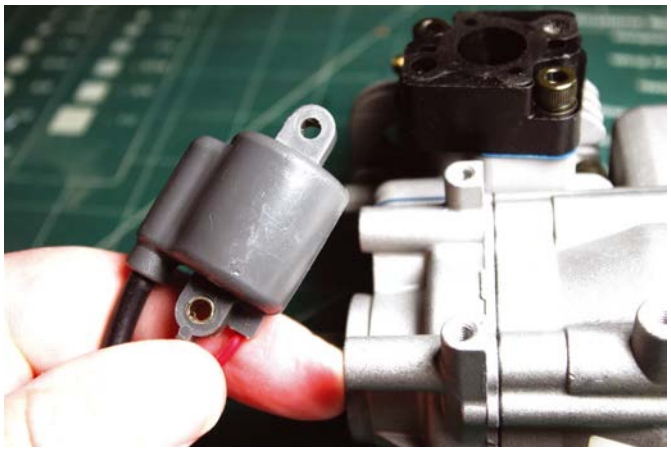


Using small springs to create a simple override function on a throttle linkage this adjustable rod prevents an overstress on your boat's onboard throttle servo motor

MISCELLANEOUS

On many petrol marine craft power plants, the best way to connect the throttle servo to the motor's carburettor body will involve adding a bell crank/rod setup that joins directly to the engine's outer case housing. Requiring a series of push/pull rods, the bell crank itself could end up creating a need for movement of the engine's main or secondary ignition module.

Luckily, there are a handful of aftermarket brackets sold for just this kind of component movement, or you can fabricate your own custom module mover out of regular aluminium strap or angle stock found at your DIY store. In the event you cannot use the rods/bell crank throttle control on your hull/power plant combination, there are also flexible cable control packages that can easily provide servo-to-carburettor links.



To install a bell crank/rod gashull throttle linkage your petrol engine's ignition module may have to be relocated via a homemade or aftermarket bracket

SILLY SEGMENT OF THE MONTH

This scene goes back quite a few years, however it could still happen in 2017 as well. A hull equipped with a nitro-engine outboard motor was about to be launched and the person in charge of the vessel launch was in for a big surprise. In some situations an outboard motor can actually run backwards as it's easy to hook-up the handheld starter in reverse via its battery clips. The engine may not sound or run anywhere near its possible high levels, but our boater was a beginner and didn't know his nitro marine craft's power plant was running backwards.

Our launcher went to toss the running hull in the water directly in front of his torso and when it hit the surface of the pond, it attempted to chase him up the shoreline. So, the moral here is that whenever you launch any powerboat, do it so that it's not inline with any body parts.

When launching any IC boat be aware it's possible to start its power plant in reverse, which could produce a strange reaction when the hull hits the water

In the event your rod collars begin to loosen up on the boat's servo arms, the culprit will likely be the small spring washers that are used to secure the locking collar to the servo arm. In some situations I've found that by adding a second spring washer can help the collar remain tight in its mounting hole, or you can also switch out the collar itself to one that is retained via a screw on plate.

Normally larger in size than most regular linkage collars, these units can hold a very stout section of piano wire, which makes them handy for larger and/or higher performance IC hulls. They also have larger pinch screws as well, so by adapting these heavy duty collars to your servo/transom part pivot points you can be assured of a non-slip connection on the control links found on your power craft.

Since the movement of a large aluminium rudder blade can include changing its angle (in relationship to the transom plate) you'll need to leave some movement in your rudder control linkage should a tweaking be necessary in this area. Using a good quality ball joint end plus leaving a bit of free movement in the arm itself will give you enough adjustment free play on a rudder angle change.

Overall, we've attempted to give the MMI reader the best possible profile of the available control linkage connectors your nitro/petrol hull's onboard control arms. If you create as many possible adjustment points in the control linkages you can gain an advantage in knowing the best angle, throw and torque/speed settings for the servos used on your power craft. Talk to you next time. ***MMI***

PLASTIC KIT SCENE

HERE ARE MORE OF THE LATEST RELEASES FROM THE WORLD OF PLASTIC AND RESIN

AUTHOR: ROBIN TROTT (robin.trott@yahoo.co.uk)

BLUE RIDGE MODELS

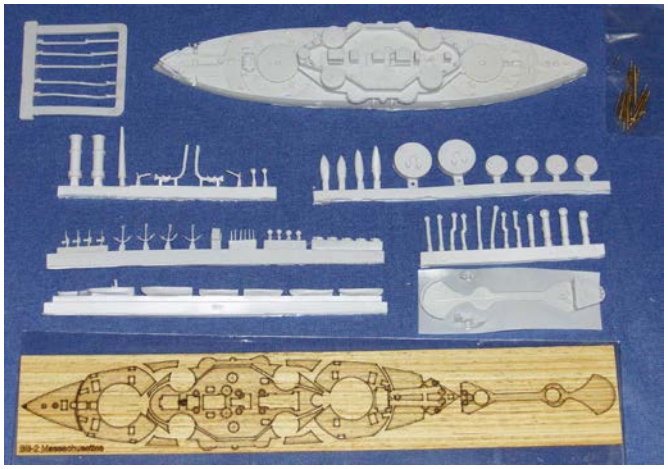
USS Massachusetts BB-2

Model No. BRM 70051
Scale 1/700
Length 15.3 cm
Parts 71 resin including one piece hull and superstructure. Self-adhesive wooden decking and P/E fret all from Artwox Models, 16 turned brass gun barrels from Infini Models

The new Blueridge USS Massachusetts

Images of the built model on the box

The USS Massachusetts was an Indiana-Class battleship that was commissioned in June 1896, her main armament consisted of two twin mounted 13 in guns and four, twin mounted 8 in guns there were also many other smaller caliber guns. She carried a complement of 473 officers and seamen. She saw active service during the Spanish-American War 1898 and during the 1st World War she was used as a training ship to train gun crews. In her lifetime she was commissioned and decommissioned no less than three times, after her final decommissioning she was used as an artillery target and sunk. The wreck was never scrapped and she is now still preserved as an underwater artificial reef.



Very detailed parts for this limited edition model

This is yet another fantastic new kit from Blue Ridge Models; the detail of the resin casting is first class. The moulding of the one piece waterline hull and superstructure is well reproduced and has very crisp detail. The kit includes self-adhesive wooden decking and P/E fittings which are by Artwox Models, the turned brass gun barrels are by Infini Models and add extra detail to this model.

The assembly instructions are very well done with many colour photos showing the positions of all the parts. The kit comes in a stout box with a great picture of the ship and images of the completed model on the bottom. All the parts are securely packed in foam to stop any movement during transit. It is a Limited Edition kit of which there will be 250 so check this model out soon as they will be going fast.

More details of this kit and the complete Blue Ridge range can be found at www.blueridgemodel.com and at www.freetimehobbies.com

KAJIKA MODELS

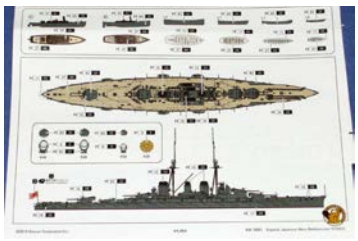
Imperial Japanese Battlecruiser Kongo 1914

Model No. KM 70001 Navy Model Series
Scale 1/700
Length 30.7 cm
Parts 269 plastic parts, metal weight and decals

Kajika Battlecruiser Kongo 1914

The Kongo was the first of four Kongo-Class battle cruisers that were based on the Royal Navy Lion-Class warship; she was built by Vickers in the UK in 1913. During the 1st World War she saw service with the Japanese navy in the Pacific and surrounding area. After the war she had many refits and was modernised and upgraded to a battleship. She was heavily involved in many actions

All these parts for the Kongo



Full colour painting guide on the instruction sheet

in World War 2 and was sunk by an American submarine in November 1944.

Kajika Models are a new name in the model world; but they are a division of Flyhawk who sent me the review sample (www.flyhawkmodel.com). The quality of the kit and the look is very much in the Flyhawk style. The kit is very well detailed and the moulding of all parts is first class with no flash on any parts. The model is a waterline kit which includes a metal weight to be attached inside the hull on the base plate. There are no P/E parts with the kit but the detail of the small plastic fittings more than compensates. Upgrade sets for this kit are available from Kajika for those who want to add even more detail. The masts are well reproduced with the yardarms already moulded in place and are extremely fine.

The assembly guide is very good and easy to follow and includes colour painting guide. The box art shows a picture of the Kongo at speed with other ships in the series on the side of the box, so I will have to keep a lookout for them when they are released.

There is no website for Kajika but more details can be found by visiting www.hlj.com

MT MINIATURES

Here are details of their two latest Royal Navy models…

HMS Salisbury F32

Model No.	MTMO42
Scale	1/700
Length	14.5 cm
Parts	1 resin hull and superstructure, 7 white metal fittings and 1 P/E fret

HMS Salisbury type 61 frigate

Wonderful detail on this one piece hull and superstructure

HMS Salisbury is a Type 61 Cathedral-Class frigate, she was commissioned in 1957. She was used as an aircraft direction frigate and carried many various types of the most up to date radar systems. Her fate was to be used as a target ship at the end of her use and was sunk in 1985. This is a great little kit which is cast in resin and has a very finely detailed hull and superstructure and white metal fittings. A P/E fret comes with the kit which has railings and other detailed parts to enhance the model, a pennant number decal also come with the kit.

HMS Glasgow D88 Type 42 Batch 1 Destroyer

Model No.	MTM043
Scale	1/700
Length	17.8 cm
Parts	1 resin hull and superstructure, 5 white metal fittings and 1 P/E fret

HMS Glasgow all parts come well packed

The Type 42 destroyers were the workhorses of the Royal Navy when HMS Glasgow was commissioned in 1977. She saw active service during the Falklands War where she was damaged by a bomb. She returned home and was repaired, and then saw many other operations around the world. Eventually she was decommissioned in 2005 and sold for scrap. Like all MT kits it has a detailed one piece hull and superstructure and white metal fittings together with P/E fittings, pennant number and helicopter landing pad markings decals.

I love all these Royal Navy warships from MT Miniatures, they are detailed with few parts which make them easy and quick to assemble and paint, and they look great in any collection of model warships. I hope to see more new releases during the course of the year and will give their details when they are available.

For more details of these kits and the complete MT Miniatures range go to www.mtminiatures.com.

REVELL MODELS

Petr Velikiy

Model No.	05151
Scale	1/700
Length	36.4 cm
Parts	484

Petr Velikiy is a Russian Kirov-Class nuclear powered battle cruiser. This class of warship is one of the largest warships in the world. The kit is a waterline model and has a very detailed superstructure and armament. The kit has a very high part count for a model of this size and all the parts are finely reproduced giving the finished model a great look.

Revell model kits are available from all good toy and model retailers. For details visit www.revell.de/en, @Revell Germany or facebook.com/Revell ***MMI***

Great detail on the Petr Velikiy model (courtesy Revell)

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We regret that the original 543-23 is no longer manufactured but is replaced by a specially wound 543-24 with similar speed and ratings.

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Very low drain, 6 to 12V £5.15

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IMPORTANT

Choose the right controller for the motor you intend to use.

There is a common belief that the speed controller should be chosen to suit the stall current of the motor rather than the continuous running current. This is completely wrong and is no doubt due to experience of many controllers with exaggerated ratings. Please be assured that our controller ratings are realistic and in any case they have a lot of built in protection. There is no need to worry about the stall current that only lasts for a second or so as the motor accelerates from rest. As an extreme example our 653-33 motor is a moderately high speed 6 volt motor with a rated current of 15 Amp and a stall current of 92 Amp. That will run comfortably on one of our 15 Amp rated FR15HVR controllers. In fact there aren't many single motor set ups that won't run on one of our 15 Amp controllers.

You need to know the motor's max. continuous current but that depends on the prop size and pitch and on the voltage you intend to run on. If possible, get hold of an ammeter put the boat in the water and measure the current with the motor running straight off the battery.

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REPORTS FROM EVENTS DURING JANUARY 2017

LONDON BOAT SHOW 6TH-15TH JANUARY BY PATRICK BONIFACE

The opening ceremony for this year's London International Boat Show was suitably 'Absolutely Fabulous Darling's' when the actress Joanna Lumley performed the traditional ribbon cutting. She was just one of a bevy of famous people who visited the Excel Exhibition Centre in the capital throughout the ten days of the show in early January.

As the first of the major full size boat shows of 2017 London International Boat Show traditionally is the showpiece for the British boat, super yacht and leisure industry and this year's show did not disappoint with new designs being shown for the first time by Princess Yachts and Sunseeker. As the images from the boat show shows there was a wealth of ideas and inspiration for model boaters to take away from this huge exhibition.

Pearl 95 luxury yacht

Model of the Pearl 80

Stern view of Sunseeker 116 yacht

Bow view of Sunseeker 116 yacht

Laudau uk luxury launch

LONDON MODEL ENGINEERING SHOW AT THE ALEXANDRA PALACE ON 20TH TO 22ND JANUARY BY KIM BELCHER

This was the 21st Anniversary of this major Show, having been held at this venue for the last fourteen years – it started at Pickett's Lock, Enfield, then moved to Wembley. It's a multi-discipline event with traction engines, steam locomotives, tanks, aircraft, helicopters and quadcopters, trucks and diggers, model railways and model boats. There is also a reasonably large attendance of trade stands too, so tools and materials can be purchased, as well as all kinds of radio control products and electrical items to power them and also our models.

However, this report deals with the marine items seen, being exhibited by a loyal group of model engineering societies and fellow model boat clubs.

A good 'solid' display was put on by the Association of Model Barge Owners [AMBO] ably led by Richard Chesney and team, which included models by Dutchman Hans V. Leeuwen – who also had two boats on the Malden & District Society of Model Engineers stand.

The Welwyn Garden City Society of Model Engineers had a large, two table display area showing a good number of boats alongside their engineering masterpieces of static and traction engines, tanks and radio controlled vehicles. Phil Abbot was on hand, as usual, to engage with the public on all matters of steam engines – construction, development, refurbishment and maintenance. He even had time to advise on the 'straight running' of some of the Blackheath Model Power Boat Club's models.

Next to him was a small, but varied display by the Victoria Model Steamboat Club, where Kevin Fleet's restored and refurbished Flash Steam Hydro (RTP) boat, capable of speeds in excess of 100 mph (the current world record being 129.33 mph) was on display. It was originally built by Keith Norfor in the 1990s.

The St. Albans & District Model Engineering Society had a great little display, with a variety of engineering exhibits large and small, and one end had a good selection of model boats with a few smaller scale locomotive engines. A good example that combined both engineering and marine was Bill Langton's river steam launch 'Suzanne' with its superb workmanship in both the wood construction of the boat and also its steam engine.

On the same stand was Alan Holt's 35' 6" Liverpool type lifeboat RNLB St. Albans, scratch built to 1/16th scale from plans by the legendary Vic Smeed. A nicely finished model, especially the diagonally planked cockpit.

Whilst talking of lifeboats the Moorhen MBC had another large display of boats, one end consisting of a number of lifeboats and Trinity House vessels. As is inevitable at shows, one has changed hands and a Welwyn & District SME member now owns a beautifully made Rother Class lifeboat. Welcome back to the 'Orange and Blue' Derek!

On the Hanwell & District Model Society display was a 'touching' salute to a former member who had died, and instead of being

A very impressive display of Thames barges by Richard Chesney and his AMBO team in this magnificent hall at the Alexandra Palace

Just one of many visitors that took time to look at the models on the Welwyn Garden City Society of Model Engineers' large display, this being one of two

The impressive and varied model display of the St. Albans & District Model Engineering Society, with Bill Langton's river steam launch 'Suzanne' in a prominent position

A close-up of Alan Holt's splendid 1/32nd scale Liverpool type lifeboat, here displaying the cockpit's diagonal planking – also on the St. Albans & District MES stand

forgotten, the membership exhibited two of his boats. The rigging on his German Graupner kit shrimper Tön 96 Nicky was superb, and it was just a pity that the builder – Bill Cocking – could not see it or witness his modelling friends' generosity of spirit.

Over on the side wall the IMPS – Hornchurch Branch had, amongst all their other models, a wonderful 1/35th X-Craft British submarine, which I am told is from a Merit kit, built by Bob Lawrence. He also had another water borne kit on display, the Soviet built Caspian Sea Monster called an Ekranoplan. This was at a scale of 1/144th.

Meanwhile, those stalwarts that are the Surface Warship Association, provided yet again a large and informed display, with at the 'centre' a truly wonderful model of the motor gunboat (carrying no torpedoes) HMS Brave Borderer, built to a scale of 1/24th by Peter Stern. This was a four year scratch build on a Perkasa President hull. His father was a Royal Navy gunner, so hence the display had some beautifully engineered naval ordnance guns too.

Further back from this model was another version of the same vessel, built by John Coster to a 1/32nd scale. It was scratch built onto a Keil Kraft wooden Perkasa kit hull, from a set of French plans in the RC Marine magazine of August 2005; it took three years to complete. This model was brought to life by the activity on the foredeck of Royal Marine commandos and their canoes, making ready for a scouting mission. The armaments were purchased from Precision Controls.

Phil Abbot checks the rudder to see why his boat keeps pulling to the right!

Built by Keith Norfor and now owned and restored by Kevin Fleet of the Victoria MSC, this Flash Steam Hydro (RTP) is capable of over 100 mph!

In memory of Bill Cocking – his shrimper fishing vessel Tön 96 Nicky, displayed by his friends at the Hanwell & District Model Society – gone, but not forgotten

Models by Allan Storrar, Chris Brookes and Keith Henley – the photo says it all! Neat and informative, a credit to our hobby

Talking of scouting, one of the more interesting moments at the Show for me was when I came across the small end stand display of the Eastleigh & District MBC, here exhibiting their outreach scheme to the local Eastleigh Scouts, where Club members teach six Scouts each week to help them gain their Model Makers badge. Now there is an interesting approach to keep our hobby going! They have been doing this for four years and deserve to be applauded for their vision.

I continue with my overview. On the Malden & District Society of Model Engineers stand was a different model altogether, it being the 100 gun warship 'Royal William' of 1719 and built by Ian Tiplady in wood – magnificent!

Space precludes, but I have to just say that Paul Chilcott's two large models of the USS Kittyhawk aircraft carrier and the cruise ship Voyager of the Seas (both covered in other Meeting Point articles by me) had constant attention throughout the Friday by boys and girls (why weren't they at school!) and men and women alike – keep up the good work Paul!

It was a good day out and there was plenty to see overall. Maybe a few other clubs and Societies could support the event with their boats next year?

A display of the various models built by Scouts from the outreach programme run by the Eastleigh MBC

Whilst one visitor photographs a model on the Surface Warship Association stand, Alan and Peter look pensive regarding Brexit and the Euro's effect on the cost of modelling! In front of them is Peter Stern's superb model of the gunship HMS Brave Borderer

Ian Tiplady's 100 Gun Warship 'Royal William' on the Malden & District SME stand with Hans V. Leeuwen's tug 'Smilt Rotterdam' and trawler 'Wotan' in the background

Bob Lawrence's 1/35th Merit kit build of an X-Craft British submarine, seen here on the IPMS – Hornchurch stand

Scout Dominic Hall's boat on the Eastleigh MBC stand. Starting with a display model he converted it to be radio controlled – he was 11 years old at the time

CHIPSTEAD SC RADIO SAILING MARBLEHEAD GAMES1 – 21ST JANUARY 2017 BY PETER CRISP AND ROGER STOLLERY

This was the first time that the Marblehead Interclub Event had been held at the Chipstead Sailing Club. For this first M&S interclub event of the season there were sixteen visiting Marblehead skippers representing eight clubs. All were welcomed by Peter Crisp at the entrance to the car park.

Chipstead Lake was not frozen, despite it having been very cold and frosty for the previous few days, near the launching area but there was a small area of ice at the far end of the lake. Conveniently these ice patches soon melted in the bright sunshine. Although the day started with a flat calm the wind gradually built into a light easterly breeze which gave some excellent racing conditions. Later in the day things got a bit more challenging as the wind became variable as it blew through the trees.

A slightly nervous Dave Allinson was race officer for the day. This was the first time he had run a big event, but he and his team handled the racing very well and were able to get 10 long windward leeward races completed before the wind finally died out by mid-afternoon.

During the morning Colin Goodman made a good start by winning the first two races and another before lunch only interrupted by wins by Roger Stollery and John Shorrock in Races 3 and 4. Lunchtime gave a very welcomed break as everyone had an opportunity to get warmed up and enjoy a beef stew and a hot drink, specially laid on by the club.

Several course changes were made during the afternoon by assistant race officer, Garven McKie, as the wind began to blow more across the lake. John Shorrock started well by winning Race 6, with Races 7 and 8 won by Rob Vice and John Cleave, but the most consistent skipper, apart from the winner Colin Goodman, was Hugh McAdoo who finished by winning both the last two races in the lightest of airs.

Overall it was an enjoyable and good natured day's racing for all those who attended. Special thanks were given by the prize-winners to Dave Allinson, who managed the racing well and organised a team from Chipstead SC Radio Sailing for scoring, observing, course changing etc. as well as making a good photographic record of the event.

There is no doubt that this new radio sailing club has fantastic facilities, is very well suited to running big events with a large lake with good access on the banks and the clubhouse, and excellent launching facilities right in the centre of the activity. ***MMI***

The pre-racing briefing in cold conditions

Good close racing in a light wind

The field begins to spread out

Tight racing at the mark

Good natured racing

1st Colin Goodman	Coalhouse Fort	QUARK 16
2nd Hugh McAdoo	Datchet Water	PRIME NUMBER 29
3rd John Shorrock	Datchet Water	QUARK 30

Colin Goodman wins the Marblehead Interclub Event

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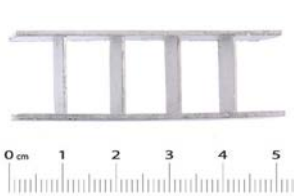
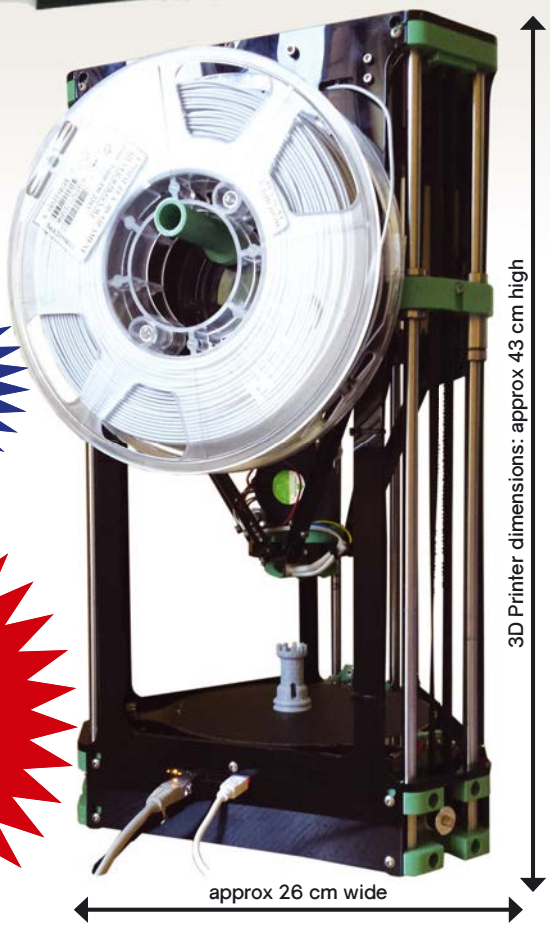


White Metal Short Steps

Roller Fairlead x 2



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GREAT BRITAIN

SEALIGHT

BUILDING THE MOUNTFLEET MODELS KIT OF A CLYDE PUFFER

AUTHOR: ALLAN MILLER

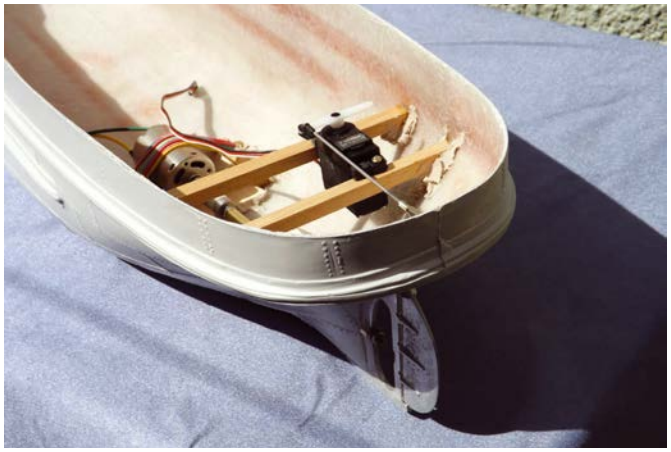
This is not a kit review it is just an article about how I constructed this kit. It is a kit that has been on the market for a while now but it is still as popular today as it has always been. A legend in kits I would call it as I have built this kit in the past and I was hoping for another enjoyable build. The kit arrived by parcel post, not the usual carrier that this manufacturer uses, for they said my address was too remote. Anyway with the kit box safely on the workshop bench it was opened to expose the contents.

Kit contents

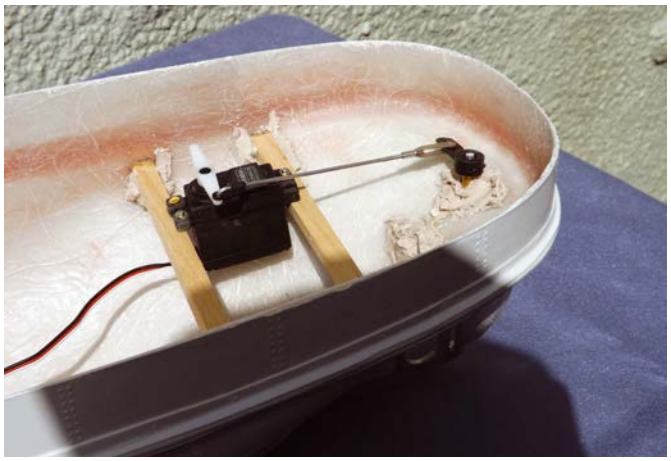
Everything was removed from the box and placed onto the bench for checking and all the bubble wrap was also removed from the parts that needed protection. Fibreglass mouldings being the hull, wheelhouse base and also the lifeboat hull and all of these items had been manufactured to a very good standard. There are several sheets of plywood in the kit some plain and others printed, a box of cast fittings that were identified relating to their position on the model, the running gear along with a plan and an instruction manual together with various lengths of plastic strip and a bundle of different sizes of wood, including doweling for the masts. There were other items in the kit that would help to construct a nice model. I did not spend a large amount of time planning this build because, having built this model before, I had fortunately saved my previous planning article.

Starting the build with the hull I smoothed around the interior top using a small drum sander. After completing this job the hull was washed along with the wheelhouse base and lifeboat hull, which were then placed to one side to dry. All the running gear was made ready for fitting including the rudder servo along with the motor and coupling. A 540 style motor was used, not supplied, for although the model was not large it would be quite heavy for sailing. Following the instructions the running gear was installed. Any gaps showing between the hull and the skeg were filled using

Starlight Clyde Puffer



Running gear added



Rudder servo fitted

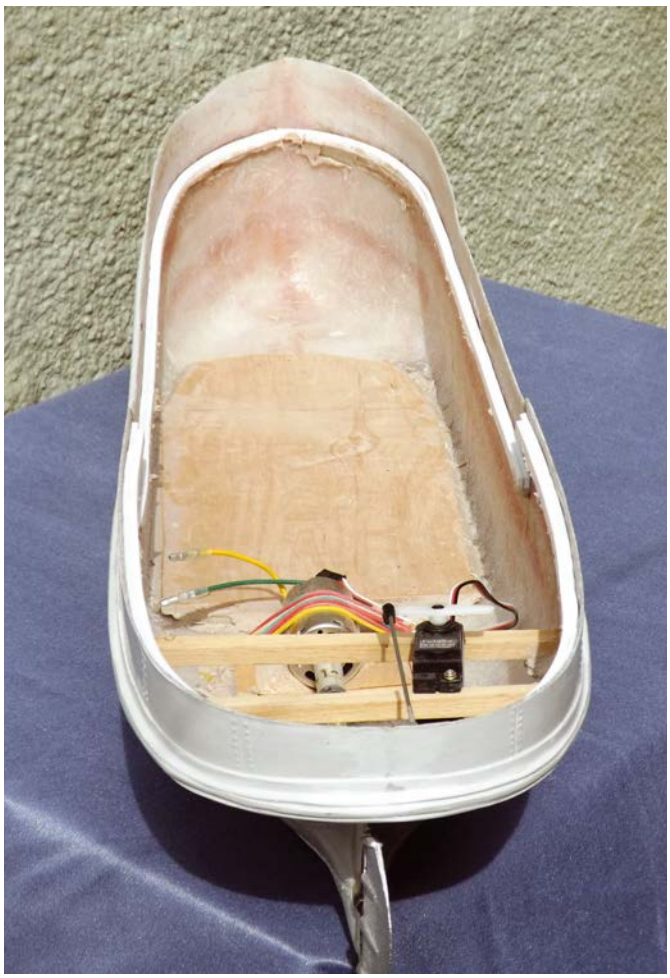
car body filler. I injected some oil and grease into the prop tube then connected the couplings and motors to the propshaft and tested to check all worked satisfactorily.

The next stage was to glue the plastic stringers to the hull interior to sit the deck upon. These stringer layers were fixed in place using the usual method, which was the first layer is fixed using thick superglue, then the second layer which is held in place by clips while plastic weld is applied. When everything is in situ P38 car body filler is applied to the underside of the stringers to add strength to the joint. The measurements for the cross beams position were obtained from the plan and when the beams had been attached it was time to fit the decks.

Having removed the decks from the plywood sheets and using sandpaper the edges were trimmed until a snug fit was achieved. The access areas were removed and then using two part epoxy glue the decks were fitted in place. Strips were cut from a plywood sheet to make the coamings around both access hatches.

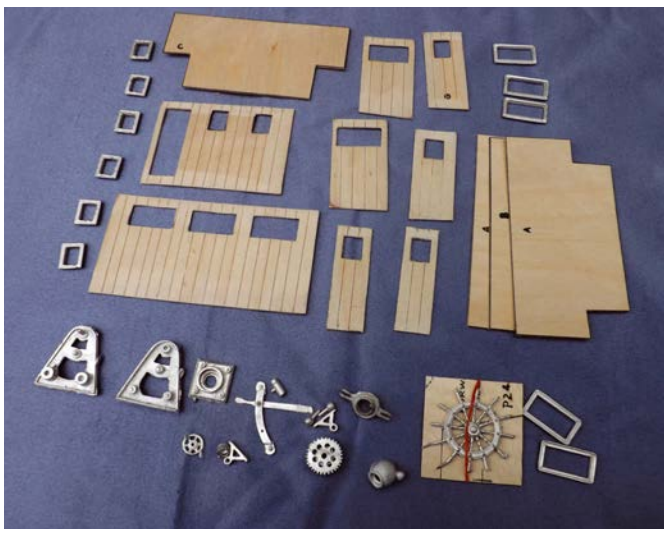
The next job to be done was the construction of the wheelhouse so all the required parts for this project were made ready. Having removed the parts from the printed plywood with a P-cutter I scribed lines to simulate planking. After this was done the windows were removed and assembly began, all the cast window frames were painted before being installed because all the wheelhouse wooden parts were going to be stained.

All of the interior detail parts were made ready and then placed to one side for painting. All the parts needed for the wheelhouse base moulding construction were made ready and all the holes required in the fibreglass base were done. The parts to be the same colour as the fibreglass base were glued in place now; the parts not attached were painted separately before being fitted. The detailed plan helped guide me through this operation. I used red oxide paint as a base cover for the fibreglass base then the ends and sides were hand painted using a tan brown shade.



Ply base fitted to hull interior

Deck fitted



Parts for the wheelhouse

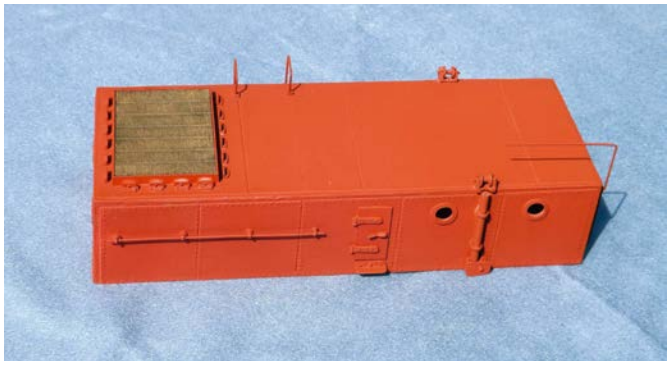
A plastic tube is the main part of the funnel and to this are added bands of cast metal rings. Again the positions of these bands were taken from the plan and when completed the funnel was painted black, red and white, then placed to one side ready for fitting. With the wheelhouse stained and the painted window frames added along with the hatch covers the windows were glazed before adding the painted interior detail. The painted roof was glued in situ using two part epoxy glue. All the rest of the parts surrounding the funnel and wheelhouse were painted before being glued in place, this now completed section was placed aside until after the hull and decks had been painted. Having fixed the capping rail to the top of the hull painting the hull and decks then commenced.

Parts for the wheelhouse superstructure moulding

Parts for steam anchor winch

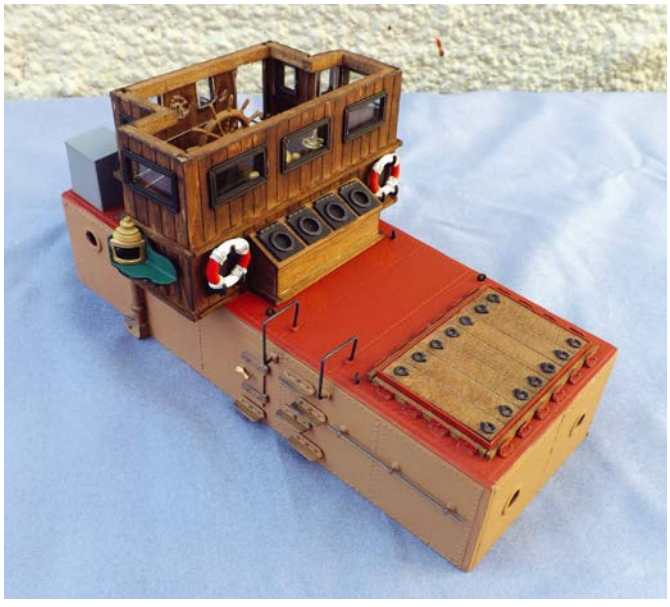
Parts for the funnel

Using car red primer all the hull exterior and the decks were painted. When dry, above the waterline was sprayed using a matt black colour; all the bulwarks I hand painted using the tan brown colour. After all the paint had dried the railing around the stern deck was assembled. This task was done by firstly drilling holes around the edge of the deck and inserting the stanchions into these holes (but not glued) before threading the rail wire through the stanchions. A small amount of thick superglue was applied to the majority of the joints, between the stanchions and the rail, strengthening and fixing all in situ. Then when all the glue had dried the completed railings were removed, painted and then replaced using thick superglue.



Superstructure base painted

Wheelhouse constructed



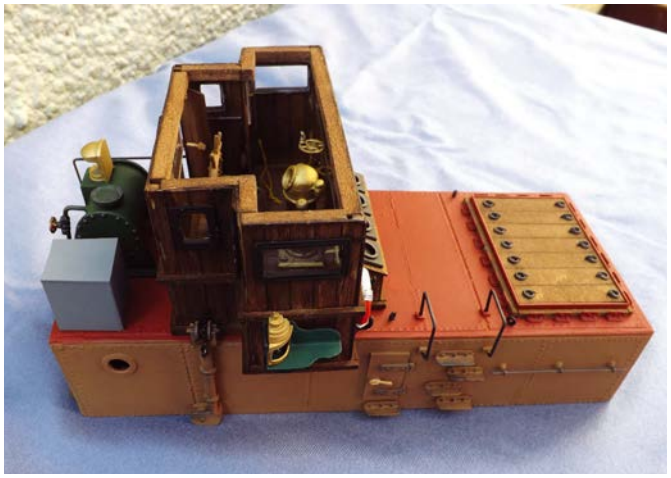
Wheelhouse fitted to base

Progressing on, the main hatch was the next to be constructed; I found it easier to build this in situ. After obtaining the contour of the deck it was transferred to the two sides of the hatch cover to enable these to be a snug fit. I then added the two ends, this formed the basis of the cover. After adding the strengthening strips of wood to the interior, the plywood lid was cut to size and again using a P-cutter the hatch planks were simulated.

The plywood hatch lid was removed and stained while the remainder of the hatch cover was painted, firstly red primer and then tan brown. All catches situated around the edge of the hatch cover were painted and then glued in place. In the kit is a piece of material for the hatch top cover but I decided not to use this, I used green model aircraft covering material. This material when placed onto the area that required covering was fixed in place using an iron and if you use the wife's iron be very careful and get permission.

Having cut out the overlay forward deck from the printed plywood sheet it was glued in place upon the forward deck using thick superglue, then two coats of satin varnish was applied to it. On to this deck sits the steam anchor winch and this winch is made from cast metal parts which were painted before assembling. After completion I dry brushed the gears to simulate use.

Both the mast and boom are made from wood dowelling that needs to be tapered and this was done using rough sandpaper at the start and progressing to a smoother paper. All the fittings that

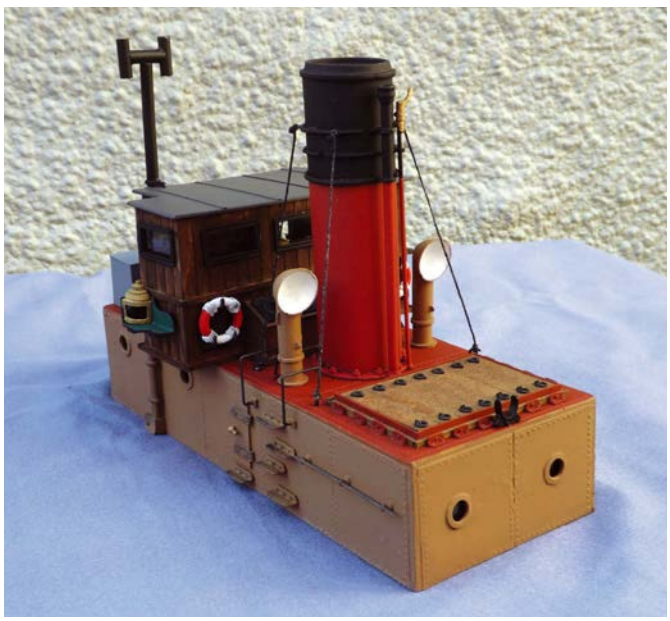


Fittings attached to base

Fittings with mast and boom

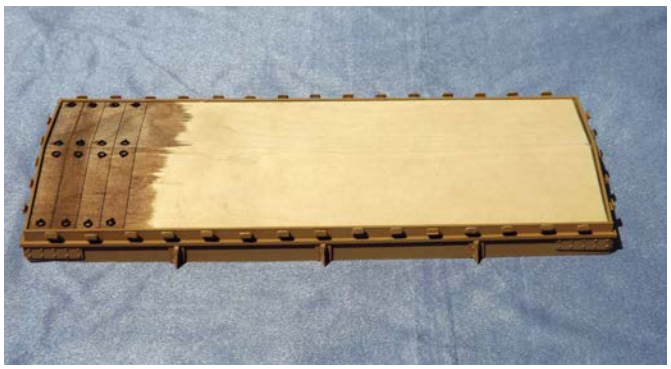
Parts for hatch cover

Wheelhouse, funnel and base complete



Wheelhouse, funnel and base complete

Hull and deck painted

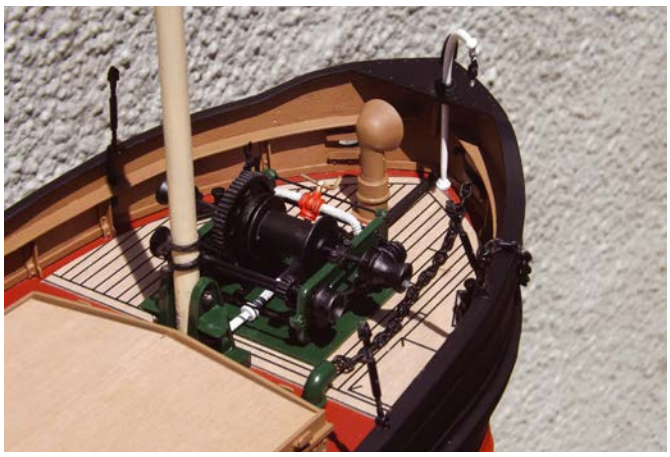


Hatch cover stained and painted

fit to these two items were test fitted before being painted. The mast was painted a dull yellow colour and the boom was stained light oak shade. When the mast had been completed it was fixed in position on the deck. When the boom was fixed in place all the rigging was added. After painting the ship's boat a matt black colour it was fastened to the main hatch top using cord.

The build was now complete and ready for installing radio gear and then ballasting. I only used a 2 channel radio system because no extra working features were to be added. A 6 V rechargeable battery was to power the motor through a 10 A speed controller. Before the next stage all three crew members, provided in the kit, were built, painted and positioned onto the model simulating doing various jobs. Although this is not a large model it does require some amount of lead to bring it down to the waterline, I made as much of this lead removable to aid transportation.

I waited a few days before the weather was right for sailing. The day dawned and I arrived alongside the sailing area, and after testing everything was operating correctly the model was placed onto the water to start sailing. All went very well and I was pleased with the performance. There is plenty of room in the model to add working features but to date I am happy with the build and the sailing so maybe features will be added in the future. ***MMI***



Anchor steam winch and mast fittings

Completed model

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GREAT BRITAIN

THOR GUARDIAN

THIS MONTH'S FREE PLAN

THIS MONTH'S FREE PLAN, MAR 3801, IS OF A 1/50 SCALE MODEL OF STERN TRAWLER CONVERTED TO A STANDBY SAFETY VESSEL

AUTHOR: JIM POTTINGER

Taken when at Lerwick in Shetland, this is a good view of starboard side (pic Sydney Sinclair)

This vessel was one of a number of broadly similar stern trawlers introduced by the Boston group of trawlers and others. This design recognised the advantages of towing and bringing the catch in over the stern. This used the shelter afforded by the deckhouse amidships and gave much better working conditions for the crew; in contrast to having to handle all the gear on the open exposed deck of a side trawler.

Unfortunately their introduction and later service was bedevilled by the drastic and far reaching effects of the Common Market Fishery policies, resulting in their disposal long before the full and lasting benefits could be realised. This example had a somewhat chequered history in that she underwent a number of roles before being finally converted for oil rig installations guard and survey duties.

This plan shows a type and size of prototype that seems popular with model makers, with relatively heavy displacement, which can be readily represented in a model, and at a scale which gives a

Port side view, she does not have the white cutwater line as in previous photo (pic Frode Adolfsen)

Overhead view, with buff coloured tank in front of the bridge (pic Frode Adolfsen)

Taken from the port traffic control station when leaving Aberdeen she is basically in the same condition as in the first photo (pic courtsey the late Barry Standerline)

View of foredeck, with companion and breakwater in foreground, this view shows the detail of the bulwark stanchions (pic Shipsforsale Sweden)

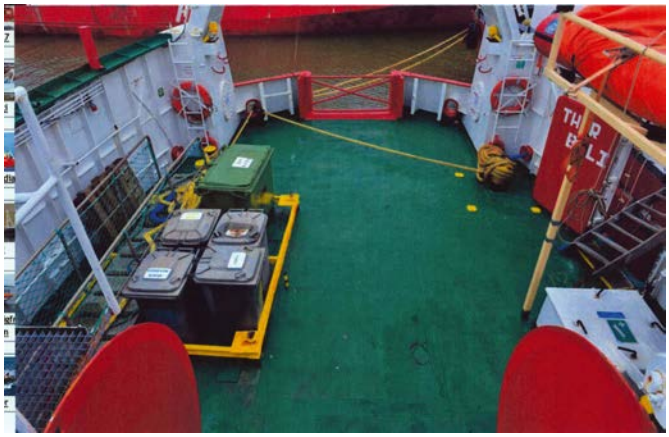
View of after end of the bridge deck, with wheelhouse access ladder at left and ladder to wheelhouse top at right hand of photo, the opening for ladder down to main deck is at top left (pic Shipsforsale Sweden)

reasonable size and robust detail. Without any sharp changes of section and fairly free flowing curves, planking or shaping of a plug should present no great difficulty. The large block of deckhouse, when made removable, gives a fairly large area of hull for access to power unit and controls etc. Additionally a large hatch could be incorporated in the deck aft for access to the steering mechanism.

When I was drawing the lines it was difficult to incorporate much flare into the topsides forward due to the unusually narrow deckline from section 8 to the bow, in contrast to many other vessels of this type.

I have omitted many of the miscellaneous deck fittings and navigation and radio antennas for reasons of simplicity and unnecessary complications on a working model; however, study of the various photos will allow the model maker to copy any of

Aft side of centre castle showing the two access ladders, to wheelhouse and wheelhouse top (pic Shipsforsale Sweden)



After deck with open stern and gate (pic Shipsforsale Sweden)

Companionway and breakwater on fore deck (pic Shipsforsale Sweden)

Looking down on the foredeck (pic Shipsforsale Sweden)

Forward end of wheelhouse with various electronic controls, still retaining a traditional wooden steering wheel, nowadays usually relegated to an ornament (pic Shipsforsale Sweden)

Looking to port in the wheelhouse, with chart table and cabinet across the centre of the wheelhouse (pic Shipsforsale Sweden)

these if preferred. Similarly, only an outline of the arrangement of the wheelhouse internals is shown; again reference to the photos will allow the addition of many of the navigation and other instrumentation as typical of this type. The forward console takes up the whole width of the wheelhouse and the chart table and cabinet is arranged in the centre.

I have indicated the position of the hydraulic crane, which is typical to many mounted on lorries etc.

As the photos show she has been significantly altered to suit her new role since originally built as a stern trawler. As evidence and just an example of her many travels I have seen photos in Malta, Norway, Aberdeen and Shetland.

Colour Scheme: The photos give indication of current livery, with minor differences over the years as shown. ***MMI***

Typical hydraulic crane as mounted on numerous workboats (pic Shipsforsale Sweden)

Port side view, this shows the RIB inflatable dinghy and davit, with SatNav beacon mounted on the stern gantry (pic Charlie Umphray)

As stern trawler Boston Sea Dart, this and next, shows the extent of the rebuilding carried out for her new role (pic author's collection)

This shows that all deck erection above the main deck has been removed during her conversion (pic author's collection)

DETAILS:

She was launched by H. McLean at Renfrew (yard no. 5008) in April 1972 as Boston Sea Dart for Boston Deep Sea Fisheries, Lowestoft taking port number LT94. In 1974 she was the top Lowestoft trawler with a grossing of £169,342.

After sale in 1983 to Putford Enterprises Ltd, Lowestoft she was converted to a standby safety vessel renamed Putford Dart in 1984. She was converted back to a fishing vessel and renamed Nelaraq in 1988, owned by Royal Greenland Fiskeri & Forsyning Nuuk as a trawler/training vessel. She was sold in 1996 and renamed again to Gorm and converted back to a safety vessel in 1998 by her owners Hantslholm Bugseservice A/S Hantsholm.

In 2006 she was renamed Thor Guardian as owned by P/F Thor, Hosvik Froe Is.

Currently (April 2016) up for sale.

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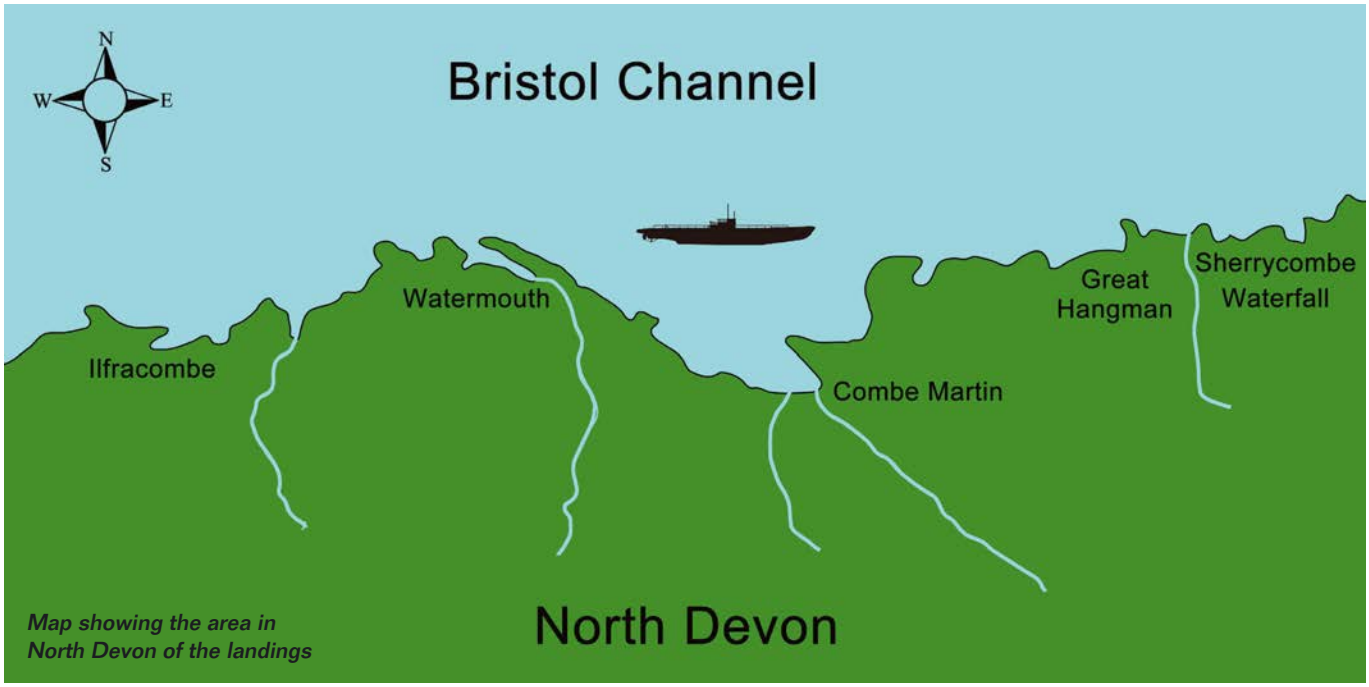
U-BOAT REPLENISHMENT IN NORTH DEVON

TONY UNCOVERS AN ASTONISHING WAR STORY WHICH HAS BEEN LARGELY UNKNOWN FOR OVER 70 YEARS

AUTHOR: TONY JAMES



Map showing the area in North Devon of the landings

WHEN U-BOATS LANDED IN DEVON...

From 1940 to 1943, German U-boats hunted in 'Wolfpacks' (Rudeltaktik), ruthlessly preying on Allied shipping in the English Channel and the Atlantic and upsetting the balance of naval power so dramatically that Britain probably came closer to defeat than at any other time in the war. For instance in just one year – 1941 – U-boats sank 875 Allied ships totalling over three million tons. The German High Command called these 'the happy times' – the Allies had as yet no answer to this underwater threat and the U-boats could, it seemed, do pretty well as they pleased.

Some of the most daring commanders in the German submarine fleet, which in 1941 numbered more than 250, were those in what was known as Group West, a pack of around 16 U-boats, consisting of Type VII attack submarines and the longer-range Type IX, which operated in the English and Bristol Channels. A former Type VII commander has written: "We thought we were untouchable. We took risks and did things which would be unthinkable now." Some of the most audacious – which have only recently come to light – were to regularly land on remote North Devon beaches to replenish water supplies, take a stroll along the sands, and even enjoy an impromptu game of football!

One of the favourite landing points was alongside a series of waterfalls cascading down some of the UK's highest cliffs on the North Devon coast between the village of Combe Martin and the seaside resort of Ilfracombe. It's a spot normally only frequented by fishermen who know the treacherous rocks and fast-running tides. Who would expect to find an 800-ton submarine moored in such a wild and dangerous place?

The area around Great Hangman taken from the MV Balmoral

Type VII U-boat at sea

But according to local historians, the beaches around a crag called Great Hangman, inaccessible from the landward side, were visited scores of times by Type VII U-boats in the early 1940s but the authorities were never told. Indeed, there are numerous stories of enemy submarines being guided in at night by lights in cottage windows, and crews strolling through the streets of Combe Martin to get their washing done, but sadly they remain unverified hearsay.

Technically it would be possible for a 220 ft VII sub, drawing less than 15 ft, to anchor close inshore at Great Hangman and now there is more reliable evidence that this actually happened. Shortly before his recent death at the age of 90, former Ilfracombe boatman Leslie Gear told a friend that in the 1950s he had been chartered by a German visitor to take him to the waterfall at Sherrycombe, under the Great Hangman cliffs. Leslie said that when he asked why he wanted to go there and how he knew where the waterfall was located, the visitor replied his name was Captain Martens and during the war he was skipper of a U-boat operating in the Irish Sea and the Bristol Channel.

He told Leslie his was one of numerous U-boats which anchored off the beach at night, usually on spring tides and landed sailors by dinghy to replenish the submarine's freshwater supply. Leslie had said the skipper was very emotional. He had been impressed by the beauty and height of the cliffs – at 800 ft, Great Hangman is the highest sea cliff in England – and wanted to see them in daylight.

The captain said that VII submarines were very cramped and stank of diesel fuel and battery acid and the crew welcomed the chance to go ashore for some fresh air and exercise. The only alternative freshwater supplies were back on the French coast and U-boat skippers began using remote North Devon coves early in 1941.

Leslie Gear said that Captain Martens had the most remote beaches marked on a chart and that the area around Great Hangman was the favourite because overhanging cliffs made it almost impossible to spot a U-boat lying close inshore.

Water containers were filled from waterfalls which ran down the cliffs on to the beach, usually Sherrycombe Falls, which cascades down the side of the Great Hangman and rarely varies in volume even in the driest summer. Captain Martens said that if the tide served, the crew were allowed on shore for up to half an hour and would often have a kickabout on the hard smooth sand. He told Leslie: "We would have people on lookout for spotter planes but we never saw one and it was off the beaten track for Royal Navy vessels. We had the place to ourselves."

Ilfracombe pleasure-boat skipper Alan Kift also has evidence of U-boats landing in Devon – from a German tourist guide whose father had been in the crew of a VII submarine. "He was called Wolfgang and he brought a party of tourists on to the boat. He particularly asked whether they could see the Sherrycombe waterfall and when I asked why he told me that his dad went ashore there in the war to get freshwater. It was risky but not as risky as going back across the English Channel to their base in France."

There's also the story of the elderly German businessman found enjoying a pint in the remote Hunter's Inn, just inshore of the Great Hangman, who told the landlord that he had been in the crew of a U-boat which landed to collect freshwater. "I saw a path leading from the beach and wondered where it went. I made it my ambition to come back one day and find out and now I have. If I'd known it led to a pub I would have come sooner!"

By the spring of 1943, the Allies had found a way of efficiently locating wolf packs by tuning into their radio signals. Aircraft attacks on U-boats were also increasingly successful and finally the wolf packs, including Group West, were disbanded and U-boats largely returned to lone operations. Historical research has revealed that of the seven or eight U-boats that visited North Devon on a regular basis, none survived the war. It seems that Captain Martens and the customer of the Hunter's Inn were among the lucky few who lived to tell the extraordinary tale of when U-boats landed in Devon...

Next month we continue this unusual story by looking at U-Boat Replenishment in the Atlantic. ***MMI***

GREAT BRITAIN

CHANDLERY

BOOK REVIEWS

IMPERIAL ROMAN WARSHIPS 193-565 AD NEW VANGUARD SERIES NO 244

The Roman Empire's first two centuries of relative peace ended with the Marcomannic wars.The following centuries saw near constant warfare in the Roman world, which meant that the Roman Navy was no longer just patrolling the Mediterranean, but fighting against invaders with real naval skills such as Genseric and his Vandals. The book through the excellent illustrations covers the design, development, operation and history of the machinery of warfare through the ages.

Author: Raffaele D'Amato
Pub Date: 2017
RRP: £10.99 plus P&P
EAN/ISBN: 978 1 4728 1826 3
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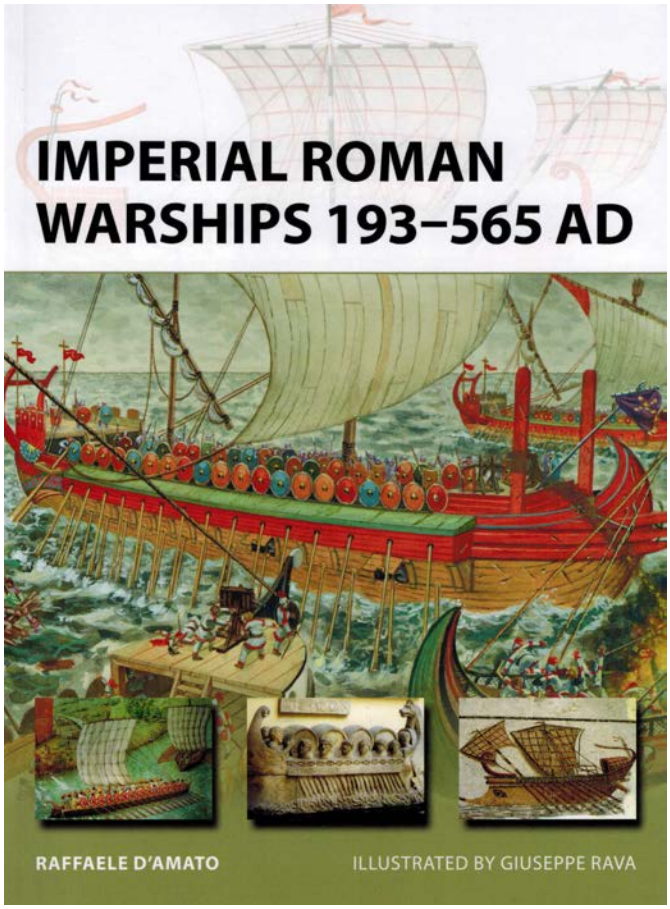


GREAT BRITAIN

SLC 'MAIALE'

MODIFYING ITALERI'S 1:35 SCALE SLC AND CREW TO MODEL NO. 221 AS CLOSELY AS POSSIBLE

AUTHOR: MIKE WILLIAMS

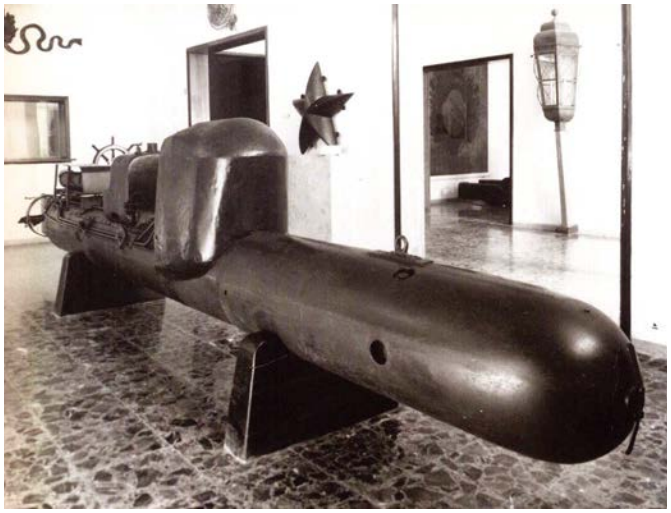
INTRODUCTION

As modellers we have all, at some time, undertaken a project where a relatively simple modification greatly enhances the overall final subject. This was the case with my desire to model an example of a Siluro Lenta Corsa (SLC), 'Slow moving torpedo', from the Regia Marina's famed Decima Flottiglia MAS (10th Light Flotilla). This was a SLC Serie 200 craft from the most numerous and most successful version of this unique Italian manned-torpedo, better known by the name their two-man crews bestowed upon them, 'Maiale' (Hog -Pig), because of their difficult handling qualities.

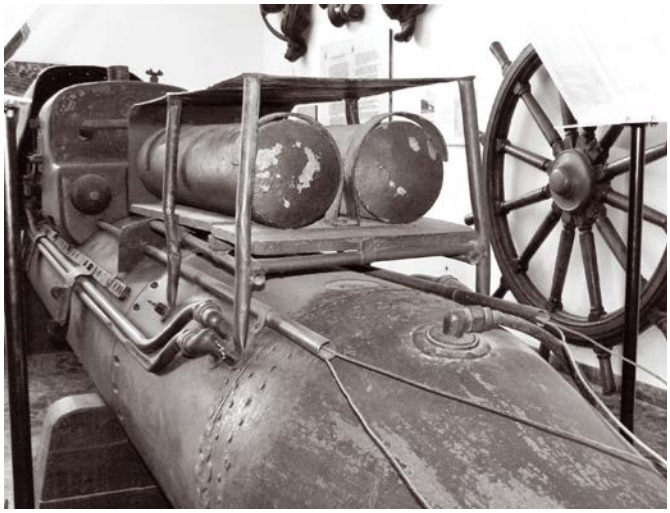
Reading Commander Valerio Borghese's revealing book 'Sea Devils', detailing his time with the famed Decima MAS, was undoubtedly my instigator for this particular exercise. Being in command of this unit's underwater section saw him deeply involved with the evolution and subsequent active employment of their Maiale craft, which he wrote about with commitment and passion in his captivating narrative.

In my follow-on research I became aware that Model Victoria, from Italy, marketed a seemingly, extremely well detailed 1:35 scale multi-media SLC (their No. 4067), with one standing pilot figure (No. 4075) included, all for around £44. Also available was Choroszy Modelbud's 1:48 SLC (Ref: S4801) for £39, but my funds could not extend to these. I wanted something bigger than Choroszy Modelbud's 1:72 companion SLC resin rendition (Ref: S08) for £19. So it had to be Italeri's SLC 200 Maiale, still at a rather high initial asking price of £21, but achievable from my appraisal of what was readily available. However, from what was to follow, I believe that this is the very best all-round model, and I was certainly not disappointed.

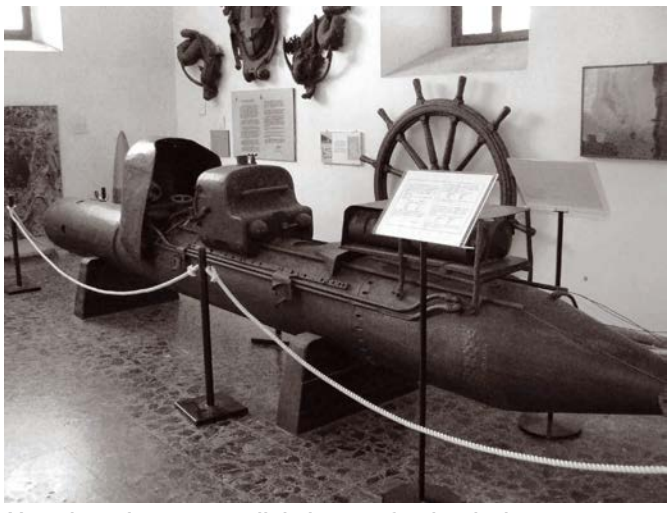
One of the early highlights of this package was the accompanying booklet, which I found particularly useful in understanding the purpose and function of such clandestine light craft. The inclusion of this 36 page manual is a real bonus, with a potted history of SLC development and operations, rare



This well preserved SLC Maiale is on prominent display in the main entrance foyer of the Historical Museum of the Navy, Venice



A view clearly capturing a number of significant modelling points, including the 'rustic' nature of the aft utility rack



Note the utilitarian overall dark green finish, which was apparent in colour images

A preserved Maiale on display at Taormina in Sicily. There are a number of examples currently on display in Italy, besides Venice, La Spezia, and Milan's museum restored SLC's

A typical Maiale pilot, support team and equipment. Details of the well-fitting flexible rubberised Belloni suit, compact head-gear, goggles, and Pirelli Modello 49/bis re-breather, are all well captured

wartime photos, colour artwork, and many walk-around images of a surviving example. This really made Italeri's package a one-stop reference and model for anyone considering a SLC Serie 200 Maiale for inclusion within their collection.

My overall impression on opening this comprehensive package and model was certainly positive. I initially undertook a rather satisfying 'basic' build over a weekend, being very pleased with the results 'straight from the box'. But my interest in this subject soon made me aware of the full display potential of such a model. It gave me the opportunity to enhance and highlight the vital 'human' aspect of this craft, as well as some 'operational' modifications to fabricate a complementary 'improved' SLC to my initial basic undertaking through a second build. The results of which I hope prove interesting here.

SLC NO. 221

In all there were thirteen principal SLC Maiale operations undertaken by the Decima MAS between the period 22nd August 1940 to 3rd August 1943, launched by a number of innovative and diverse means. The basic concept of such underwater assaults was only arrived at after a very trying and disappointing introductory period. Through perseverance the concept and material were eventually successfully perfected.

During the Mediterranean War three Allied warships and twelve merchantmen were either sunk or severely damaged by these craft, with an overall tonnage of approximately 200,000 tons involved. Since only about fifty SLC's were built, this was a remarkable achievement by a small team of dedicated men.

From these diverse operations one stands out, 'Operazione EA3' executed in December 1941, the third and only successful Italian sortie against the British Mediterranean Fleet's main anchorage at Alexandria. The mother submarine Scire, carried three SLC's in special watertight containers on deck and departed from La Spezia. Later, the three SLC crews: Lieutenant Luigi Durand de la Penne and Petty Officer Emilio Bianchi (operating SLC No. 221); Engineer Captain Antonio Marceglia and Petty Officer Spartaco Schergat (No. 222); and Gunner Captain Vincenzo Martellotta and Petty Officer Mario Marino (No. 223), along with a backup team of Surgeon Sub-Lieutenant Spaccarelli and Engineer Feltrinelli, all joined Scire at the forward base at Leros in the Aegean Sea for the actual attack.

On the 18th December Scire released her three SLC's just outside Alexandria harbour. After many difficulties, trials and tribulations in the early hours of the 19th they successfully attached their explosive warheads under the battleships Valiant and Queen Elizabeth, as well as the tanker Sagona which had the destroyer Jervis alongside. All four were severely damaged; the two battleships settling in only a few feet of water were eventually re-floated, nevertheless they were out of action for over a year at a crucial period in the war for the Allies. However, all six SLC operational crewmen were captured and became PoW's.

In this operation the experience of Lieutenant Durand de la Penne and Petty Officer Bianchi manning SLC No. 221 can be cited to show the courage, commitment, tenacity, and improvisation so often displayed by SLC crews in undertaking their mission. After they had successfully negotiated the outer entrance barriers and the inner defensive nets surrounding the target, the electric motor of their SLC failed.

They dragged their SLC's detached 230 kg Trotolital explosive warhead along the bottom toward the Valiant. When Bianchi suffered a totally debilitating breathing apparatus failure, forcing his withdrawal, Durand de la Penne went on alone. He was also suffering as his dry suit had been leaking ever since he had left Scire. The cold water sapped his strength as he strove to drag the charge for over 40 minutes to under Valiant's keel where he set the timer. On surfacing he found Bianchi had been captured and both were imprisoned after his successful attack.

It is apparent that SLC crews were kept in a constant team and were devoted to the specific craft they had been allocated. They undertook their primary training and preparations and oversaw the maintenance of their allocated vessel. Their SLC's were modified to the build and personal requirements of the crew, with any individual preferences towards fixtures and provisions being implemented to ensure they were a well matched pair with the best tools for the job. With this in mind every SLC could be regarded as a unique craft. As an example, the prominent fore-fairing possessed by preserved or restored examples today all vary in some degree, while surviving photographs of operational SLC's confirm this pronounced fairing diversity between craft even in the same series.

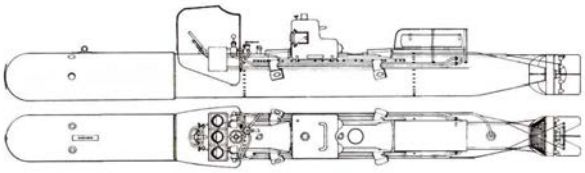
The configuration of the craft differed between trials and operations, so modelling a specific example, say No. 221 is virtually impossible. Even pre-operation trials images of a specific unit do not accurately capture how the fully fitted-out operational example would have appeared. This meant it was impossible to accurately model Durand de la Penne and Bianchi's No. 221 (as it was at Alexandria in late December 1941), to represent all SLC's, and commemorate their crews.

It occurred to me upon appraising Italeri's model that here was the perfect base upon which to fabricate a faithful 1:35 scale 'representation' of a typical craft. It appeared to have an amalgam of such a craft's principal features, derived from reference to a number of preserved examples, and obviously Italeri have delved into the wealth of photographic and documentation available. This enabled them to arrive at their SLC capturing all the salient features and general characteristics of this type of craft.

MODEL

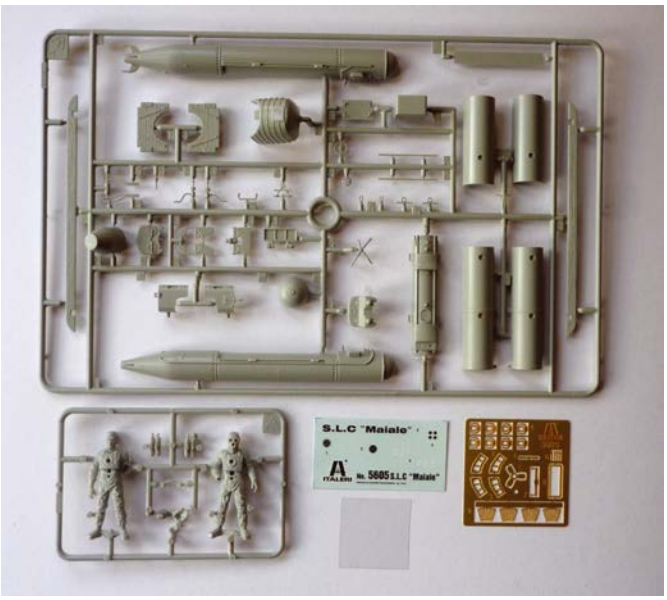
Italeri's 1:35 scale Italian SLC 200 Maiale, Premium Edition Kit (Model No.5605), was initially released in December 2007, and comprises 47 very workable, high quality medium-grey plastic parts, complemented by 20 fine etched brass detailing items, one sheet of clear styrene, and a small decal sheet for instruments, along with its 36 page booklet, and a 'frame ready' piece of artwork to complete this comprehensive package, all in all a very nice presentation box.

The detailing of the parts is very crisp and accurate, with no evidence of any deformation anywhere, no flash, sinkage marks or blemishes on any visible surfaces. The model may be completed to produce either a single (effective against capital ships) or a later double-warhead version (used against merchantmen or light-craft). This results in either a 'standard' 19.14 cm, or 20.86 cm long 'extended' version, with a uniform 1.51 cm diameter body, so this is obviously not a large model.



Overall view of a Siluro Lenta Corsa (SLC) 'Slow moving torpedo', Serie 200 Maiale, from the Regia Marina's famed Decima MAS unit

The box-top artwork, suitable for mounting

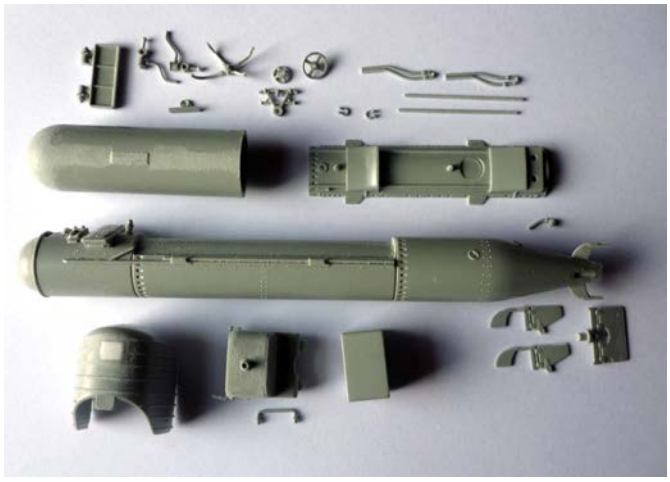


A relatively simple model, as this layout of its contents clearly conveys

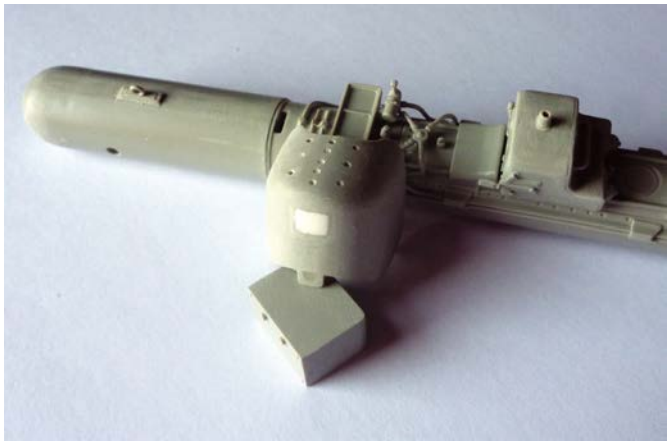
Most of the build is very straightforward, with a central 'crew' section, fairing, emergency ballast tank, auxiliary equipment storage, and various light sub-assemblies, atop a basic torpedo-shaped main body; all simplicity itself due to the perfect fit and alignment of all principal components. Only the area of the propeller guard (9ph) and cruciform control surfaces demanded some care, however, a light-touch and forethought through dry-runs enabled me to execute this part of the build cleanly.

Please note the prominent fore fairing (22a) is deliberately loose in its lower attachment to the main body, the gaps at the bottom have securing brackets in the actual craft.

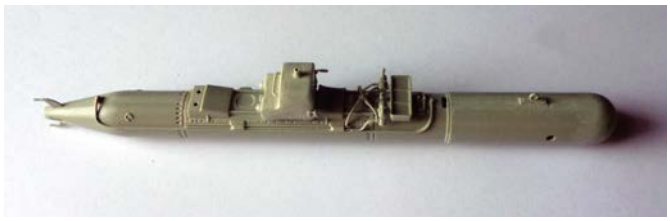
One other important point concerning this fairing was the provision of the glazed opening unique to only one SLC, No. 227, which was well photographed in trials off the Decima MAS's principal SLC base at Bocca di Serchio in 1941. In my example, this opening was plated-over, and rendered flush with the rest of the fairing. I also opened-up the eleven 'vent' holes indicated at the top of the fairing by recesses. I took this opportunity to sand flash the entire fairing replacing the seven reinforcement ribs with four, as illustrated in a number of examples, just to significantly differentiate my model from the original.



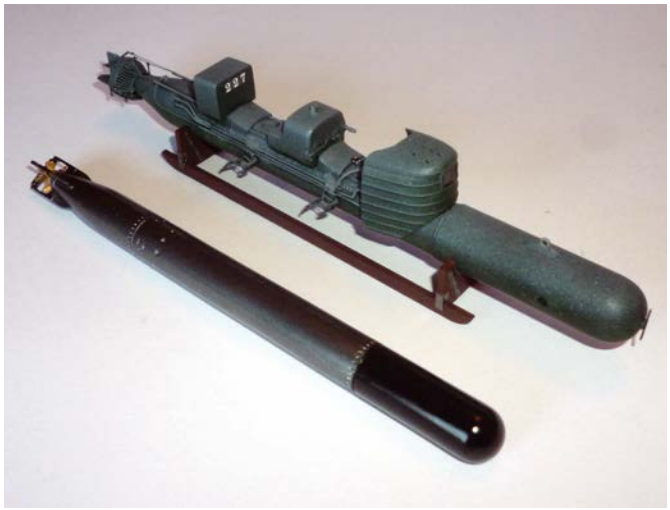
My second SLC build, modified to show a markedly different 'operational' Maiale companion to my first 'static' example



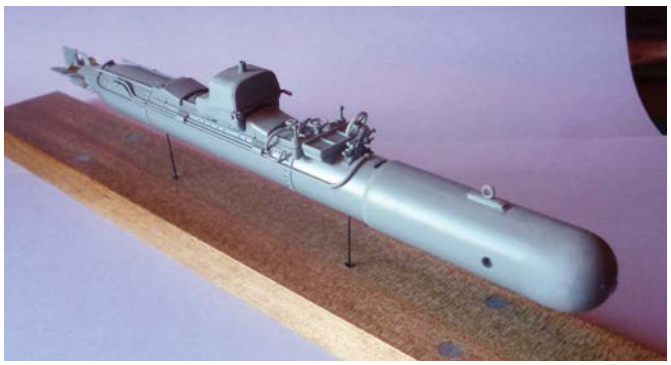
The prominent fairing, with the glazed area plated-over, vent holes opened-up, and original seven strengthening ribs removed



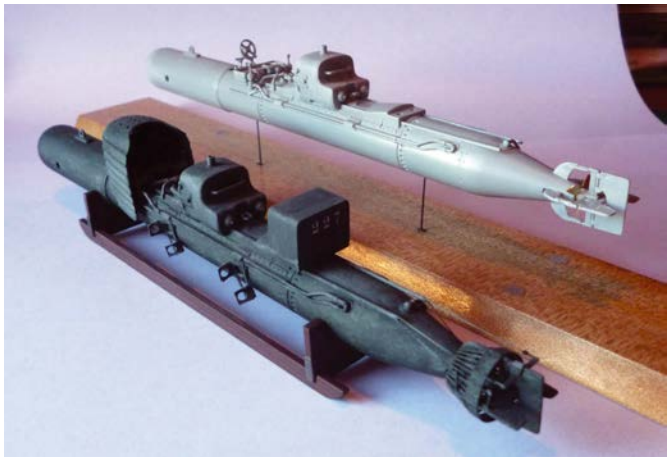
The torpedo shaped body is cluttered by its convoluted pipework and tubing



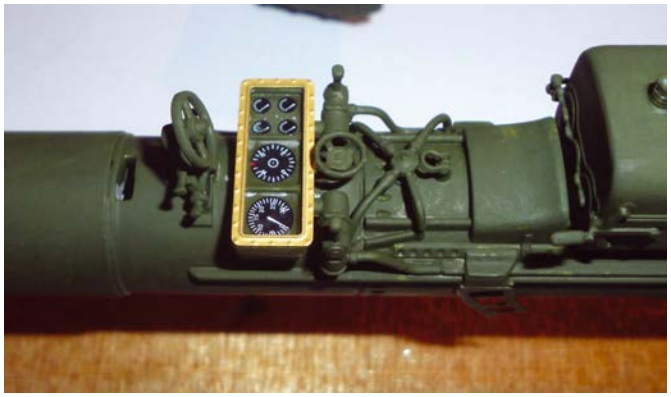
My first model alongside the conventional 45 cm diameter W200 torpedo, from Italeri's MAS motorboat' is another 1:35 scale final set presentation option



The second example giving the impression of being underway by mounting it on two thin steel wire supports



It was hard to resist comparing the two models



The basic pilot station, before the fairing was installed and final highlight painting, showing the instrument panel decals, etched sealing frame, and complex 'plumbing'

One of the most striking inclusions to my model was the addition of the 'open' utility framework aft. This carried equipment and fittings of crucial importance on active operations. It had vital equipment such as oxygen tanks, net-cutters, ropes, clamps, and reserve breathing apparatus; the use of these operational resources is amply documented in a number of 'action' accounts. This was achieved using plastic rod and card. The fabrication of the basic support frame was quite easy, with a couple of bracket supported oxygen cylinders to complete the main structure.

A spooled, knotted (marked) white rope 'ascensore' (measuring line) wound around a wood spindle, usually carried just forward of the aft crewman, attached to his handrail (18a) should have been provided. While a flexible ribbed rubber pipe extension to the emergency ballast vent should also be added to produce a more accurate representation of an operational craft.

Please note, for anyone building Italeri's original, their SLC No. 227 is well illustrated on page 27, here is clearly shown a third lifting point and shackle (like 26a), just forward of the tubing (15a). Obviously the latter was not fitted with my revised SLC with its aft utility rack.

The dedicated photo-etch fret is just fine, with its parts easily cut-out and cleaned-up. I found the bending and placement instructions for these etched parts relatively simple. Certainly the side stirrups, and propeller guard might look daunting, but guidance here is first class. Aft the three-bladed propeller (5ph) will require a little pitch angle to each, while the instrument panel with a surrounding etched brass frame (8ph) highlights this visible control station decals forward.

As for actually fitting the vital guard around the propeller, the photo-etch pieces, consisting of a ring and four truncated cone sections, can be easily formed around the very practical plastic template (7a) provided, but it still takes care and a little skill to get it to fit properly. Although not covered I would certainly recommend using some fine wire to replicate the prominent control steel wire cabling to the control planes aft. Those for the dive planes (9a and 10a, with guides 6ph) are just fine, but those to the rudder head (7ph) should actually cross-over, the port side cable going to the starboard location, and vice a versa. It might not look 'right', but this was the arrangement. The booklet shows this correctly at the bottom of page 27, but the instructions and artwork have you putting both to their respective sides.

For display Italeri have replicated a utilitarian five-piece wood 'sledge' with metal supports and runners as its base for a completed 'out of water' model. Some might feel that a rail-mounted transportation trolley, like one of the examples shown in Italeri's booklet (page 3), would have been just as easy to present and perhaps their fine model would have been served a bit better through such a provision. For me such stands might be ideal for a 'static' landed craft, but for the 'active' version I desired I placed my example on a wooden display plinth, raised above it in a 'floating' stance through securing it by two thin but ridged steel wire supports.

My preference these days is towards Tamiya acrylic paints, and these were used throughout my project. The booklet shows one SLC as being dark grey, the box art shows a black version and the instructions advance it as dark green. Preserved examples now display a variety of finishes, therefore, it is difficult to emphatically settle for a 100% accurate example. But to me dark olive-green (XF-58) seemed to be a pleasing balance of authenticity for the practical reason to covey stealth at night as the goal, and to add just a bit of 'colour', albeit extremely subtle and subdued to my piece. I did not add any identification number (No. 221), believing such markings would have been painted over. However, I finished-off the regulating wheel (28a), and the central hub of the main control wheel (30a) in flat-white (XF-2) as shown in photo coverage, presumably visible for ease of pilot location and handling. To further differentiate this latest model from my first SLC venture, I held back on the wear and weathering producing a well maintained 'display' example this time.

CREW

My additional work on the actual SLC can rightly be regarded as minimal, however, as regards the two standing crew figures this was to be far more drastic. It would have been a really welcome option for Italeri to have provided a pair of fully kitted-out seated operators, able to sit astride their SLC in an 'action' pose. The figures provided made a basis for the 'human' and 'scale' component.

One was fully fitted-out in his flexible rubberised Belloni suit, with head-gear and goggles in place, only requiring his fitment hose and double oxygen cylinders (with his right hand holding its valves) for his Pirelli Modello 49/bis re-breather to be cemented in place. The other crewman had his face gear off in his left hand which required attaching together with the re-breather.

The two standing figures add some real personality to this model. Both are nicely done with the Pirelli re-breather and Belloni suits very well executed, being detailed representation of this equipment, requiring minimal preparation to complete (just remember to put

The seated figures required repositioning of their dismembered limbs, subtle trimming down of the joints, and realignment. The hip and knee areas were the most demanding

ABOVE & BELOW: The modified model shows a 'slow moving torpedo' in an 'operational' mode with seated crew figures

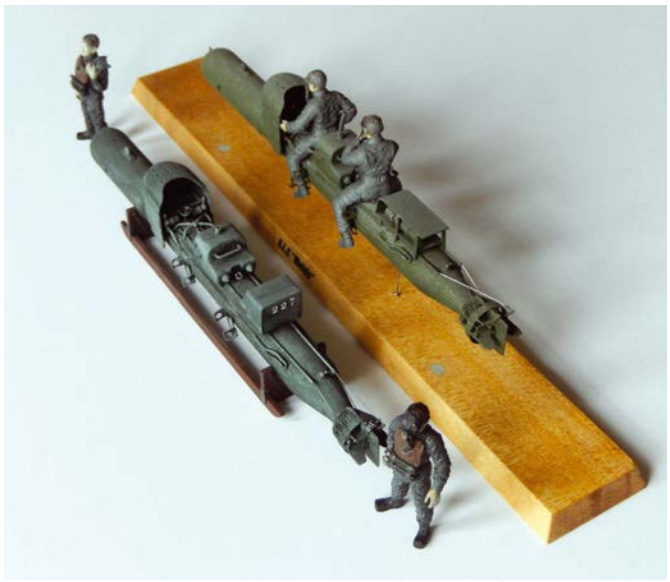
some lenses in, I used layered clear-gloss acrylic paint (Tamiya X-22). I believe goggles were standard issue at the start of the war, while full-face masks were present in later operations.

It has to be noted that U-Model from France, market accessories that can complement Italeri's SLC immediately, through their dedicated 1:35 scale resin set of two fully equipped and seated crewmen (UM 060) for about £23. They also market a pair of other individual supporting figures (UM 055 and UM 056) for £10.50 each, both of standing crewmen partially suited-up.

Certainly two seated 'operational' figures for my model was the path I wished to follow, however, I drew back from such expensive resin replacements, effectively doubling the cost of my build, and embarked upon extensively re-modelling Italeri's duo instead.

This entailed a major conversion of these two figures, demanding their total dismemberment, repositioning of their trunks and all

The SLC alongside a long out of production Dolphin Models 1:400 scale (Ref: ART.003) Regio Sommergibile 'Scire', versione d'assalto, fitted-out as a SLC carrier, as she appeared during her sortie against Alexandria in December 1941



My two SLC's show a 'standard' before (lower) and 'modified' after (upper) examples of this 19.14 cm long 1:35 scale model

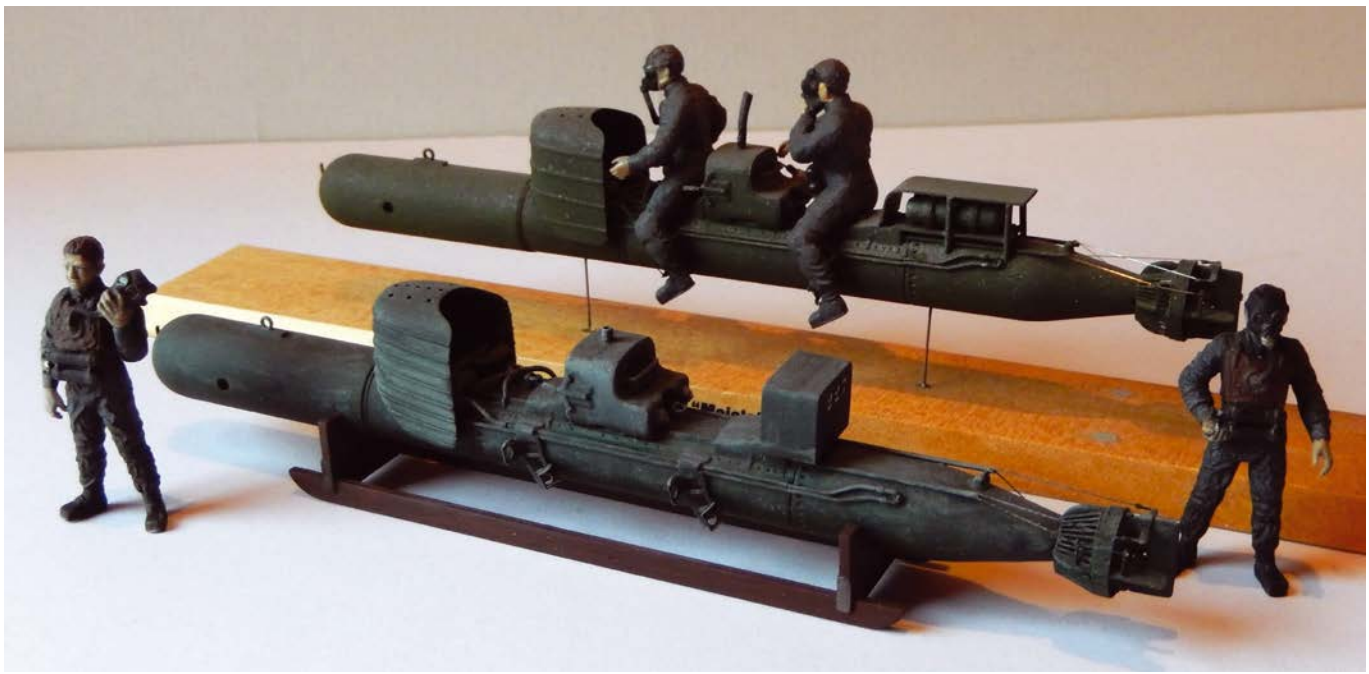
limbs, and finally seamlessly 'merging' these revised bodies into their seated 'Maiale' positions. I found it was not as difficult a proposition as I first thought, and I hope my accompanying photos convey the dramatic improvement in this subject when modelling it in an 'operational' stance.

The seamless union of these modified Belloni clad figures onto their curved seats, sitting comfortably astride the SLC does require some filing, sanding, and time to accomplish, but it was all worth it. One point about the placement of the figures, just locate the stirrup supports (2ph and 3ph) initially, aligning their legs to them, only locate the actual stirrups (1ph) once the final crew figures positions have been set.

In my figures I took full advantage of their 'smaller' moulded features to try and replicate Lieutenant Durand de la Penne and Petty Officer Bianchi manning SLC No. 221, with the latter's hand seemingly grasping his mouthpiece checking his failing equipment, with the former adjusting his own oxygen supply just prior to their attack upon HMS Valiant.

The figures were painted primarily in dark German-grey (XF-63), along with flat-black (XF-1), with the Belloni suits and Pirelli sets all dry brushed with varying shades of grey (like Kure-grey XF-75) to bring out fine points. The only areas of 'colour' are exposed flesh (XF-15) and hair (brown XF-10). One can realistically present overall 'dark' figures for an operation, with the crew not only being 'blacked-up', but wearing netting headgear, festooned with camouflaged tatters and trailing strips to resemble clumps of innocuous debris when they broke surface to take their bearings.

To close all that has to be said is that this is a great little model that will allow for the faithful fabrication of this relatively obscure



The ideal display, a direct comparison between my earlier 'straight from the box' example and follow-on modified model

naval subject, certainly one that stands out from a standard 1:35 scale undertaking. My latest SLC addition was again one of the simplest and most enjoyable weekend (plus) builds imaginable. It is a very impressive presentation, while the subject matter is rather unique and will make a fine addition to any collection. Overall this is a welcome model by Italeri, which only required the provision of seated 'action' figures to complete as far as I was concerned. ***MMI***

Another interesting comparison is Italeri's 1:35 scale MTM Barchino explosive motorboat and crewman

SOURCES

SLC 'Maiale': Italeri photographic reference manual, Bologna, Italy, 2007

Sea Devils (Decima Flottiglia MAS): Valerio Borghese, Andrew Melrose, London, 1953

Frogmen First Battles: William Schofield and P. J. Carisellam, Avon Books, 1989

Italian Navy and Air Force Elite Units and Special Forces, 1940-45: Piero Crociani and Pier Paolo Battistelli, Osprey Publishing, 2013

Mussolini's Navy – Reference guide to the Regina Marina 1930-1945: Maurizion Brescia, Seaforth Publishing, 2012

Italeri's Maiale has many display options. In the end my modified example stands by itself as a fine 1:35 scale representation of the Regia Marina's famed Decima MAS unit

SCALE WORKING

Tern Plan

Scale: 1:12
Length: 601 mm
Beam: 204mm
Designed by: Jim Pottinger
Product code: MAR3702
£12.50 + p&p

MV Theron

Scale: 1:30
Length: 700mm
Beam: 172mm
Designed by: Jim Pottinger
Product code: MAR3747
£11.00 + p&p

Woden Icebreaker

Scale: 1:128
Length: 845mm
Beam: 242mm
Designed by: Clive Halliwell
Product code: MAR3704
£14.50 + p&p

Oil Devil

Scale: 1:35
Length: 704mm
Beam: 205mm
Designed by: Jim Pottinger
Product code: MAR3701
£15.50 + p&p

Singapore Pilot Boat

Scale: 1:20
Length: 725mm
Beam: 204mm

Venice Lagoon Ferry Burano 2

Scale: 1:72
Length: 475mm
Beam: 217mm

Soleil D'Or

Scale: 1:20
Length: 645mm
Beam: 170mm
Designed by: Jim Pottinger
Product code: MAR3161
£16.50 + p&p

Nancy Raymond

Scale: 1:24
Length: 690mm
Beam: 185mm
Designed by: Jim Pottinger
Product code: MAR2982
£16.50 + p&p

Ritalea

Length: 920mm
Beam: 235mm
Designer: Eric Leadley
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Beam: 75mm
Designer: Stuart Bolton
Product code: MAR2254
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Farmile D

Scale: 1:32
Length: 1100mm
Beam: 200mm
Designer: Steve Fosbury
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Scale: 1:180
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Designer: Charles Sells
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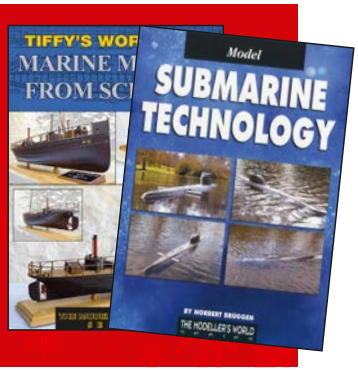

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HISTORY OF J CLASS YACHTS

'BEAUTIFUL', 'ELEGANT', 'GRACEFUL'. THESE ARE JUST A FEW OF THE ADJECTIVES TO DESCRIBE J CLASS YACHTS

AUTHOR: ROGER BAGSTAFF

THE HISTORY OF THE FULL SIZED J CLASS

Quite obviously, the history of J Class yachts is a vast subject and many books have been written on the subject. This article is not intended to give the reader a definitive insight into the full history but to give a precis of some of the more salient points. Neither will this article include any detail regarding the building of a model J Class yacht.

J Class yachts were the epitome of grandness, huge hulls, enormous sails and large numbers of crew sometimes numbering as many as forty. To give an example of the dimensions, weighing 166 tons Ranger was 41.15 m long (135 ft), 26.5 m waterline (87 ft), 6.4 m beam (21 ft), 4.57 m draught (15 ft), had a sail area of 701 m² (7545.5 ft²) and had spinnakers of 1772.25 m² (18000 ft²). Some yachts had masts that were 45.7 m (150 ft) from the deck. Weetamoe (designed by Clinton Crane) was the narrowest of the American J's.

The 'J' Class yachts were built to a precise specification introduced by Nathanael Herreshoff, an American naval architect.

Yachts Lionheart and Rainbow under sail at the J Class regatta in Falmouth, 2012 (photo: Chris Parfitt)

J Class yacht Velsheda under sail (photo: David Blaikie)

Yacht Ranger under sail at the J Class regatta in Falmouth (photo: Chris Parfitt)

This specification became known as 'Herreshoff's Rule', later becoming known as the 'Universal Rule'. To enter the America's Cup, these single masted yachts had to conform to the Universal Rule.

The Universal Rule was mainly intended to avoid handicapping, which was extremely difficult to implement and very complicated. This rule came into being in 1920 and took into consideration the hull length, hull shape and sail area. It stands to reason then, that J Class yachts were not all identical but they were permitted to sail in the America's Cup provided that their rating was within the parameters of the Universal Rule.

The Universal Rule is:

$$R = \frac{0.18 \cdot L \cdot \sqrt{S}}{\sqrt[3]{D}}$$

Where:

L is boat length (a number itself derived from a formula that includes Load Waterline Length L.W.L in feet)

S is sail area

D is displacement

R is rating

To comply with the Universal Rule, the waterline lengths had to be between 23.16 m (76 ft) and 26.52 m (87 ft). With a confirmed

J Class yachts Rainbow (foreground) and Velsheda under sail (photo: David Blaikie)

displacement, the formula could then be used to calculate the permissible sail area. Yachts having the longest waterline were found to be the fastest, especially around the 1930s. Endeavour II and Ranger both had maximum waterline lengths of 26.52 m (87 ft).

The Universal Rule separated boats of different sizes into classes which were identified by a letter: two masted yachts were in classes A to H and single masted yachts in classes I to S.

Eighteen yachts were designed but only ten were built to the Universal Rule, each costing in excess of $500-000, (£332,000) approximately £4.5m at today's rate. A vast sum of money for the 1920s and 1930s by anyone's standard. The Great Depression and the 1929 Wall Street Crash did not deter these millionaires from having new yachts built, such as Harold Vanderbilt (American railroad executive), Sir Thomas Lipton (Scottish tea merchant) or Sir Tom Sopwith (English aviation pioneer). It will be of no surprise to anyone that the owners of these yachts were multi-millionaires.

The steel hulls were built using a welding system known as the 'shielded arc process', this is a manual arc welding procedure that uses a flux covered electrode to create the weld. This is more informally known as stick welding. The British yachts were generally all steel construction but the American boats were of steel above the waterline and bronze below the waterline. Some 110 tons of lead was welded to the keel of Ranger to give counterbalance for the mast. Masts were produced from aluminium, which, apart from being lightweight, is resistant to corrosion and has a superior strength to weight ratio than steel.

The downturn in the economy and World War Two did eventually spell the end for these magnificent craft but since about 1980 the J Class yacht has begun to make a comeback. Replica's of Ranger, Endeavour II and Rainbow have been built and are sailing again. What a sight to behold.

For the first time, boats from various countries and of various designs were able to compete in the America's Cup under a uniform measurement rule. Six of the ten boats built within the Universal Rule were American. They were; Enterprise, Whirlwind, Weetamoe, Yankee, Rainbow and Ranger. The four boats built in the United Kingdom were; Shamrock V, Velsheda, Endeavour and Endeavour II.

The first official race for The America's Cup for J Class yachts was in 1930 between Enterprise (Harold S. Vanderbilt) and Shamrock V (Sir Thomas Lipton). The American built Enterprise was technically superior to the British built Shamrock, the hull was developed using scale models and tank testing. The sail design was developed in a wind tunnel by the American designer William Starling Burgess who had a background in aviation and aerodynamics. The adjustable 'Park Avenue' boom was first seen on this boat – the draught of the sail could be controlled by slides across the wide base of the boom, allowing a curve to be put into the foot of the mainsail.

The next match was in 1934 between the defender Rainbow and Endeavour II. Rainbow was designed for light weather but Endeavour II almost took the Cup, a 'certain' third place was lost due to a tactical mistake by Tommy Sopwith when he failed to cover the boat behind. Endeavour II, which was designed by Charles Nicholson, was deemed to be the fastest and most beautiful J Class Yacht ever built. Although being the fastest boat, Endeavour did not win the 1934 America's Cup. Due to superior tactical sense and good fortune, the American yacht Rainbow won the race.

After dominating the British racing scene until 1938, Endeavour II was laid up until the end of WWII. She was saved by Elizabeth Meyer of Newport, Rhode Island (a yacht restoration pioneer) in 1984 and after a refit costing ten million dollars she was relaunched in 1989. Endeavour once again became a sight to behold. The race in 1937 was between Endeavour II and Ranger. (Designed by Olin Stevens) Ranger proved superior by winning all four races. Endeavour II then 'struck her colours', conceded and was scrapped in 1968.

The trophy for the America's Cup was affectionately known as the 'auld mug' and the race between Endeavour II and Ranger was the last race of its kind. Shamrock, Endeavour and Velsheda survived the war and have all have been refurbished at enormous cost and still sail today in major regattas around the world. Endeavour and Velsheda were at Auckland, New Zealand, during the America's Cup series.

One of the main characteristics of the J Class yacht is the Bermuda rigging. This has a continuous mast without any extensions and has high rigging instead of the use of a gaff rig. Jib sails are attached to the deck and not to a bowsprit as with previous designs.

Although regarded as the most advanced yachts ever built, the J Class eventually became too expensive to continue. Between 1935 and 1941, all of the American boats were consigned to the scrap heap. Some of the British boats befell the same fate but some were simply abandoned. The fascination of J Class yachts survives to this day, their beauty, size and speed (around twelve knots), still places these boats high on the sailing pedestal. Even today, the peak of yachting events is the America's Cup.

The author's Canterbury J at Roath Park Lake

ABOUT THE MODEL CANTERBURY J

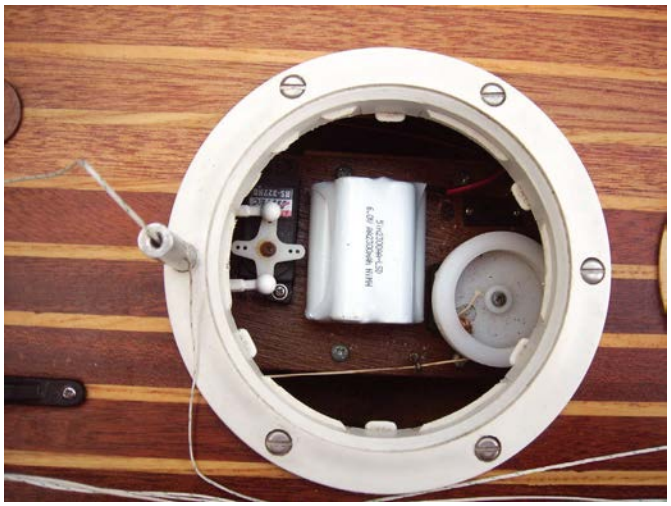
The model Canterbury J Class yacht was first designed and built by members of Christchurch Model Yacht Club in New Zealand. This club, like many clubs in Great Britain, was plagued by an abundance of weed on their lake.

In the 1996-97 season a small yacht named 'Ranger' was spotted and attracted the attention of several who saw its potential. Arrangements were made and the first 9 hulls were produced which sold very quickly. In a short period of time the fleet soon became 12. In 1997 the 'J Squadron/Association' was formed to record and control the basic specifications of the model.

The 'J Squadron/Association' is now the 'Canterbury 'J' Class (one design) Owners Association Inc, still based in Christchurch, New Zealand. The boat 'Ranger', (J1) was eventually purchased and is on display at the Christchurch Model Yacht Club building at Victoria Lake, still in pretty near original 'as built' condition. The outcome, as we now know, was the production of a beautiful model yacht called 'The Canterbury J' which has the ability to negotiate weed and shallow water due to the integrated keel and rudder profile.

The Canterbury J is now registered with the NZ Radio Yachting Association as a nationally recognised class. One of the aims was to create a model that was affordable and one that would be easily transported in an average family car. The class rules cover such

The beautiful lines of the Canterbury J



Removable cradle supporting 'the workings'. A tight fit

aspects as; hull moulding and dimensions; lead weight; masts; sails; fittings; standard rigging; booms, identification marks and, of course the details for the waterline. There is a minimum all up weight limit for the completed model of 6.5 kg (14.3 lb) when fully rigged. Quite comprehensive building instructions are available.

Both in and out of the water the J Class epitomises both grace and elegance. In model racing terms, the design is not as fast as more modern designs which are lighter and offer less resistance in the water but there are some distinct advantages:

First: The sleek lines make the boat attractive both in and out of the water and the model will attract positive comments from both colleagues and members of the public.

Second: The hull shape is proving to be more practical on the water than more modern designs. In lakes where the weed is problematic, the J Class hull is more suited to make progress than modern hulls that have a drop keel.

Third: The J Class has a shallower draught which allows it to be sailed in a wider range of venues.

It is not uncommon to see a group of J's approaching the finish line together, particularly in calm conditions, when their ability to sail in the lightest of breeze poses a challenge to other classes of yachts.

The model Canterbury J is a 1.22 metre (48") yacht with a main and foresail rigged to a 1.6 metre (63") aluminium mast. The mould is based on 'Ranger', the last winner of the pre-war America's Cup.

A great many hulls have been sold and they are to be found in all areas of New Zealand and as far afield as the USA, Canada and the UK. It is a one-design yacht and all hull shells, keels and trim weights are made from moulds officially approved by the 'Canterbury 'J' Class (One Design) Owners Association Inc., with an identification number moulded into the hull.

There are rules that:

a) prohibit exotic materials,

b) define a fixed minimum weight,

c) strictly control dimensions in the three sizes of sail rigs.

The yacht can be bought as a kit or in separate pieces and assembled as the budget allows. This also allows members who are capable of making small components to make many of the parts and keep the price down.

THE CANTERBURY J COMES TO BRITAIN

Alun Harwood, from Cardiff, bought a Canterbury J hull from Christchurch Model Yachting Club about twelve years ago and made his own mould (with consent) and became the official UK agent for the Canterbury J. He produced more than fifty hulls before selling the mould and plans to Alan Horne of J Class Hulls. Alun built two model Canterbury J's, one is his pride and joy and the other he sold to the author.

THE NOTTINGHAM J CLASS MODEL

The completed Nottingham J is the same as the Canterbury J in every respect except in the build process itself. The Nottingham hull is a 'full' hull where the ballast is fitted inside the hull, as opposed to the Canterbury where the ballast is bolted up to the underside and completes the shape of the hull. Both the ballast weight and trim weight are from the same moulds for both versions and the studding is also present. It is because of this minor change in production that the Christchurch Model Yacht Club raised their objections to the model being called a Canterbury J and they insisted that the name of the modified model be changed, hence the Nottingham J (I guess that this is similar to an infringement of copyright). A larger Nottingham J has now been produced which is 1.54 m (60") in length and this is also a beautiful model.

AMERICAN MODEL J CLASS YACHTS

Following the enormous success that America has had with the America's Cup and the renowned history of J Class yachts in America, it would stand to reason that model boat enthusiasts in the USA would have a penchant for building model J Class yachts.

John T. Hanks III with his 1/16th Ranger and Canterbury J

J Class models in America are 1/16th scale hulls ranging from 2.14 m (72") in length to 2.59 m (102") and weigh between 29.5 kg (65 lb) and 40.8 kg (90 lb). The models are the largest recognized class in the AMYA (American Model Yachting Association). The models have sails from about 1.94 m² (2.31 yd²) to 2.58 m² (3.01 yd²) in area on masts that are 2.44 m (96") to 2.9 m (114") in height. The difference in sizes of the models is obviously arrived at by scaling the different sizes of the full size hulls. As we know, the original yachts were designed to the Universal Rule whereby designers could alter dimensions of the hull and sails and still be within the rules.

Again, as with the full size J Class yacht, these models look truly magnificent on the water and attract a great deal of attention from passers-by. For most members of model yacht clubs, storage and transport of these models may well cause some concern.

John Hanks III from Arizona, Secretary of the AMYA National J Class, built and sails a 1/16th J24 Ranger. This is one of five scratch built 1/16 scale J's to have been built by John. This class was formed in the US in 1974. Over 200 are registered but only about fifty are currently in use. ***MMI***

CANADA

ROTATING FIRE MONITOR

ROY GIVES A NUMBER OF DIFFERENT SOLUTIONS TO MODELLING A FULLY FUNCTIONING FIRE MONITOR

AUTHOR: ROY CHEERS

Squirting water adds another interesting operational feature to a model. Whether it is a fire monitor on a scale tug or fireboat, or something which sets the children squealing with delight (or disgust) on a hot summer day, the details are similar.

If the fire monitor is fixed in position on the model, then connecting up a water supply is fairly simple, but a realistically-rotating, remote-controlled monitor sounds more complicated. It doesn't have to be. Many suppliers of model boat fittings offer "working" fire monitors, but I have not yet found any supplier who offers either components or advice on how to connect one that can rotate. The purpose of this article is to describe several ways in which it can be done, allowing the monitor to be rotated under radio control. The intention is to do it with off-the-shelf materials and components, and avoid sophisticated tools.

It will be assumed that readers know how to fit and connect up a motor-driven pump to supply the water, and a radio-controlled switch to turn it on and off, and also how to mount their chosen monitor on top of a length of tube.

WATER SUPPLY

If you are using an on-board supply of clean water, it's possible to arrange the pump, monitor and drive as one complete lift-off assembly. The only disconnects needed will be electrical, to the rotational drive servo and the pump motor.

If you are taking water from the pond you are sailing in, the water inlet and the pump have to be low down in the hull because many water pumps are not self-priming. In other words, the inlet and impeller must be below the waterline. Be careful to keep the inlet hose to the pump fairly level to avoid an airlock. It is better if the hose rises a little towards the pump, then the water will push the air out as you lower your boat into the water. If the ponds you sail in are likely to contain weed or leaf particles, you may want to consider fitting an inlet filter. Remember that water directly from the pond may be contaminated and so should not be used to spray water at observers.

STRAIGHT TUBE CONNECTION

The simplest of all connections is a hose from the pump discharge to the vertical feeder tube of the monitor. This method's effectiveness and reliability depends on a number of variables. If the hose is too stiff it will restrict the rotation of the monitor. Large diameter hose will be stiffer than small diameter; thick wall hose will be stiffer than thin wall, and a short length stiffer than a long length. If the hose is too flexible it may kink when the monitor rotates and restrict the water flow. The vertical distance allowed for the length of hose can also limit its rotation.

Since this is the simplest method, it's probably worth trying it in your model and testing to see if it works OK for you.

Because the hose is connected to the end of the monitor tube, the drive mechanism must be fitted around the tube and under the deck. A way of doing this is described later.

COILED TUBE CONNECTION 1

This method is very similar to the first except that the flexible hose is arranged to lie horizontally and to the side of the vertical feeder tube. With this arrangement the hose coils and uncoils as the monitor rotates, in the way that a spring in a wind-up clockwork toy or watch does. This minimises some of the drawbacks of the previous method, but a sufficient length is required, and room for it to wind and unwind. Figure 1 shows the author's first attempt at this feature and is a model featuring Captain Hook behind the monitor.

Figure 1. Feed arrangement with coiled tube and hose, and hull drive

A length of soft round brass tube is glued into the monitor, and is bent out and around to a horizontal end. The flexible hose is fitted onto the horizontal end and it lies mostly horizontally. Part of one side of a length of 1/4" (6.3 mm) square brass tube is cut away and soldered around the round brass tube. The square brass tube is vertical and in line with the monitor axis, and fits inside the 9/32" square tube of the drive mechanism.

This is also an example of fitting the drive mechanism completely separately from the monitor and mounted in the hull. It consists of a sprocket on the servo driving another sprocket by a plastic chain in a 2:1 ratio, so a 90° rotation of the servo results in 180° rotation of the monitor. The driven sprocket is mounted around a 3/8" (9.5 mm) diameter brass tube into which is glued a 9/32" (7.1 mm) square brass tube. The 3/8" tube rotates inside a couple of bronze bushings.

Figure 3. The simplified coiled tube arrangement

COILED TUBE CONNECTION 2

A simplification of the above method connects the hose right onto the vertical feeder tube of the monitor. Two short pieces of styrene are glued together at right angles. The vertical piece is sized to fit around the vertical feeder tube of the monitor, and the horizontal one around the hose. In the example shown in figure 3, the vertical piece is 1/4" to fit around a 3/16" diameter tube, and the horizontal is 5/16" diameter to fit 1/4" outside diameter hose. Two flat pieces are glued on to strengthen the joint.

When installed, the flexible hose from the pump is fed through the horizontal piece and then looped around and fastened to the end of the vertical feeder tube. Again, the length of the hose needs to be selected so that it can wind and unwind as the monitor turns. This arrangement is presented as a solution but has not been tried in practice by the author.

With this arrangement the rotational drive has to be mounted under the deck because there is no shaft end to drive.

SEALED TUBE CONNECTION – TWIN SEALS

In this method the stiffness and length of the supply hose have virtually no effect on the functioning and reliability of the monitor. The key component here is a seal of the type used in waterproof propeller shafts.

Figure 4. The supply tube with two seals ready to be glued into place to form the seal assembly

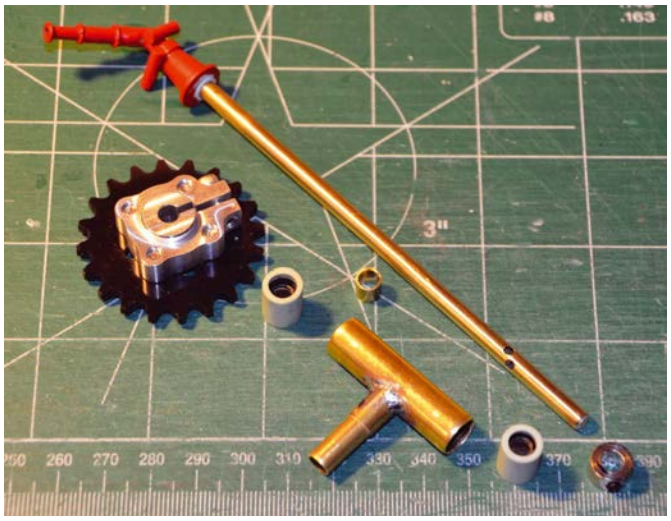


Figure 5. The complete set of parts for the monitor with a twin seal assembly

Figure 4 shows the 'working part', which consists of a tube with a smaller diameter tube attached to it at right angles where the hose from the water pump connects.

The inside diameter of the larger tube is selected to fit the seals and of the smaller one to match the hose from the water pump. The two are soldered together. Drill a hole in the larger tube to fit the smaller tube into it, but shape the end of the latter so it doesn't protrude too far inside. I added a short length of brass tube one size larger than the inlet tube at the joint to strengthen it.

The ideal seal fitting, as shown in Figures 4 and 5, contains a bushing and a watertight seal. Two of these are glued into the ends of the vertical tube, with the seals facing inwards. Because the seal shown has a resin body, and the seal itself is heat-sensitive, the parts must be glued together, not soldered. Use a length of tube or propeller shaft as a mandrel to hold the seals in alignment while the glue sets.

The vertical tube of the monitor fits through the seal assembly. One or two holes should be drilled across this tube and positioned so that they are midway between the two seals, as you can see in Figure 5. The vertical tube should be long enough to fit a method of driving rotation (in the photo it's a chain sprocket).

In operation, water is delivered through the inlet tube into the space around the monitor tube and between the seals. It passes through the holes into the monitor tube, and up and out. The seal assembly remains stationary, while the monitor tube rotates inside it.

The seals rely on a very smooth tube surface to achieve a watertight seal. They are meant to be used with a highly polished stainless steel shaft. It is essential, therefore, that care be taken with the monitor tube not to scratch or mark it during construction. In particular, after drilling the cross holes, be sure to remove all burrs and sharp edges so as not to damage the seals when sliding the assembly onto the tube. As a final step I recommend using some toothpaste as a polishing compound, to polish the tube by rotating it between your fingers.

The bottom of the monitor tube needs to be sealed, and this can be done with a piece of styrene or brass, glued or soldered. A collar should be fastened to the end of the tube to keep everything in place. Figure 9 shows the assembly with the drive above the seal. The drive could be below the seal, in which case the driven sprocket can replace the collar.

Figure 6. The parts required for a single seal assembly

Figure 7. Parts B & F and also D & E have been glued together. A length of 3/16" dia stainless rod is ready as a mandrel

SEALED TUBE CONNECTION – SINGLE SEAL

You may ask, why not get rid of the bottom seal and let the water in through the open bottom end of the monitor tube? With only one seal, water pressure will try to force the tube and seal assembly apart. With the twin-seal assembly the pressure is balanced. So a single seal assembly requires a method of preventing water pressure from pushing the seal assembly off the monitor tube, while allowing it to rotate. It is possible to do this as shown in Figures 6 to 8.

I will describe the construction based on the same seal that is shown in figure 4, which is 3/16" (4.8 mm) inside and 3/8" (9.5 mm) outside diameter. The collars used have the same dimensions. The design is quite simple so readers will find it easy to adapt to a different size of seal. The raw materials required are the seal, 2 collars with grub screws, and 2 concentric pieces of brass tubing, starting with the size which the seal will fit into. A piece of 3/16" diameter rod or tube is required as a mandrel to keep parts aligned while the glue sets.

Figure 8. The completed single seal assembly, with fire monitor mounted. When installed the monitor tube must be long enough to fit a drive sprocket

The construction described here uses tube with outside diameters of 13/32" (10.3 mm), and 7/16" (11.1 mm). One additional piece of tube is required to suit the inlet hose.

Construction of the seal assembly requires making up the parts as shown in Figure 6.

A) The 3/16" bore collar is glued into:

B) A piece of the 13/32" tube cut in half lengthwise, and to the same length as the collar is wide. This will be used as a spacer so that the seal and collar will be concentric. This piece of tube can be eliminated if thick epoxy is used to fill the gap between the collar and the 7/16" tube.

C) The 3/16" bore seal is glued into the top end of the tube D.

D) The 13/32" tube is cut to, let's say, 2.5 times the length of the seal. A notch is cut, or a hole drilled, into the bottom end of the tube for the water inlet.

E) The water inlet tube is glued into the hole in tube D.

F) A length of the 7/16" diameter tube is cut in half lengthwise and used as a spacer to hold the seal and the fixed collar in alignment.

Parts A and B are glued together and into the top of part F. Part D with the seal C and inlet tube E glued into it, is glued to the bottom end of part F. See figures 7 and 8.

The grub screw on the glued collar should be discarded.

The caution described above about keeping the monitor tube smooth and without scratches also applies here. The assembly is slid onto the bottom of the monitor tube with the second collar in the middle. The tube must be fitted so that the open end is past the seal, but does not bottom out. The second collar is positioned against the glued collar, and the grub screw tightened. If you use thin-wall brass tube on the monitor, be careful not to overtighten the screw because the tube is easily distorted and may seize in the glued collar.

If you find that the grub screw on the rotating collar sticks out so much that it interferes with the supporting piece of tube F at the end point of its rotation, you have a few options. File the tube back where it interferes, grind the grub screw down, or rely on flexibility in the supply hose to allow the seal assembly to rotate a little at the extremes of rotation.

ROTATIONAL DRIVE

There are two options for arranging the rotational drive. The driving servo can either be mounted in the hull, or attached to the underside of the deck on which the monitor stands. If the hose is connected to the end of the vertical monitor tube then the drive has to be under the mounting deck, above the hose connection.

Figure 2. Clockwise from the top left, replacement of the deck covers restoring Captain Hook to his rightful (and threatening) position

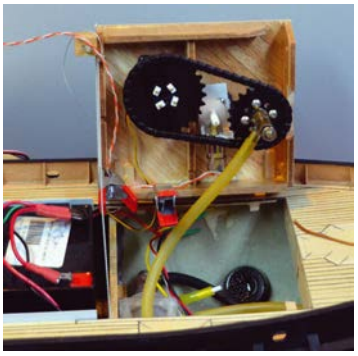


Figure 9. The twin seal assembly in place on the author's tug Forceful, showing the drive. The left hand sprocket is mounted on the drive servo, which is fastened to the underside of the deck. An electronic servo extender (not shown) is used to increase servo rotation to 180°

An example of mounting the drive in the hull is shown in Figure 2. Figure 9 illustrates the drive mounted under the deck. The servo with its drive sprocket or pulley can be fastened onto the underside of the deck. The driven sprocket, mounted around the feeder tube, has to be positioned so that the drive chain or belt is straight and in line with the drive sprocket on the servo.

PRECAUTIONS

It is a statement of the blindingly obvious, but nevertheless needs to be repeated, that a leak anywhere can have a bad effect on a model, and a leaking hose connection allowing a pump to discharge water inside it can quickly be disastrous. It would be a good idea to isolate the pump and monitor in a sealed compartment with full depth bulkheads.

Another idea is to have an otherwise sealed compartment with an opening to the water in the bottom of the hull, and in which the pump suction sits. The compartment will fill up to the external water level. The advantage of this arrangement is that if a hose leaks, the leaking water will simply recirculate back into the same compartment. The water in the compartment represents, depending on your point of view, either a loss of buoyancy or replacement ballast. This can be an advantage or a disadvantage, depending on the configuration of your model.

My method for securing the ends of the flexible hoses is to wrap bare copper wire twice around and tighten by twisting the ends together using pliers.

Last but not least, a water alarm can be fitted to alert you to any leaks that develop.

MANUFACTURERS AND SUPPLIERS

The seals shown in Figure 4 are available from www.sub-driver.com. Although the price of the seal fittings is quite modest, at the time of writing their website is only set up to provide shipping via insured, traceable carriers which makes them expensive to destinations outside the USA. If you contact them through their website contact form, they will, on request, arrange to send them by regular airmail.

Another seal is available from www.mikessubworks.com. Similar seals are available from Raboesch and Mack Products (and possibly others) as part of propeller shaft assemblies. You would simply discard the shafts and most of the tubes.

Although plain pulleys and rubber bands can drive the monitor rotation, toothed belts or chain will not slip and will keep the servo and monitor synchronised. The sprockets and chain shown in Figures 2 and 9 were purchased from www.servocity.com. They offer various sizes of sprocket which will fit the standard Futaba and Hitec servos. It is also fairly easy to attach them to the standard arms supplied with every servo, of whatever make.

Just a reminder; if you are going to use the monitor to spray water on observers you need to get their permission first and make sure it is clean water.

Finally, I have no connection with any of the suppliers listed here.

MMI

HMS Tyne underway

AUTHOR: PATRICK BONIFACE

HMS TYNE

PATRICK PAYS A VISIT TO A RIVER CLASS FISHERIES PATROL VESSEL

The fishery patrol vessel HMS Tyne first entered service with the Royal Navy on 7th July 2003 and since then she, and her sisters HMS Severn and HMS Mersey, have maintained a virtually constant patrol of British home waters providing security and fishery protection for our islands. HMS Tyne was built by Vosper Thornycroft at Southampton.

She was built to replace the elderly and cramped seven Island class patrol vessels and to a lesser extent the pair of Castle class patrol ships. To maintain their reported 'at least 300 days a year at sea' the ships are worked extremely hard and already their expected replacements have been ordered and are under construction in Scotland. It is telling that the replacement ships will also be River class vessels, but to a slightly modified and enlarged design drawing on the successes of HMS Tyne and her sisters.

Each of the original River class have a displacement of 1700 tons, although a fourth HMS Clyde is slightly different having been built with a flight deck for extended overseas deployments in her case to the Falkland Islands. The River class have a large cargo deck to the stern which makes them much more versatile than the preceding Island class. This cargo deck can be utilised in a variety of ways including disaster relief, fire-fighting as well as the ship's staple diet of fishery protection in offshore fishing grounds around the United Kingdom.

From the bow looking aft – note the high mounted gun, forward superstructure and fully extended ship's crane

Forward superstructure

Starboard side amidships looking aft – note one of two rigid raider fast intercept craft on its davits used to board and inspect fishing boats

Looking down on bridge wing – Mine countermeasures vessel HMS Hurworth in the background

Forward bridge details

Looking forward from in front of bridge

Starboard side amidships

Starboard side stairs looking down

Port side bridge wing

Each ship is 79.5 metres in length and has a beam of 13.6 metres and a draught of 3.8 metres. Two Ruston 12RK 270 diesel engines power the ship's driving twin screws and giving a respectable speed of 20 knots and a creditable range of 7,800 nautical miles at an economical cruising speed of 12 knots. HMS Tyne is equipped with a ships crane capable of lifting 25 tonnes and also has two rigid inflatable boats, which are launched to board and inspect suspect fishing trawlers and other ships in territorial waters.

Such is the success of the River class design that BAE Systems, who took over Vosper Thornycroft have successfully sold derivatives of the design to the Brazilian Navy who have bought three ships; Amazonas, Apa and Araguari. The Royal Thai Navy built one locally in Bangkok Dock under licence and christened her as HTMS Krabi. ***MMI***

Main mast

Forward section of ship's bridge

Bow fittings

Cargo deck fittings

Rear of superstructure details

Ship's main gun

GERMANY

INSULINDE (PART 2)

THE SCRATCH BUILDING OF A 1:16 SCALE MODEL OF AN UNSINKABLE AND SELF-RIGHTING LIFEBOAT

AUTHOR: CHRISTIAN KöENIG

In the last issue of Marine Modelling International Christian Koenig told the tale of the first truly unsinkable and self-righting lifeboat in the world; the Dutch 'Insulinde'. There follows a quick overview of the construction of a 1:16 scale model of this boat…

EVERYTHING WAS SCRATCH BUILT

On July 27, 2014, my lady friend Kirsten Bokranz asked whether we could drive to Den Helder in the Netherlands. At Den Helder we visited the Reddingsmuseum, which was a natural choice: Kirsten has been a member of KNRM for quite a while. We checked out the lifeboats at their jetties in front of the museum. Have you ever visited the used car section at your local dealer? And walked from vehicle to vehicle, more or less impressed, checked out dates, mileage, interior... and so on? Calculating all those bargains in your head and dreaming about owning this one or another? This is what we did! Both of us took pictures of all the lifeboats on display, and I guess even Kirsten thought about what it would be like to own one of these boats.

You may want to have one over the other, but in the end we all know that we cannot simply buy a lifeboat; even if it was on sale. My favourite was 'Twente'. However, I took a number of shots of other boats, too, which included 'Insulinde'. Back at home and after a good glass of Chilean red wine I wondered whether I could build a model of Insulinde, making use of her general arrangement plan and a set of hull lines which I had taken pictures of in the museum.

This would be the very point in an article to admit a bitter truth. I've been building (scale) models for decades, and published quite a number of articles in MMI before. However, I never ever faced

Insulinde afloat

The Reddingsmuseum at Den Helder offers a photo booth where you can dress up like a lifeboat crew member. Kirsten Bokranz and Christian Köenig did just that

a truly round bottomed hull with tunnelled drives and a significant deck sheer before. I have some difficulties referring to myself as a model maker; all I have got at home are two saws and three files, some sanding paper, a few screwdrivers and pliers, an electric drilling machine (45 years old!) and my car's toolbox. I also have my Leatherman multi-tool, which is as much a lifesaver as it could possibly be.

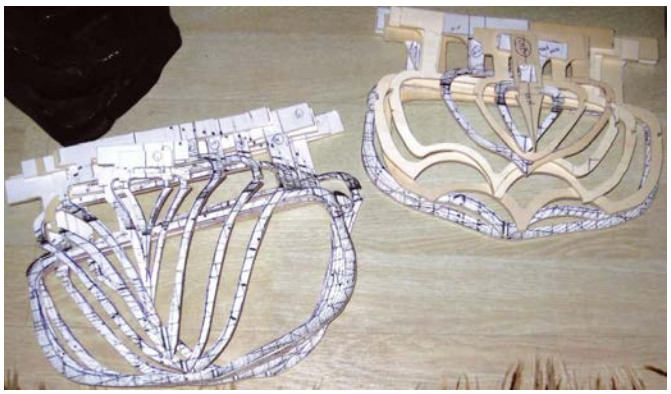
The other day a chap in the local hobby store said he was frustrated to be called a tinkerer. Rather a name I would give myself due to my limited abilities to build true masterpieces. I am lacking a room for my hobby, and consequently work either on the porch or in the kitchen.

Under these conditions a model of Insulinde represented quite a challenge. But then simply visit the flying aces at the nearest field and ask what they do if their construction efforts fail. "A crashed aircraft may be used to ignite the fireplace" a senior pilot of the Grimsby and District Model Aero Club told me some time ago. "If it doesn't fly, light it up."

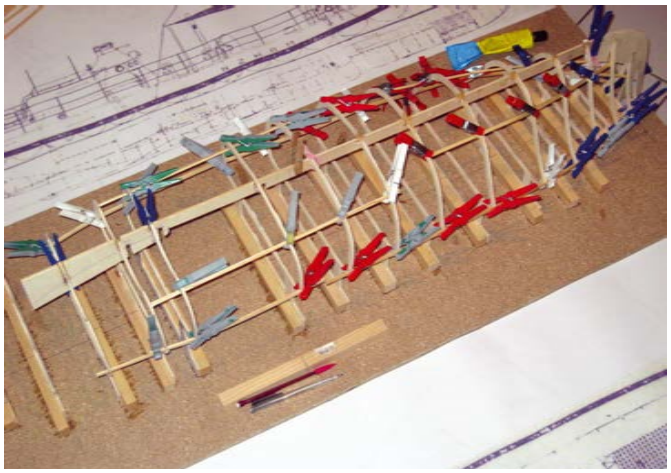
Before starting all the drawing work I assessed possible crew members and the possibility to buy fittings instead of building them from scratch. In 1:16 scale Tamiya offers a German machine gunner with a great coat. This notable gentleman may well be converted into Mees Toxopeus or Jaap van der Meulen, since both dudes sported long black tarpaulins in the early 1930s. Their life vests were made from cork, which is quite easy to create in 1:16.

The boat itself would measure 117.50 cm long and 28 cm wide. After measuring the back seat of my BMW I knew this would fit. As long as the balance point was placed quite low within a round bottomed hull, stability and seaworthiness should be quite OK. The sharp edged bow is likely to cut waves and as such reduces spray.

Having checked the preconditions I rolled up my sleeves and started to work on the plans I had copied (by taking photographs of them in the museum). This was assisted by MS PowerPoint on a PC. In the next step the general arrangement plan was printed in 1:16 scale, while the set of bulkheads eventually required 21

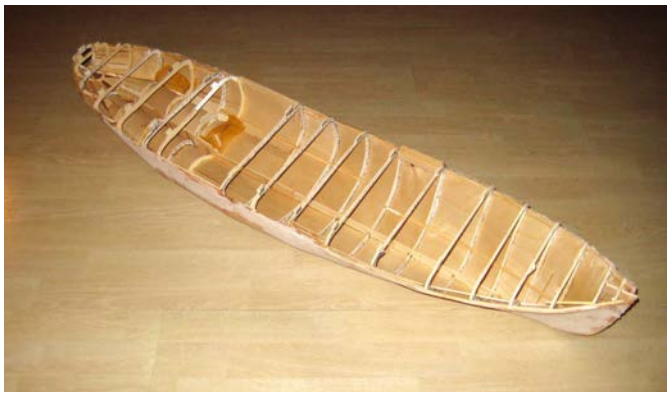


Cutting out bulwarks from 0.5 cm spruce



The hull's framework during the construction phase

By cooking 0.1 cm spruce in hot water and bending it in shape, the building process is eased



Despite 117 cm in length the hull weighs only a few 100 g (before applying the putty)

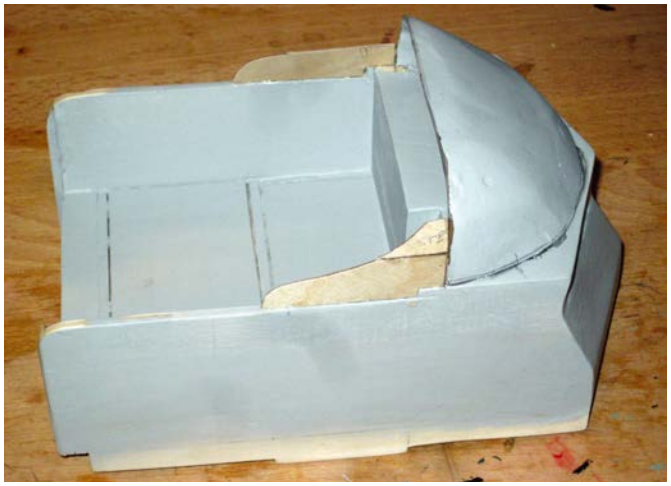
Reinforced by GRP, filled and sanded, the hull awaits its paint job

printouts. These printouts were glued to 0.5 cm spruce and cut out using an inlaying saw. I learnt that 0.5 cm was too thin; 0.8-1.0 would have been much better.

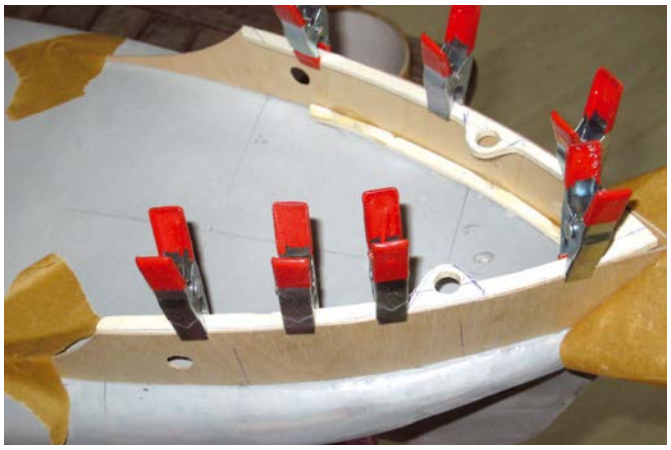
The keel was built from various sections, while the frames for the tunnelled drives had to be pre-fabricated in parallel. Again I used 0.4-0.5 cm spruce. A second thing I learnt was that the keel should have been made of 1.0 cm spruce, possibly sanded down where this was applicable.

A wooden rail was then used to attach little rectangular blocks of wood. The bulwarks could then be attached to the blocks. To cover the framework 0.1 cm spruce was cooked in water in my mother's old coffee machine and bent over cups and other shaped objects. If you allow the wood to dry thoroughly for 48 hours or so this methodology produces exactly fitting patches. These may be applied to the framework quite easily.

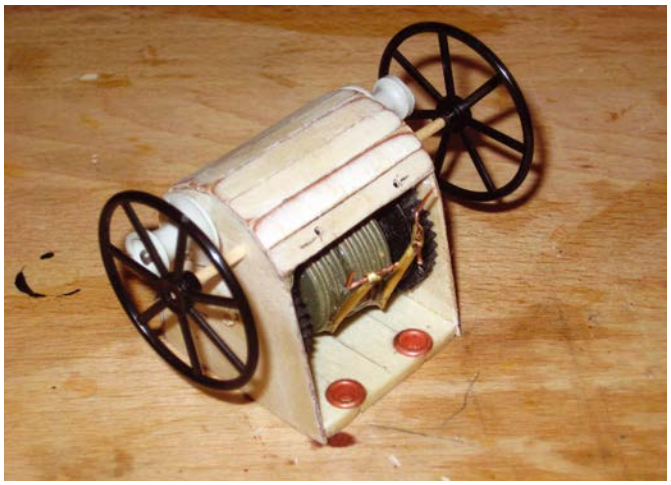
GRP was used both inside the hull and on the outside in some places in order to strengthen the construction before applying putty and starting to sand down the bumps that occurred during the building process. The third point I learnt was that sanding such a hull is at best done if the outside air humidity is high. This prevents nasty clouds of dust. Always wear eye protection, gloves and respiratory equipment when abrading.



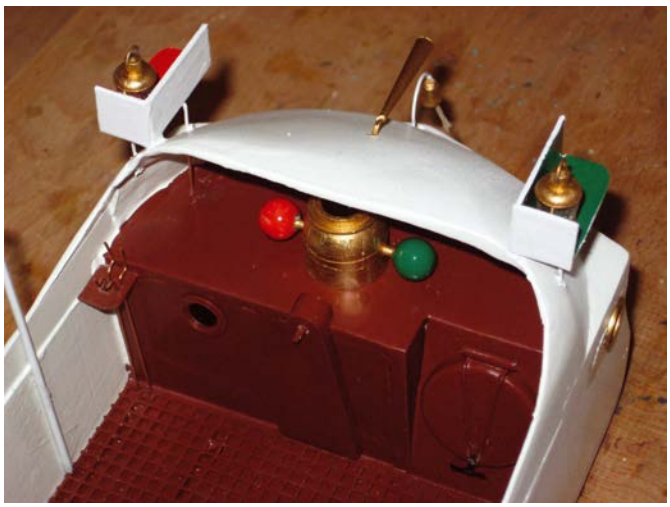
The wheelhouse was made from spruce and a GRP cover. Scratch building at its best



Little formers assist in gluing the bulwarks in place



From scratch: leftover spruce, plastic waste and two hand wheels made up the windlass



Wheelhouse finished and painted, yet lacking the helm

The searchlight located on the mast

The crew on the bridge

The first trial run

If you think about using a vacuum cleaner to get rid of the dust, think again. After some 35 hours of sanding the hull, our old Hoover quit its job. Fine dust is the worst evil for such a machine! The fourth point I learnt was to get another old vacuum cleaner or buy a new one. This gets you out of trouble with your mother or partner!

The hull looked alright after those 35 hours; it was primed several times and thoroughly sanded again. It was then set aside as I wanted to spray paint all modules of the model in one giant step. In order to do so I had to build all the fittings, the bridge superstructures, and the windlass and so on in parallel. If 1:16 bollards are available at your local hobby store these items can be quite costly. Empty shells in .38 S&W Special have the same size, and may be soldered easily. I made the vents from wooden marbles and plastic chain lock links cut in half. The spray protection for the helmsman was built from scratch using a cardboard former which was covered with polyester matting. Again I learnt that many solutions are common sense and cheap. Use your imagination before spending lots of money in the hobby store or on the Internet.

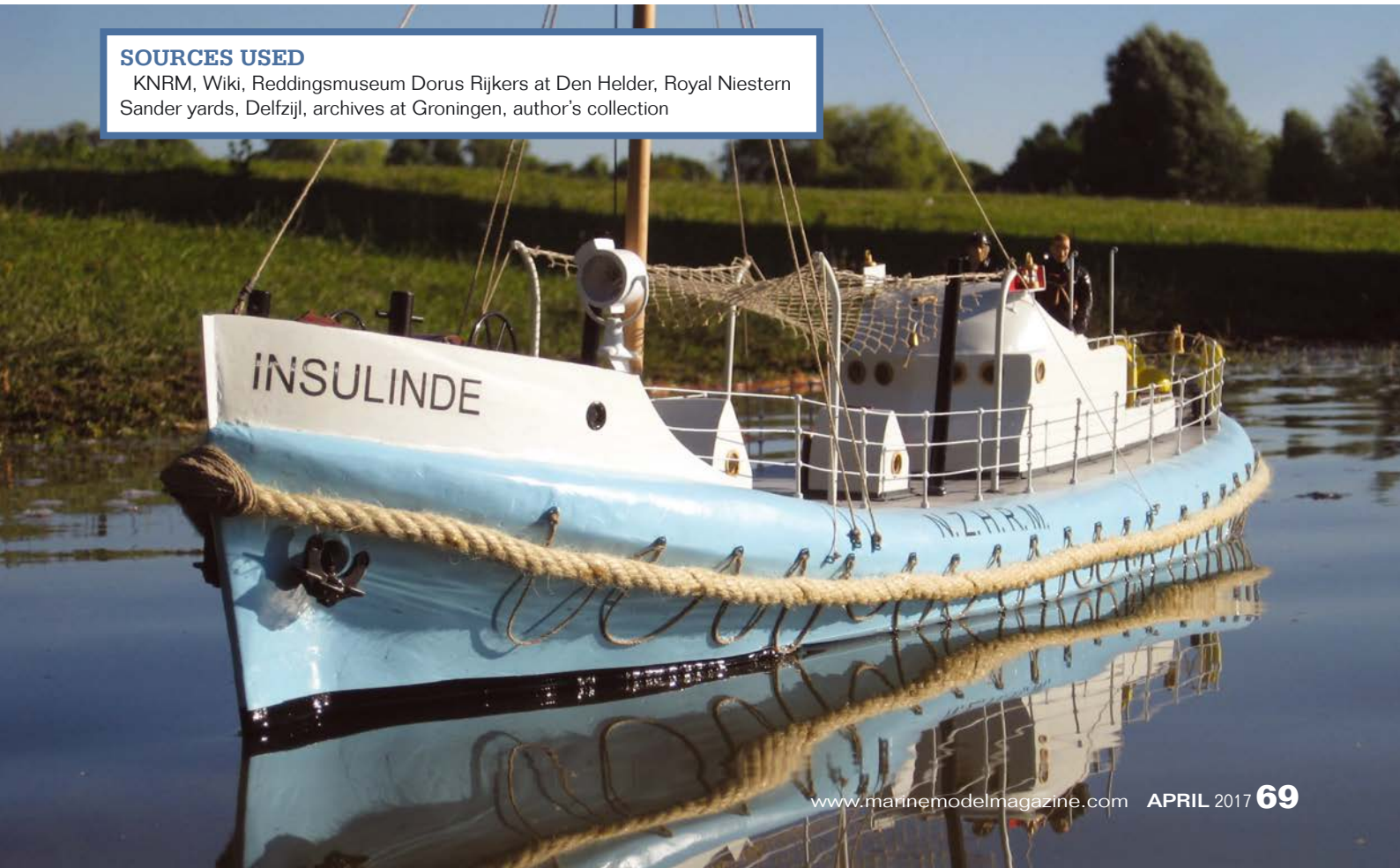
What really puzzled me was the net in front of the bridge. This served as a jumping net to catch people, and allowed them to land safely on the lifeboat, instead of in the boiling sea. Nets were made by hand for centuries, but this skill has got lost through the decades. Today most of the nets used are made from plastic, and only minor repairs are still carried out manually. The solution came quite unexpectedly: a net weaver business from Coswig/ Germany, offered their assistance. Jens Walther, the boss of the company, offered to send some leftovers, these were then cooked in strong coffee several times until their colour was as grey-brown as desired.

After applying several layers of spray paint, according to 1927 standards, all parts were assembled. Decals made in Microsoft PowerPoint finished the job. It turned out that roughly nine months after visiting the museum the 1:16 model of Insulinde was finished. Too much work and foul weather successfully prevented me from going for a shakedown cruise any earlier than July 2016, more than a year after completing the project.

The pictures of the model were made during the first trial runs – an enormously powerful model. We are already planning the next trip to the Netherlands to visit the museum and show them the finished model. Afterwards the Insulinde will be donated to KNRM headquarters at Ijmuiden. To sum it all up, here is my conclusion: "If I can do it, so can you. Get down to it!" ***MMI***

SOURCES USED

KNRM, Wiki, Reddingsmuseum Dorus Rijkers at Den Helder, Royal Niestern Sander yards, Delfzijl, archives at Groningen, author's collection



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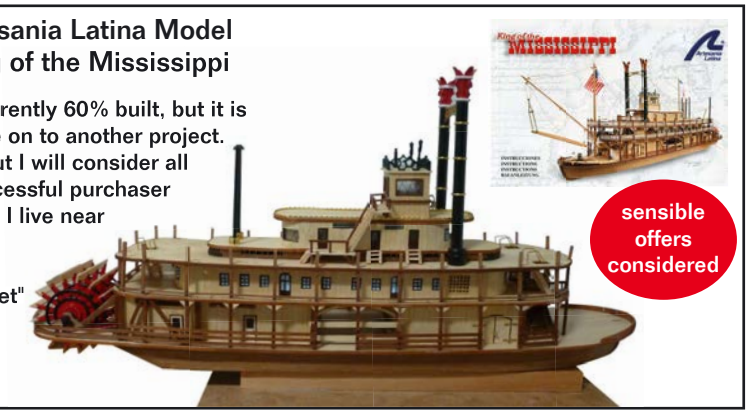

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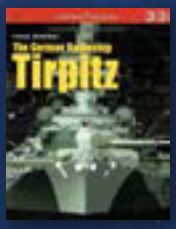

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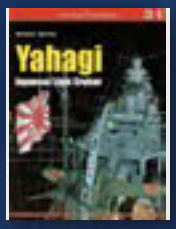

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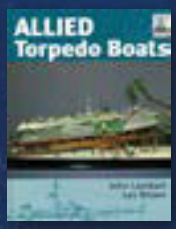

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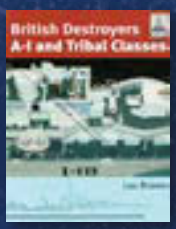

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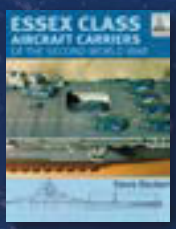

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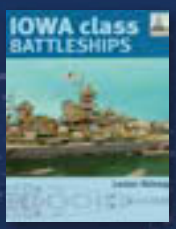

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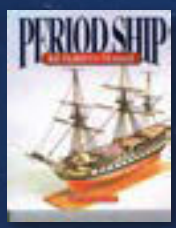

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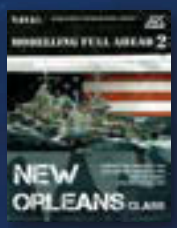

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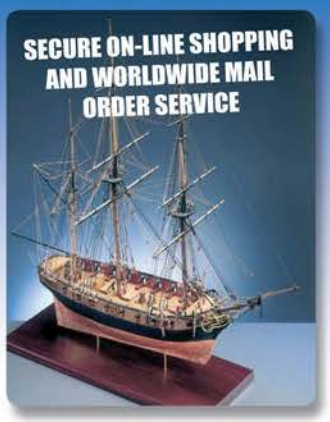

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