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MARINE

SEPTEMBER 2014

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COVER STORY

ABEILLE BOURBON

This stunning model of one of the world's most powerful modern tugs is shown in great detail of the build. The builder had the advantage of being given permission to have access to the full size tug and the master gave some good advice on some of the details when he saw the completed model! The homeport of the full size Abeille Bourbon is Brest and she is at present on charter to the French Navy. This tug is affectionately known as the St. Bernard of the high seas as she can go anywhere, anytime for salvage, fire fighting and rescue duties.

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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.

GREETINGS ALL!

Even though I am writing this report in bright sunlight in the middle of the summer by the time you read this the autumn, or as our fellow modellers in America call it 'the fall', will be starting to take place. Thinking about the rest of the year and future editions of MMI don't forget to let us know what type of articles you prefer, I did have one reader who could not understand why we did not produce only specialised articles on their interest! As I have said before, we try to accommodate as wide a selection of articles as we can, sadly the economics of the magazine production can only work if we can sell large quantities of the magazine. If there are any specialities we have not covered I am always willing to consider new articles so please contact me at the address in the 'flannel panel' below. One subject we are planning for the future is a review of battery chargers and I am asking readers who may have been using a particular charger for a period of time and could share with other readers any particular advantage/disadvantages. With the wide selection of chargers on the market is it a case of the more you spend the better the charger or are some of the 'cheapies' as good?

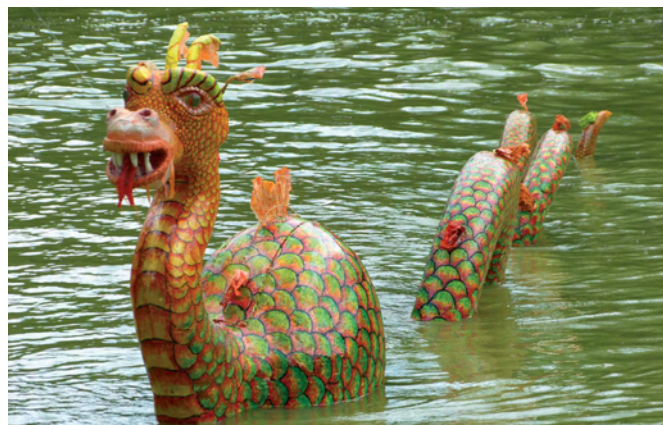
This month one of our major articles is of one of the world's largest and most powerful tugs, Abeille Bourbon. Modelmaker Jean-Louis Diard designed and built a superb 1:50 scale working model with the advantage of having access to the full size tug to make sure his details were correct. Another detailed article is the build of a commercial kit of the tribal class frigate HMS Zulu, it is

not specifically a kit review but is how one of our experienced model building contributors built this kit. Talking of experienced model makers, one of our Australian contributors has updated MMI on his building of schooners over the past seven years. For power boating and fast electric enthusiasts the winning performance depends on an important item of hardware, namely the propeller, and in our regular feature article Powerplug details are given of fine-tuning props! Continuing the theme we have been running in MMI for the past few months on WW1 and WW2 D-Day commemorations we are publishing a pictorial on DKM Auxiliary Escorts, this is a short history of how the Deutsche Kriegsmarine defended the shores of Europe during WW2 and includes some hints on modelling Auxiliary Escort Craft. Also this month we have the final part on building the Thames Barge Veronica and from all reports this has been one of our most popular building projects for some time, perhaps if all the new Veronicas are built AMBO (Association of Model Barge Operators) may have to consider a special class just for racing Veronicas? We have not forgotten all the other regular feature articles, like Scale Scene, Airwaves, Livewires, Vintage Chatter, Plastic Kit Scene, Waterlines and a mega edition of Meeting Point giving reports on many maritime modelling events held over the past few months.

Have a good month and if you are visiting or participating in the Model and Hobby Break from 29th August to 5th September at Holiday Resort Unity at Brea in Somerset, I am sure we will meet you!

Barrie Stevens

MMI



The first monster of the season was spotted at the Alford event by brave photographer Kim Belcher – beware, it may reappear at a lake near you!

MARINE
modelling INTERNATIONAL

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MASTHEAD

MARITIME NEWS AND VIEWS

SOUTHAMPTON HERITAGE TUGS

Berthed in Southampton are two heritage tugs which both took part in the D-Day operations in WW2 and both are in need of funds for restorations. The steam tug tender Calshot was built in Southampton in 1929 designed to be used as a port tug and a tender to the visiting cruise ships berthed in Cowes Roads, transporting passengers and baggage to the dockside. She was registered to carry 566 first and second class passengers. During WW2 she was used in Scapa Flow and the D-Day invasion. After the war she was rebuilt and continued her duties in and around Southampton, she retired from her Red Funnel duties in 1964 and after followed a period in Ireland she then returned to Southampton for preservation in 1986. We understand her hull is in need of major attention and earlier this year a cheque to the value of £13k was presented to the Tug Tender Calshot Trust by Red Funnel collected from passengers on the cross Solent ferries over two years. For further details visit

<http://andoverinfo.org.uk/calshot/>

The second heritage tug is Challenge, built in 1931 in Aberdeen and served most of her life working on the Thames, in fact she is reputedly the last working steam powered tug on the Thames. Challenge was active in the evacuation of Dunkirk and preparations for D-Day. In 1964 she was converted from coal fired to oil fired and after her retirement she went into preservation and has toured the UK on occasions, she has recently visited the Southampton Maritime Festival in August. Again funds are required to keep this tug operational and visitors are welcome aboard once a month. For further details visit www.stchallenge.org

If any modeller has any models of these tugs please contact the editor.



Tug Tender Calshot recently seen in Southampton (picture K. Fleet)



Tug Challenge berthed in Southampton (picture K. Fleet)



Falmouth RNLI Lifeboat crew proudly receiving a cheque from the NMMC

NATIONAL MARITIME MUSEUM (CORNWALL) VISITORS HELP RAISE FUNDS FOR THE RESCUE SERVICES

The Museum's much-loved Search & Rescue exhibition celebrates the maritime rescue services and in honour of their work the Museum installed a charity box for donations that would then be distributed across all the rescue partners involved in the exhibition. Over the duration of the exhibition, the donation boxes have raised in excess of £10,000 which will be divided between the RNLI and charities associated with the Royal Navy, Royal Air Force, National Coastwatch Institute, HM Coastguard and Cornwall Air Ambulance. On-going fundraising will continue for the duration of the exhibition which will close in February 2015.

For further information on the museum visit www.nmmc.co.uk

THE MIDLANDS MODEL ENGINEERING EXHIBITION, 16TH OCTOBER – 19TH OCTOBER 2014

This long-established and popular event held at the Warwickshire Exhibition Centre has again some new features this year, including for the maritime modeller an exhibit on the 120th anniversary of the Manchester Ship Canal's official opening on 1st January 1894. When the Ship Canal opened on this date it was the largest river navigation canal in the world, and enabled the newly created Port of Manchester to become Britain's third busiest port despite the city being about 40 miles (64 km) inland. To celebrate this achievement there will be plans from the time of build, a 060 Steam Saddleback locomotive and other items of memorabilia and a photo display.

Advance tickets for the exhibition are available to book online at www.midlandsmodeleengineering.co.uk

BATTLE OF THE WEED!

A number of clubs this time of the year are suffering from the annual problem of weed in their boating ponds or lakes and have asked if there is a magical solution to this problem? The editorial team has been made aware of some events that have been cancelled because of this problem and some clubs have abandoned sailing on their home lakes for the rest of the year due to weed. If any club has a solution that does not involve chemicals which could affect wildlife please let us know. Over the next few weeks the editorial team will be experimenting with a simple cutting device, we will let you know the results – but don't hold your breath!

DEANS MARINE FACTORY OPEN DAYS

This UK model kit manufacturer will be opening the doors of their factory for visitors from the 12th to 13th September where you can view the full range of kits and products and have a sneak preview of new kits on the slipway!

For further details visit www.deansmarine.co.uk

*If you have any news of interest to MMI readers please contact the editor. **MMI***

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All our FR Series controllers have the following feature, making them the smoothest, most reliable controllers around. Just ask the 1000's of people who use them!

- ★ Unique selectable frequency mode, low, high or variable frequency now on all our controllers.
- ★ Low frequency for best low speed control and low noise.
- ★ High frequency for smooth, efficient high speed operation.
- ★ Electronize variable frequency system low speed - low frequency increasing to high speed - high frequency.
- ★ Digital signal processing for super smooth 'glitch' free operation and fast response. No extra filters required.
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- ★ 6 to 24 volt battery range. (5.5 volt min.)

* Beware suppliers who quote MOSFET ratings as continuous controller rating!

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A heavy duty controller for the most powerful boats.

- ★ Genuine 30 amp. continuous forward and reverse rating.
- ★ 200 amp. motor stall rating.
- ★ Precision pre-set neutral.
- ★ Double MOSFET's giving 150 amp. (480 amp. peak) rating*
- ★ Low loss Power MOSFET switching. (2.3 milli-ohm)
- ★ Size: 73 mm (ex. mounting) x 51 mm x 22 mm.

FR30HX (30 amp. 6 to 24 volt) £43.65



15 amp. FR15HX/HVR Speed Controllers

A high power controller for all but the most power full boats.

- ★ Genuine 15 amp. continuous forward and reverse rating.
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- ★ "Autoset" neutral at any stick position.
- ★ Low loss Power MOSFET switching. (5.8 milli-ohm)
- ★ 5 volt B.E.C. option (FR15HVR) for single battery operation.
- ★ Reversed battery protection.
- ★ Size: 73 mm (ex. mounting) x 51 mm x 24 mm.

FR15HX-AN (15 amp. 6 to 24 volt) £32.30

FR15HVR-AN (15 amp. 6 to 24 volt plus B.E.C.) £34.90



12 amp. FR12X/VR Speed Controllers

A cost effective replacement for the older 43X controller.

- ★ Genuine 12 amp. continuous forward and reverse rating.
- ★ 100 amp. motor stall rating.
- ★ "Autoset" neutral at any stick position.
- ★ Low loss Power MOSFET switching. (5.8 milli-ohm)
- ★ 5 volt B.E.C. option (FR12VR) for single battery operation.
- ★ Reversed battery protection.
- ★ Size: 73 mm x 51 mm x 26 mm.

FR12X (12 amp. 6 to 24 volt) £28.95

FR12VR (12 amp. 6 to 24 volt plus B.E.C.) £31.35



Motors

We offer a small range of motors specially chosen for use in model boats. In addition we provide a leaflet with full details showing you what current to expect with the battery and propeller you intend to use. (Ask for your free copy)



Motor Type 653-33 (Fast patrol etc.)

High Power Medium Speed, 6 to 8V

£8.75

6V,	Power 70W,	max. prop. 40 mm 'P'
8V,	Power 110W,	max. prop. 35 mm 'P'

Motor Type 653-17 (Fast patrol etc.)

High Power Medium Speed, 6 to 12V

£17.95

6V,	Power 30W,	max. prop. 65 mm 'P'
12V,	Power 70W,	max. prop. 40 mm 'P'

Motor Type 543-24 (Modern scale)

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.

Medium speed, 6 to 12V

£17.45

6 V,	Power 15W,	max. prop. 40 mm 'P'
12 V,	Power 35W,	max. prop. 30 mm 'P'

Motor Type 543-17 (Modern scale)

Medium speed, 6 to 12V

£17.45

6 V,	Power 10W,	max. prop. 55 mm 'P'
12 V,	Power 25W,	max. prop. 35 mm 'P'

Motor Type 543-12 (Traditional scale)

Very low drain, 6 to 12V

£17.45

6 V,	Power 7W,	max. prop. 65 mm 'P'
12 V,	Power 18W,	max. prop. 40 mm 'P'

Motor Type 365-14 (Small scale)

Very low drain, 6 to 12V

£5.15

6 V,	Power 2W,	max. prop. 55 mm 'P'
12V,	Power 7W,	max. prop. 30 mm 'P'

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.

Please add £3.00 to cover Royal Mail First Class post.

We regret that we have had to add postage to our prices but, due to repeated price increases, this is now Royal Mail's minimum First Class charge for one of our controllers. **There are no other "add on" costs.**

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Please note. We are happy to give advice by the old fashioned telephone but can only answer the simplest queries by email. Invariably we need more information about your model and what your preferences are. All too often there isn't a simple answer and a discussion is needed to arrive at the best solution for your case.

Who are we? Well we're not a "cowboy" company, we've made speed controllers for 22 years and earned an enviable reputation for quality and performance. We're a small family run business with the benefit of many years experience in aircraft and automotive electronics and we carry those high standards of engineering and quality on in our speed controllers. Our aim is to achieve the right balance of performance, reliability, quality and cost. So our controllers will never be "small and cheap". Likewise you can be assured that the claims we make are honest and accurate and free of meaningless jargon or exaggeration.

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DIARY DATES

EVENT DATES FOR YOUR DIARY

EVENT DATES FOR YOUR DIARY

If you know of any confirmed Maritime related events and you would like us to include them please let us know either by email to mmi@traplet.com or post to MMI Editor, Traplet Publications Ltd, Traplet House, Pendragon Close, Malvern. Worcestershire, WR14 1GA. 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 Satnavs. A full listing of events for the year can be found on www.marinemodelmagazine.com/diarydates we do need at least 8 weeks' notice to include in the printed magazine.

SEPTEMBER 2014 MMI DIARY DATES

SEPTEMBER 6

Dolphin Model Boat Club

Meetings are at Orpington Pond just off of Kent Road by the A224 Cray Avenue BR5 4. 19:00 start. There will be a £2 charge per boat for non-club members. Sorry no I/C or petrol boats. There is off road parking on club days but no food or toilet facilities. Web: www.dolphinmodelboatclub.com/ Email: dolphinmodelboatclub@live.co.uk or Margaret, Tel: 01689 834896

SEPTEMBER 7

Ramsgate Vikings Model Ships Rally

To be held at The Boating Pool, Westcliffe Leisure Park, Royal Esplanade, Ramsgate, CT11 0HE. This an open event with cafe and toilet facilities. Starting at 10.30 am until 4.30 pm. Contact Phil Allen, Tel: 01843 223230

SEPTEMBER 7

The Fireboat Funday/Vintage Model Boat Day

King Lear MBC are hosting an All Vintage Model Boaters informal and fun event at Watermead Country Park, Leicestershire, LE7 1PD. Ample parking and picnic facilities. There is a £2.50 entrance fee payable to an unmanned machine, so having the correct change is required. Contact Graham Taylor, Tel: 0116 2613959 Email: kinglearmbc@ntlworld.com or website: www.kinglearmodelboatclub.co.uk

SEPTEMBER 7

Glasgow Richmond MBC Charity Show

11 am-4.30 pm at Richmond Park, Glasgow (opposite Shawfield Stadium). Dozens of boats on display, hands-on for the kids, harbour system, bring and buy etc. Come along, join in the fun. Contact: Sandy Mercer, Club Secretary, Email: glasgow.richmond@gmail.com Directions on the club website www.glasgow.richmondmbc.co.uk

SEPTEMBER 7

Kirklees Model Boat Club Navy/Warship Day.

Wilton Park, Bradford Road, Birstall, Batley WF17 8JH. 9 am to 3.30 pm. Event theme is warship and military but other types of models welcome, sorry no I/C or high performance fast electric. Free parking, refreshments, raffle, lots of models on display, static and sailing. Free sail all day. Contact Stan on 0113 2675790 for further information

SEPTEMBER 7

Chantry Model Boat Club

Comedy day. Lake 7, Bluewater Shopping Centre, Greenhithe, Kent, DA9 9SE (on Town Square Crescent). All models sailed except I/C. Good parking nearby. Clubhouse, toilets. Contact Club Secretary Martin Oliver, Email: martin.999@hotmail.co.uk

SEPTEMBER 7

Black Park Model Boat Club Open Day And Regatta

At Black Park Country park (off the A412 near Slough, Berks, SL3 6DS) 10 am till 4 pm, displays on and off the water. All Welcome. (SORRY no I/C boats on the water) Kids 'Have a Go',

raffle, toilets, café. Full facilities for disabled including 'Scooter' rental, pay and display parking. All proceeds to the RNLI. Contact: Baggles@tesco.net or Tel: 01753 884383 or

www.blackparkmodelboatclub.org.uk

SEPTEMBER 12 to 21

PSP Southampton Boat Show

Mayflower Park/Town Quay, Southampton, SO15 1AG. Enquiries 01784 473377 or Email: info@loveboatshows.com

SEPTEMBER 12 to 14

Heritage Open Days Weekend

The paddle steamer Medway Queen, her visitor centre and the society's workshops will be open to the public from 11 am to 4 pm all days, tours of the ship will be arranged according to demand.

Medway Queen is berthed at Gillingham Pier, Pier Approach Road, Gillingham, Kent, ME7 1RX. Telephone 01634 575717 (Monday to Thursday office hours) or look at

www.medwayqueen.co.uk for the latest information

SEPTEMBER 13/14

Free Heritage Open Days with working Heritage Crafts

10.30 am – 4.00 pm. The Museum of the Broads, The Staithe, Stalham. Norfolk, NR12 9DA. BBQ, Falcon rides (additional fee). Normal Museum admission. For more details visit

www.museumofthebroads.org or Tel: 01692 581681

SEPTEMBER 21

Dolphin Model Boat Club

Meetings are at Orpington Pond just off of Kent Road by the A224 Cray Avenue BR5 4. 19:00 start. There will be a £2 charge per boat for non-club members. Sorry no I/C or petrol boats. There is off road parking on club days but no food or toilet facilities. Web: www.dolphinmodelboatclub.com/ Email: dolphinmodelboatclub@live.co.uk or Margaret, Tel: 01689 834896

SEPTEMBER 21

Bournville Model Yacht & Power Boat Club Submarine Dive In

Valley Parkway, Bournville Lane. B30 1QS. Static submarine displays, working submarine demonstrations, light refreshments available. For more details contact: Rob Fowler, Mobile: 07714517445. Email: rob4boats@yahoo.co.uk Website: www.bournville-mypb-club.org.uk/

SEPTEMBER 21

Tug Towing for M.P.B.A. Shield also Leisure Sailing

Balne Moor MBC, Kingfisher Pond. Start 1030. Refreshments available. Contact Peter Newton (Sec.), Tel: 01977 791825

SEPTEMBER 21

Chantry Model Boat Club

Grey Navy day. Lake 7, Bluewater Shopping Centre, Greenhithe, Kent, DA9 9SE (on Town Square Crescent). All models sailed except I/C. Good parking nearby, clubhouse, toilets. Contact Club Secretary Martin Oliver, Email: martin.999@hotmail.co.uk

SEPTEMBER 21

San Francisco Model Yacht Club Presents Model Boats on Parade

Golden Gate Park, Spreckels Lake, 36th and JFK Drive, USA. Start 09:30. Fun run format. Scale type vessels. Power and Sail pre run entry \$15.00. Contest Day entry \$20.00, lunch included. Contact Lee Duvall (USA international code) 510-785-3195 or Email: leeduvall@Juno.com

SEPTEMBER 28

Edinburgh Model Boat Club

Scale end of season including submarine and warship, fast electric and I/C, best boat in show. Inverleith Pond. All are welcome, start time 12 pm, contact: david.jack5@btopenworld.com **MMI**

S.H.G Marine's

Sprinter

Minitug

A FUN PUSHTUG
By S.H.G. MARINE
Length 460mm (18")
Beam 205mm (8")
Height 350mm (13.75")
Scale 1/16



SHG MARINE'S SPRINTER "TRUCKABLE" TUGBOAT A FUN PUSH BOAT KIT

The full size Truckable tugs are so called because they can be loaded on to trailers and moved around different working locations. The boats are built from around 20ft to 30ft in length; they are very powerful for there size and extremely manoeuvrable.

The Kit is easy to construct and is supplied with full instructions, the model is powerful and can be used for towing and pushing loads, so it can be used for as many fun boat-ing activities as possible. From water polo to club rescue or recovery boat.

Price £69.95 plus Shipping

Sprinter Minitug comes as a Kit of mouldings, produced in Hi-Impact Styrene material. All structural components required are supplied along with Motor & Prop Shaft Etc. Complete with Fittings including Bollards, Navigation Lights and Decals.

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PLASTIC KIT SCENE

NEW MODELS AND ACCESSORIES FOR THE PLASTIC KIT MODELLER

AUTHOR: ROBIN TROTT  GREAT BRITAIN robin.trott@yahoo.co.uk

REVELL

I have details of a great release this month from Revell.

Harbour Tug Boat
Fairplay I, III, X, XIV
Model No.: 05213
Scale: 1/144
Length: 17.4 cm
Parts: 100



Revell Fairplay tug (courtesy Revell)



Detail image of the Fairplay tug (courtesy Revell)

This model tug can be finished as any one of the four Fairplay tugs, all are used in Rotterdam, Antwerp and Hamburg by the shipping company Fairplay Towage.

They are one of the oldest maritime towing companies in Europe. The first tug – Fairplay I – entered service in 2007, all have a Schottel Drive System which allows the propulsion and steering to rotate through 360 degrees ideal for all types of towing and harbour duties.

The model is very well reproduced with excellent detail; this includes the drive system. Decals for all four tugs are included with the kit. This is a model that is a must for all tugs fans.

propulsion and steering to rotate through 360 degrees ideal for all types of towing and harbour duties.

The model is very well reproduced with excellent detail; this includes the drive system. Decals for all four tugs are included with the kit. This is a model that is a must for all tugs fans.

AIRFIX

Here is a completely new addition to the Airfix Starter Set range.

Mary Rose
Model No.: A55114
Scale: 1/400
Length: 16.4 cm
Parts: 29

The Mary Rose was a Tudor warship in the navy of King Henry VIII, she served the King for many years, but in



Airfix Mary Rose starter set

July 1545 while leading the English fleet out of the Solent to attack the French invasion fleet she keeled over and sank taking most of the crew with her. The wreck was found in 1982 and the remains of her hull and contents were raised, she is now preserved and is on permanent public display in a brand new exhibition area in Portsmouth Historic Dockyard.

This model comes complete with paints, glue and brush, all that is needed to build this kit to a basic finish. As with all Airfix kits the detail is good even at this small scale. As far as I know this is the only plastic kit of the Mary Rose available to modellers.

More details of this model and the complete Airfix range can be found at: www.airfix.com



Merit USS Elco torpedo boat (courtesy Pocketbond)

MERIT MODELS
USS Elco 80 ft Motor
Torpedo Boat (Late
Version)

Model No.: MM64801
Scale: 1/48
Length: 50.8 cm
Beam: 14.5 cm
Parts: 450+ plus etched fret

These types of torpedo boats were built in many versions and were used in most theatres of war during World War Two.

Merit has produced this model in 1/48 scale making it an ideal display model that can show the excellent detail of the moulding. All the parts come on 14 sprues with a separate one-piece hull and deck section. It is modelled as a late war version and the kit comes complete with full armament including 37 mm cannon, two twin 50 cal machine guns, 40 mm cannon, four Mk.XII torpedoes and two 4.5 rocket launchers. Other details include well-reproduced superstructure and gun tubs, radar dome, detailed antennas and a small skiff boat.

Thanks to Pocketbond the UK importers for supplying the details, more information can be found by visiting their website at www.pocketbond.co.uk

MIRAGE HOBBY

Here are details of another new release from this company in Poland.



Mirage ORP Blyskawica destroyer

Polish Destroyer ORP
Blyskawica (Limited
Edition)

Model No.: 400001
Scale: 1/400
Length: 28.5 cm
Parts: 188

The Blyskawica was built by the British company Samuel White for the Polish navy and was launched in Cowes, Isle of White in November 1937. Her wartime service began from the very start of the war; she was the first allied warship to attack a German U-Boat, the defence of Narvik, assisted

at the evacuation of Dunkirk and operations in the Mediterranean to name a few. She survived the war and returned to Poland in July 1947. She is now preserved as a museum ship in the Polish port of Gdynia; the oldest preserved destroyer in the World. For her wartime service she was awarded the Virtuti Militari, Poland's highest military decoration for heroism and courage in the face of the enemy.

The model kit is superbly detailed with very crisp and well-defined moulding. It is a full hull kit, with the hull moulded in two sections, and comes with a full colour painting guide together with decals and an easy to follow assembly guide. The kit is a limited edition model of which there is only 1300 produced, and each kit comes complete with a special collector's coin with a certificate of authenticity.

I would like to say thank you to Mirage Hobby for supplying the review model, details of this wonderful kit and the complete Mirage range can be found at: www.mirage-hobby.com.pl

THE AIRBRUSH COMPANY

I have been sent some samples from the Airbrush Company of the two latest paint sets from LifeColor that will be of use to the marine modeller.



LifeColor new paint sets

HEMP ROPES AND TARPS

Set No.: CS 28

Contents: 6 x 22 ml acrylic paints

This very useful set contains six different acrylic paint colours that can be used to simulate any colour and weathered appearance of ropes and tarpaulins. They will be ideal for painting deck covers and rigging on many types of model boats, giving them a realistic old and worn look.

BURNED

Set No.: CS 29

Contents: 5 x 22 ml acrylic paints and 1 x 22 ml pigment

Ever looked at any type of vehicle that has been burnt? There are lots of different colours, not just black. This set consists of five colours associated with fire damaged metal and a pigment powder used to simulate ash, so if you're thinking of building a badly damaged ship, whether it's a warship or a merchant ship, then this is the set to help you achieve that special wrecked look!

All the paints in these sets are acrylic so are easy to use, and can be applied by hand brushing or by airbrush. They can be thinned with the LifeColor Thinners or water, directions for their use comes with the instructions on the back of the box.

WILDER PRODUCTS

The Airbrush Company is also now the UK distributor for the Russian Company Wilder. They produce many different types of paints, washes, pigments, tools and accessories for the modeller, here are details of just a few that have been sent to me by The Airbrush Company.

GUNPOWDER LINE (WEATHERING PIGMENT)

Available in many various colours and finishes, they can be applied straight on to the model dry to obtain dust effects, and different effects can be achieved by applying with water based thinners or enamel thinners. It can also be built up in layers by using Wilder Fixer



A few of the Wilder gunpowder line pigments



This is just a small selection of washes and filters from the nitroline range of weathering products



Wilder Fixer, Soldering flux and Thinners



A selection of tools and accessories

SANDERS

HDF-TS-02 – 3 in pack

These abrasive sticks are ideal for removing seams, shaping, sanding and polishing surfaces. There are three grades on the sticks; 2 (course) to 0 (very fine), instructions are on the pack.

STAINLESS STEEL TWEEZERS

HDF-TT-01 – Straight

HDF-TT-04 – Angled tip

There are several others in the range, all are rigid, non-corrosive, anti-magnetic and are made from fine quality stainless steel.

This is just a small sample of the range of Wilder products, the full range can be found on The Airbrush Company website, details of their uses and applications can also be found there. I look forward to trying out these products and giving my models the 'Wilder look'! Visit www.airbrushes.com and www.wilder.su for more details.

MMI

(FX-01); this would be ideal for building up flaking rust and mud effects. As can be seen all paints and powders come in large 50 ml pots which when compared with other makes are very good value for money.

NITROLINE

This range is enamel based and is ideal for applying weathering effects on all types of models. They can be used straight from the pot or thinned using enamel thinners. They are available as washes and filters and are best applied over acrylic finishes.

SOLDERING FLUX

SF 01 – 50 ml pots

This Soldering flux is applied with a brush onto photo-etched pieces' surfaces prior to soldering.

THINNERS

TN01 – 50 ml pots

MASKING TAKK

HDF-AP-T01 – 35 g pack

This is a reusable adhesive similar to Blu-Tack and has many uses such as: holding pieces in position when assembling prior to permanent placement, masking, aiding soldering by holding the parts together while applying solder, temporary holder for parts while painting small parts, the list could be never ending. Just tear off a strip and work between fingers to soften and it is ready for use.

POWERPLUG

RICK STEERS A COURSE THROUGH DETAILING AND MODIFYING METAL IC BOAT PROPELLERS

AUTHOR: RICK EYRICH reyrich99@gmail.com



Having the correct metal propeller on your IC boat means choosing the right diameter/pitch blade for your hull's design/power set ups plus knowing when to modify/change a prop to suit your marine craft

No matter what type of IC marine craft you enjoy owning and running, you are likely to have at least a couple of spare/different metal propellers in your spare's box. Although it's possible to match up a single prop with a particular engine/hull combination, your personal driving style, speed requirements and the possibilities of dinging a blade or two make having an extra propeller or two a very good idea.

As for the separate area of tweaking metal props to better suit your higher-output nitro/petrol boats this month's column will give you some steps to set up and alter metal props and their related hardware pieces to keep them all providing the best performance.

PROP/DRIVE BASICS

Unless you're running a basic RTR nitro hull that comes fitted with a nylon/composite propeller your power craft is going to be using some type of metal alloy blade. The most popular material for two/three-bladed props is a mixture of beryllium and bronze, which is cast in moulds to create the propeller. Some prop makers add brass, etc. to give a bit of shine to the blade, but in general, your packaged prop will have a slightly dull finish when you purchase it.

Another popular material for nitro/petrol blades is stainless steel and it is also moulded/cast into IC boat-ready props and these are available in a host of size/pitch and blade numbers. Harder than their bronze cousins, stainless steel propellers are very popular with those modellers who have to run in debris-plagued waters as they are better able to endure contact with floating trash, other boats, etc.

Finally, there are some aluminium alloy props available for powerboats. Their lightweight finished form can help an engine spool-up faster than a heavier bronze/stainless unit, but they are prone to bending/chipping should you hit something or simply beach your hull with the driveline still under load.

Made up from stainless steel, bronze and in some cases aluminium alloys, IC boat props are generally moulded, packaged and sold as-is, which means the modeller will have to clean up/sharpen/balance the unit before mounting it on a hull

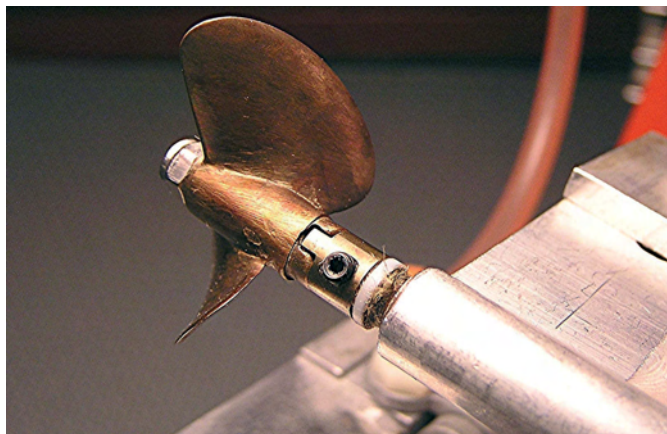




Using only some small files, wet/dry or emery paper and a balancer unit you can alter any metal propeller and add it to your blade collection as needed



Normally held to the driveshaft by grub screws, the drive dog's dual tabs must solidly lock into your prop's matching slots to prevent any slippage under a strong engine load



Aligned with the driveshaft's ground flat the drive dog's grub screw is secured with thread lock compound, plus the metal prop has been tweaked so that it's tight to the drive dog and shaft combination

As for the propeller's actual connection with your vessel's driveshaft, most of today's IC boats use what's called a 'drive dog' to join the prop to the solid or flexible shaft end. Usually made from hard steel and given a shiny chrome finish the average drive dog has a single grub screw to lock it to the driveshaft. The dog itself has a slotted portion that interlocks with the hub of the metal prop. Some drive dogs have threads to join them to some styles of driveshaft ends; plus, the grub screw itself might also be found on this kind of dog to help lock the component to the shaft.

Depending on what drive dog maker you choose the propeller 'tabs' may end up too loose or tight on the prop's hub slots; so, you may have to change the dog to suit your blade choices. We'll be discussing the matching/adapting of a propeller to a hull's

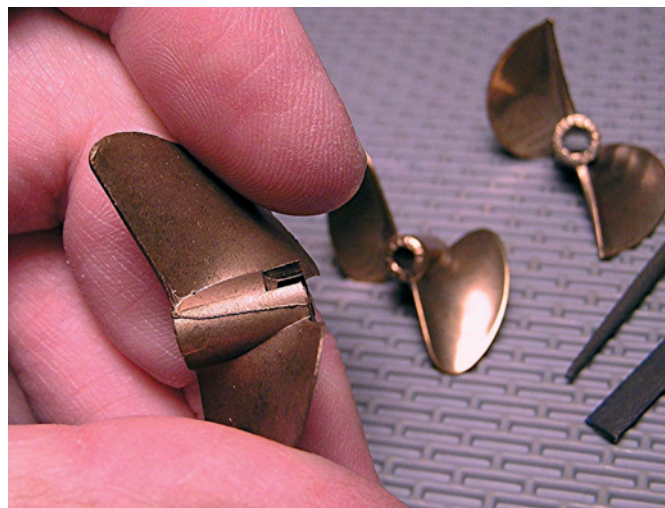
driveline later in this Powerplug for those times when you're closely matching a prop to a high-output IC marine craft.

Overall, the prop-matching process will also include the fit between the driveshaft-end/stub-shaft and the prop's centre hub opening. You'll want to avoid any noticeable slop in the fit of the prop as this can cause an imbalance in the entire driveline that could damage the strut bushings, the stuffing tube and even the hull itself due to vibration.

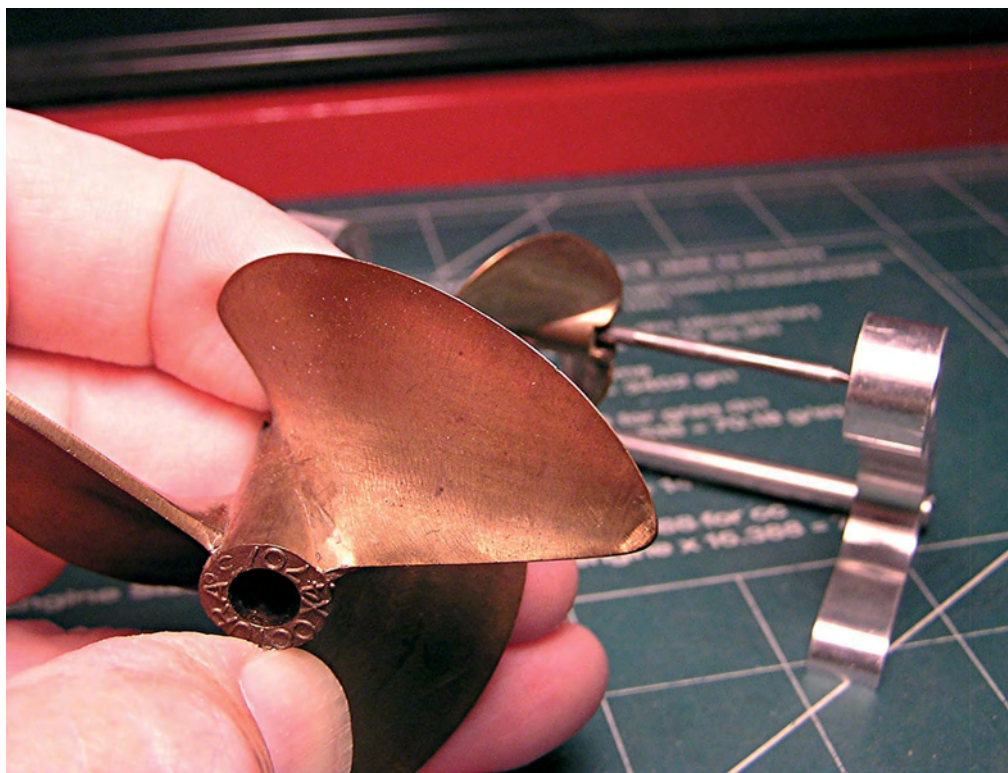
Once the prop hub slides-over the stub shaft's threaded end it should just slip tightly on the shaft's actual propeller-mounting section and smoothly engage the fixed drive dog. Meshed-together this way there'll be no chance of an unwanted loose propeller/lost propeller due to any slop in its connection to the driveshaft.

NEW BLADE NOTES

Now let's say you've invested in a brand-new metal propeller for your boat and you're ready to prepare it yourself. Once out of the package you'll probably see some mould marks on the blade, especially at its centre hub area and/or along its thin leading blade edges. One reason for this particular seam location is that the



Mould marks on the prop hub, flashing along the blade edges and any other manufacturing 'bumps' should be cleaned away before you do any further work on your new propeller



Even though some aftermarket metal props may look like they're boat-ready any store-bought blade must be checked for balance before it's mounted on your hull, especially if you've cleaned/sharpened its leading edges

OPTIONAL PROP TWEAKS

After cleaning-up and balancing a few metal props the average power boater will sometimes decide to modify a certain blade to suit his or her engine/hull set up. Most boaters believe a re-profile of the blade's profile is the main choice; however, there is another technique you can apply to any metal propeller, you make the blades thinner to allow the prop to spin faster due to its new lower mass. This modification can be done with files, sandpaper or via a Dremel tool equipped with a sanding disc.

prop's two-piece mould halves meet up at the centre hub area. Any raised metal material left on the hub could either unbalance the prop or create a lot of drag/cavitation as the prop spins on the shaft.

Normally a small flat jeweller's file and/or some medium-grit emery cloth will easily remove these mould marks. Once the metal excesses are removed you can start work on the new prop's outer edges that cut through the water, as they are usually quite blunt. In some instances, your new metal blade will have edges still covered with mould flashing bits along them, but these are easily cleaned-off with a mid-grit wet/dry paper.

At this juncture you'll add a fine edge to the propeller's blades and again a series of hand files will enable the modeller to sharpen these areas. Adding an edge to an IC boat metal blade must be done carefully to both ensure the prop's thrust levels are good while keeping your edge work from being too thin and in need of re-doing after the hull has been run a few times.

Not unlike sharpening a kitchen knife your prop's outer/leading edges will be ground at a slight angle to create a clean, sharp edge. Getting too aggressive with your files and sandpaper can end up making the edges too thin and cause damage to them with only a slight bump against even a soft object on your workbench, vehicle, hull stand etc. Look at any quality knife blade and you can see the actual thin cutting edge they use to cut and this is the type of edge you want to have on your new IC boat propeller.

Once you have each prop blade's leading edge prepared you can mount it on a suitable balancing unit and get the propeller even in blade weight. Simply put, you want the prepared propeller, once given a quick spin on the balancer shaft to stop its rotation at no particular spot each time you spin the blade.

Like any chore that requires removing material from a rotating metal component the modeller must limit the sanding/filing sometimes to prevent missing the prop's 'sweet spot' balancing point. For those instances when you're preparing a three or even four-bladed metal prop, the perfect balance point can be very difficult to locate, but with some patience you'll be able to 'tune' the blades to their equal weights.

If you need only a tiny amount of material removed during the balancing job, some minor file work near the heavy blade's hub area can sometimes provide enough mass removal on a multi-blade propeller.

To help ensure you maintain an even thickness on each thinned blade a good calliper gauge will let you know how much material has been removed. Multiple checks at several points of each blade will keep you from over doing the thinning process especially as you approach the prop's leading edges.

Another way to easily determine how much mass you've ground-off a prop is to weigh it before you start tweaking it and then re-check it as you remove metal from each blade. Of course a complete re-balancing of your thinned prop will be necessary and this step will also crop up if you decide to alter the propeller's metal blade profile.

In general, the most popular prop-cutting steps involve either changing the blade's leading edge shape or actually reducing each blade's total outside shape, thus creating a smaller prop that features more pitch angle than a purpose-made/smaller unit. When attempting either of these modifications, the boater will have to closely monitor the prop blade's shape/condition and this can be done in several ways.



Thinning a prop's blades will make it easier to spin up under power. However, as you're removing material you'll need to closely measure them to avoid making them too thin/fragile for everyday boat usage

TRICK OF THE MONTH

Over time, it's not unusual to see the occasional metal prop's mounting hole and/or drive dog notches become loose, so you might have to do some work to keep any worn propellers in good working order. To cure a loose prop hub opening, you can drill out the hole and install a brass tubing insert to bring the prop back to its OEM condition, while the drive slots can be filed flat to prevent any slippage with the shaft's drive dog tabs.

The brass tube insert trick can also be used to convert some metric-size prop hubs to inch-sized shafts. For best results a drill press should be used to re-bore the hub hole, but a slow-speed hand drill with a fresh bit can create your new tubing opening that will bring your driveline/prop back to a far more snug condition.

In the event that your new hole and tubing insert end up a bit loose in its fit, some JB Weld epoxy can tighten-up the two components. The epoxy can also help you fill-in wear edges on the drive dog slots as the slow-set version of this adhesive can produce a clean, sharp and locked connection between the drive dog and your prop's engagement slots.



For those instances where you might need to re-size or re-bore a metal prop's centre hub hole a short section of brass tubing can create a tight fit on your boat's shaft end

Before starting I like to make a paper outline of each blade, on hard card stock, and then re-do the outlines until I reach the blade shape I'm looking for. Filing-away just the leading edges of the blades is termed doing a 'Texas cut' to the prop, and this job can be done with only a fine-tooth metal file set. Normally only a slight removal of forward blade edge is necessary to see a difference in the propeller's performance curve especially if you carefully resharpen/rebalance the altered prop before you test-run it on your marine craft. This technique applies to both changing the blade profile and/or lightening the whole propeller, as these changes will all make your vessel perform in a different way.

Finally, I should mention that any metal propeller can be altered by the process of 'cupping' its leading edges, but this special tweak should only be done by experienced boaters or through an outfit that specializes in customising these kinds of model boat props. There are propeller cupping tools available for the modeller, yet this job involves bending prop blades and you can quickly ruin a prop if you get carried away with a cupping tool.

BLADE SAFETY

Most bronze IC hull props have the some beryllium in their makeup so you should take all the necessary precautions to avoid contact with prop particles as you work on them. This means using eye, nose and skin protective gear as much as possible, plus you'll want to quickly remove any shavings from your work area as well.

Wearing a disposable apron over your clothes as well as working well outside your home's main living space is always a good idea and I keep a small portable shop vacuum nearby whenever I'm tweaking a metal propeller. The vacuum is left running while I file the blades and during the prop's sharpening/balancing; then, I go over the entire space where I was working to ensure all of the metal particles get sucked up into the vacuum. Done this way you'll minimise the possible intake/contact with any harmful residue associated with this kind of IC boat work.

SHORT STORY

To wrap up this month's column I'd like to quickly relate how not to do some blade work that could improve your IC hull's on-water speeds. Ten years ago I was covering the US Fast Electric Nationals and saw a very well known racer 'adjusting' some metal props using a large electric belt sander. Yes, you read that correctly, he took an industrial-grade belt sander, turned it upside-down, placed it running between his legs and proceeded to modify a couple of new props sitting at his pit table.

On top of this very dangerous situation, our modeller wore no safety glasses, mask, gloves, etc. and although I didn't ask him, I guessed that he'd locked-down the sander's power switch with either electrical tape or a nylon ty-wrap!

Besides being a huge risk to his own person this racer's prop work was endangering anyone near his pit table, as it would have only taken a quick slip of the fingers to send a sharpened prop flying-off at high speed. Your scribe cannot imagine the possible carnage the airborne prop could have created! So, think about this tale if you ever think about taking any shortcuts while you're tweaking a metal boat propeller. Talk to you next time! **MMI**

SILICONE BUMPER TIP

On most IC powerboats it's not uncommon to find that regular silicone fuel tubing is used to help secure the hull's propeller to its driveshaft. Situated between the prop's rear hub area and the shaft's collar or locknut, the section of soft tubing must be long enough so that in the event that the prop contacts any solid objects, the silicone hose will compress enough to cushion the blow to the metal prop.

The tubing fit must be snug enough but not too tight so that it will move properly when the blade is struck. Keeping a fresh section and/or multiple lengths of the silicone tubing in your toolbox is also a good thought in case you switch props during a day at the pond.



Besides being useful as nitro boat fuel hose regular silicone tubing, cut in small lengths makes an excellent bumper to help the propeller survive any contact with floating debris

AIRWAVES

THE HUMBLE SERVO FOR MARINE USE COMES UNDER CLOSE SCRUTINY

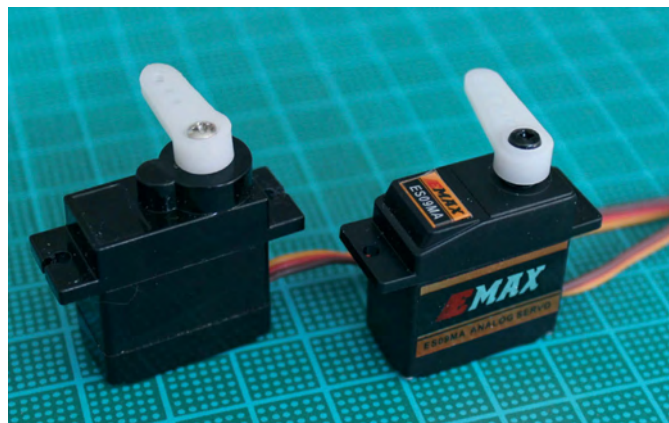
AUTHOR: ALAN SENIOR

UNITED KINGDOM GREAT BRITAIN

airwaves@anola.net

SERVO DAMAGE

In the April 2013 Airwaves I reviewed the HobbyKing Swamp Dawg airboat, I still use this model as it is fun and happily runs on weeded ponds and lakes that water screw models would not be able to cope with. Unfortunately the model had a slight accident and fell backwards off a chair and the impact forced the rudder vanes around at 90 degrees. In correcting the rudder alignment and testing the model it was clear that something had been seriously damaged as the servo made a clicking noise but barely moved. Dismantling the servo revealed the reason; the main output plastic gear had missing teeth and clearly the impact of the model on the floor had sheared them off. The good news was that apart from the servo, the model had not suffered any other damage; this meant that a simple servo replacement was all that was needed.



Swamp Dawg broken and replacement servo

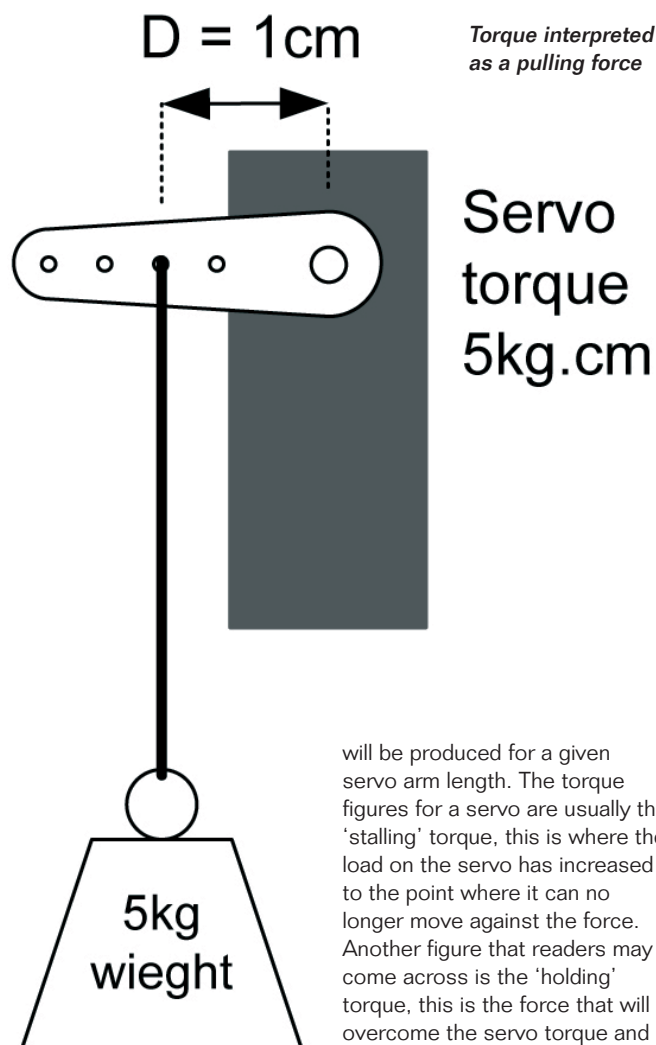
In another model I had an Emax ES09MA servo that looked like an almost perfect fit so I visited the Emax website and ordered a few more direct from the manufacturer. These servos are metal-gear, run smoothly and have an amazing output torque of 2.3 kg.cm for such a small size. After swapping out the servo the Swamp Dawg now runs better than it did before, possibly due to the extra torque and precision of these better servos.

SERVO TORQUE

In many models low cost standard servos can be used and for rudder control plastic geared servos are usually fine unless the model runs at a high speed or has a particularly large rudder. Plastic is a relatively soft material compared to metal, hence the higher torque servos tend to have metal gears, common materials being brass and aluminium and at the high price end titanium gears are employed.

In engineering circles torque is usually quoted in Newton metres (Nm), however, Newtons are not often used by the general public and hence units are used for servos that are the more commonly used units of ounces and kilograms. Usually servo torque is quoted in kilogram centimetres (kg.cm) or ounce inches (oz.in) at different voltages. At the higher voltages, the torque will be greater, this is because the current through the motor will be higher and a motor's output torque is proportional to the current flowing through it.

Torque is a measure of the 'twisting force', in the servo case it is convenient to think of this as the 'pulling' or 'pushing' force that



will be produced for a given servo arm length. The torque figures for a servo are usually the 'stalling' torque, this is where the load on the servo has increased to the point where it can no longer move against the force. Another figure that readers may come across is the 'holding' torque, this is the force that will overcome the servo torque and start to move the servo away from the commanded position.

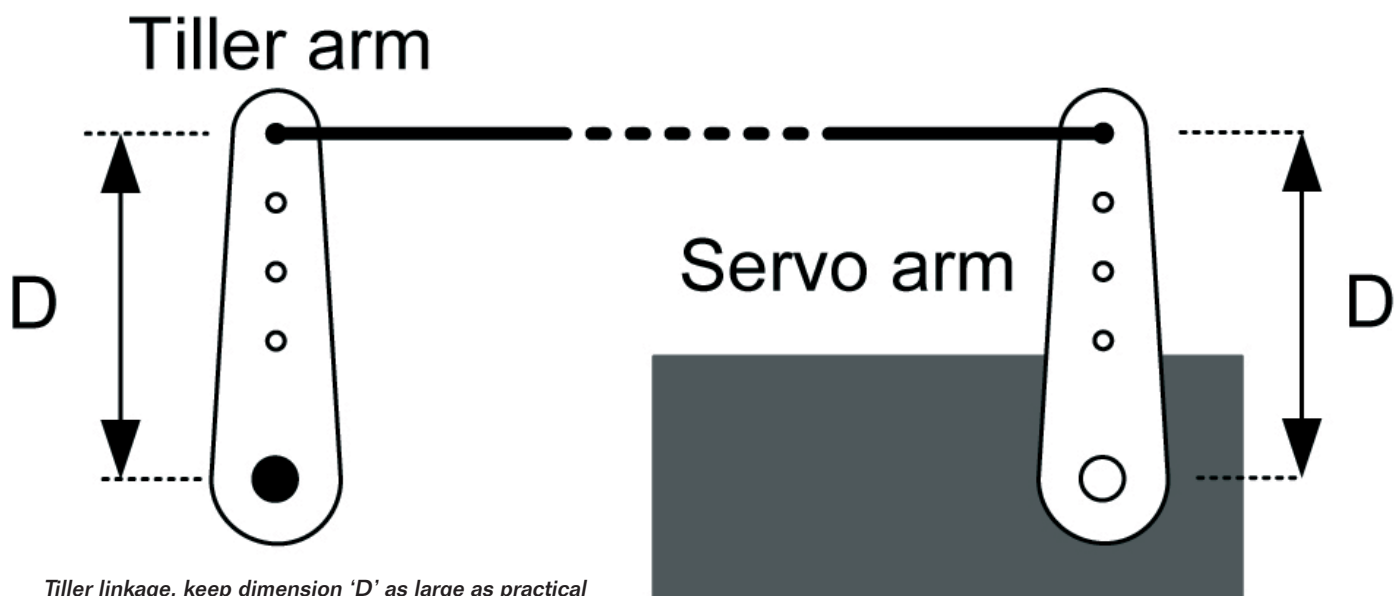
As shown in the diagram, the pulling/pushing force that a servo can exert through a linkage is dependent on the distance 'D' between the servo bearing centre and the linkage pivot point on the arm. In the scenario shown where the servo is trying to lift a weight, if distance 'D' is 1 cm and the servo has a stall torque of 5 kg.cm then in theory the servo will be able to lift weights of less than 5 kg. As the weight is increased to this maximum the servo will operate more slowly against the force, so in the case shown if the weight is 2.5 kg then the servo will operate at roughly half the speed. Since the servo will slow under load this is a visual and audible indicator of the servo load.

If the length 'D' is 2 cm then though the torque is still the same (5 kg.cm in this example), the maximum pulling or pushing force is reduced to 5 divided by 2, i.e. 2.5 kg. The simple rule is that the force is the torque divided by 'D'.

SERVO AND TILLER ARM LENGTHS

If the linkage is such that the distance 'D' at the servo and at the tiller are the same (as shown in the drawing) then the rudder will move through the same angle as the servo, so the torque available at the rudder will be the same as that of the servo irrespective of the dimension 'D'. It is usually best to make 'D' as large as practical, the reason is that there is likely to be some small amounts of play or slop in the linkage and this will have less effect when 'D' is greater and the reduced force in the pushrod will mean it is less likely to bend under load, similarly the force transferred to the rudder post and servo mounts will be lessened too.

The torque needed to operate a rudder in a model is dependent on the size and shape of the rudder as well as the model's speed. The force required is also affected by the prop wash hitting the blade. There is no simple way of determining the torque needed for



a particular model so it comes down to tapping the experience of fellow modellers, especially where a model operates at high speed. Of course it is no good fitting a high torque servo if the mountings and linkages etc. cannot take the load or flex excessively.

HIGH TORQUE SERVOS

The laws of physics dictate that larger servos of a given design will produce more torque than small ones and small servos with a high torque tend to be more expensive. A reasonably priced servo that I use, which has a high torque for the size, is the Emax ES09MA metal-geared servo which typically cost around £6. Emax ES09MA: 2.3 kg.cm at 4.8 V, 2.6 kg.cm at 6 V, weight 14.8 g.

In cases where a standard sized high torque servo is needed I have used the TowerPro MG995, this is an incredibly robust servo that can survive being stalled for prolonged periods without any damage. The main problem is that it lacks precision, this shows



The TowerPro MG995 is a robust high torque servo



The Turnigy Trackstar TS-910 has incredible torque for the size

itself because it does not return to exactly the same neutral position after rotating in different directions. I have found it to be reliable as a sail servo on a small yacht. This servo typically costs around £7.50, the specifications are: TowerPro MG995, dual ball bearings, 10 kg.cm at 4.8 V, 13 kg at 6 V, weight 55 g.

The highest torque standard sized servo I use and have been very impressed with is the Turnigy TS-910, this servo boasts Titanium gears but I suspect that really they are simply titanium coated, however, this servo is by far the best one I have being very precise and is so smooth with a brushless motor and metal case. It has incredible torque for the size but it does cost around £25: Turnigy TS-910, dual ball bearings, 20 kg.cm at 6 V, 24.3 kg.cm at 7.4 V, weight 58 g.

CONTACTING THE AUTHOR

If you have useful advice that I can pass on to other modellers through this Airwaves column or any questions then I am always pleased to hear them and I will try to help. My email address is: airwaves@anola.net **MMI**



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VINTAGE CHATTER! PART 13

DAVE VISITS KRAFT SYSTEMS (IN 'STARS FROM THE USA' PART 2)

AUTHOR: DAVID WIGGINS  GREAT BRITAIN

Hello again dear readers. After introducing last month's early LOGICTRON radio I'm moving on logically (ho ho!), in Part 2 of my trilogy on classic, vintage, American R/C to introduce just a sample of the very many outstanding radio outfits designed and sold worldwide by Kraft Systems Inc of Vista, California, USA who were easily the world's largest R/C manufacturers over a period from about 1965 on into the 1980s.

GOLD MEDAL

The earliest Kraft transmitters I own are two of the famous Kraft Gold Medal Series from 1968/9 which were a ground breaking piece of miniature electronic design for its time. It's no exaggeration to say that the Gold Medal – the World's first 'miniature' proportional – took owner Philip Kraft from modest beginnings with his 'Custom' single channel and multi reed radio range through his first K/P (for Kraft-Pullen), 'gold box' digital into the big time and launched him and the Kraft Systems company on a path to become the biggest R/C production plant in the world.

The set that I will be restoring (not shown), is a 6-channel Gold Medal KP6B radio built, like the KP4B shown, at Kraft's first South El Monte factory unit before they expanded and moved to Vista and it is only part restored at the time of writing. My radio, obtained from UK dealer Al's Hobbies in March 2014, was on the American 53 MHz 'ham' waveband which like the US 72 meg band has never been legal to use in the UK. It will thus need converting either to



"A Business is People" – classic company advertising, later updated to include boats and cars

A Kraft Gold Medal 4 transmitter c1968 used as a spares source for my KP6B project



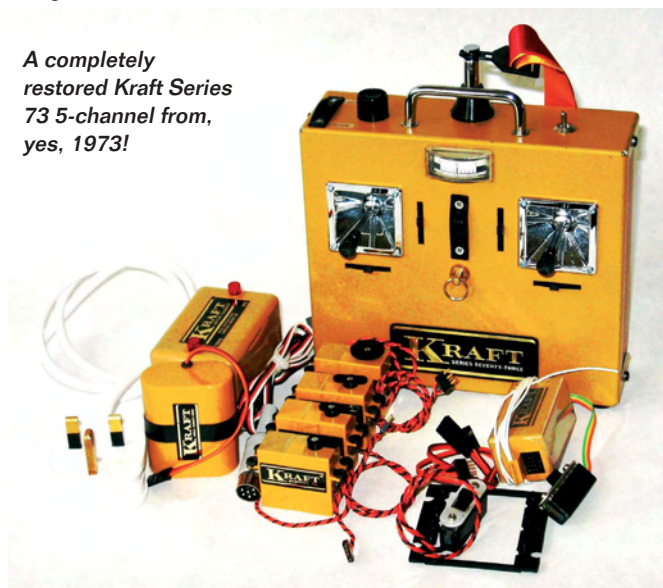
'old faithful' 27 (Citizens Band in the USA), or to modern 2.4 GHz, probably the former as I'd like to retain the original co-axial antenna. My set's antenna rod is in reasonable condition so it ought to be practical to do that – usually, they're not useable after 40 odd years of modeller abuse. I'll see how things pan out and the restoration to 'as new' of this now historic piece of electronic design will be fully reported in a future MMI column.

The Gold Medal radio is named after the Champions gold medal won by company owner Phil Kraft at the World Aerobatic Championships of 1967 and this medal is pictured on the original owner's manual included in my picture. From 1968 let's jump on a few years to 1973.

TWO RESTORED OUTFITS FROM C1973

The first Kraft set that I acquired and rebuilt in recent years is a bit special to me as it was a kind gift from a former Kraft Systems mechanical design engineer – Mr Joe Martin – who still resides and works in Vista, California where these famous outfits were designed and built.

A completely restored Kraft Series 73 5-channel from, yes, 1973!



His is a standard 5-channel Series 73 (twin stick), outfit built at Vista in 1973 and it was completely rebuilt and converted by me from the American 72 MHz band to dual frequency on 27 MHz. As you see, I have rebuilt the entire outfit including the receiver, battery pack, charger and five Kraft model KPS-12 micro servos (which Joe designed), and I've even obtained an original Kraft packing crate for it so it's now a full outfit – unusual for my restorations and a major job. The Series 73 transmitter had some innovations for the time amongst which are a fully retracting and locking antenna and nicely chromed dual axis sticks. A restorer's tip – I find that Kraft retracting antennae always need a thorough overhaul if you should own one yourself – corrosion, dirt, old fuel etc. can render them open circuit not to mention that the soldered joint on the big nut is often 'iffy' so I recommend complete disassembly, rebuild and a continuity test especially (!) if flying rather than boating.

The S73 receiver was small and the matching KPS12 servos minute by the standards of 1973. These radios sold well and in large numbers across the world. The British importer was Geoff Franklin of 101 Jarrom Street, Leicester, whose brother Maurice worked at the factory in California. Kraft also offered a 7-channel version of this set as well as a single stick (triple axis/'cuddle box'), variant.

WHICH INCLUDED A 'BRICK'!

The next radio I'm showing you is a touch unusual for its time, as it was designed specifically for marine, glider and early race car applications, it is a 3-channel Sport Series outfit from about the same time as Joe's radio. Some of the bigger American R/C companies stayed firmly focussed on their model aircraft customers, Kraft were an honourable exception in looking after us (less wealthy dare I say), boat guys as well. I shall return to the Sport Series concept later in the series.

BEING KRAFT'S CHEAPEST MODEL

This radio, as I initially acquired it, was a model KP2/3, the factory's least expensive model, sold with dry battery power. I purchased it as it looked to be in clean condition and I happened to have a correct 27 MHz circuit board handy making conversion from 72 to 27 a doddle, which the fifth channel just mentioned most certainly was not. During the 1970s this radio was the only affordable way that a boat man could enter the Kraft Club (as it were), and I purchased two of them (using HP I hasten to add!), when I was a keen young modeller competing in Naviga speed-steering. I still have pictures of one of my F3V steering boats with this radio installed but there's probably not enough space for that. Back then, these basic 2/3-channel dry cell Krafts cost about 65 or 70 pounds if I remember correctly. A 4-channel aircraft set was priced at £199, with the full six selling at £225, these prices hardly changing for some years. For people like me such exotica was just a dream even with model shop hire purchase schemes like Paybonds.



A restored and improved Kraft Sports KP2/3B outfit



A radio tech's eye view inside Phil Kraft's 2/3 channel 'brick'

Just as I did back then I have upgraded the set to be fully rechargeable using Sanyo Eneloop NiMH cells rather than the button cell NiCads I'd have used during the '70s. These modern Sanyo cells are amazing. Case sizes as small as AAA have ratings of 800 mAh, perfect for vintage radios like this, and charge retention is first rate. I use them a lot in my work. The dry cell transmitters had no meter so I have added an original Kraft battery state meter (from the same source as the circuit board), a nice chrome handle and homemade neck strap point and have put in the dual frequency factory upgrade raising the radio to the status of a full Kraft KP3B(X).

Originally, the factory 'X' versions had a pair of adjacent 'solid' frequencies (e.g. green and yellow), as that was all there was in 1973, but when I execute the job nowadays I try to put in one solid and one 'split' if I can get the crystals. The two frequencies are then no more than 25 KHz apart and absolutely no RF or IF retuning is required – a big time saver. The least expensive dry cell 2/3-channel Kraft sets used a 'brick' (in the common parlance of the day), to cut cost though I have always wondered if these units really were cheaper. Kraft's version of the brick concept, then a novel idea, housed two sets of their latest KPS-12 miniature servo mechanics, an RF/IF board and a 3-channel decoder/twin servo amplifier pcb. Both were built to the very highest standard with all of the electronics being discrete on flow soldered pcb's. The third channel exits as a pigtail with a Multicon 4-pole crimped gold connector for an extra KPS-12 to be plugged into for customers requiring the full three channels. I have

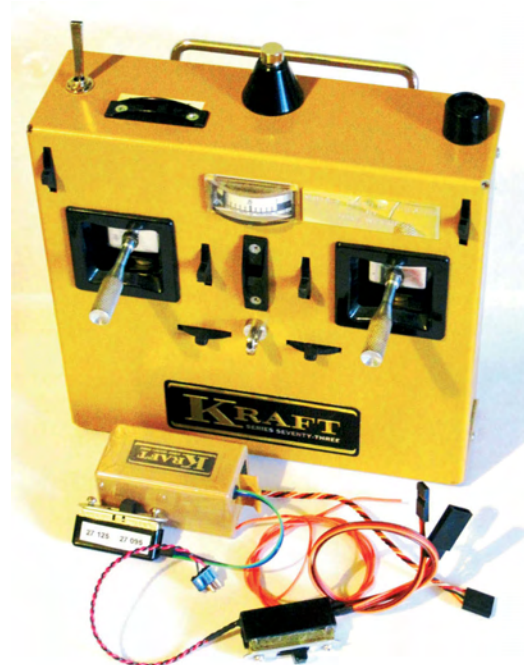
a brand new, 4-wire, KPS12 with my set but most buyers flying a glider or driving a boat did not need or use the third channel. I haven't mentioned car applications as there was so little interest in cars during the early '70s, amazing isn't it when R/C is now car dominated. Just ask a hobby shop owner if you doubt it.

Even though brick sets were rated and priced as economy, entry-level options, Kraft nonetheless thoughtfully designed into the circuit boards the same facility for twin frequency operation as on their top dollar aircraft radios making the upgrade a straightforward task for a service tech. I've included a picture of my unit during rewiring. On the nicer 3-channel NiCad sets Kraft supplied a conventional 3-channel receiver and separate servos in place of the brick as well as rechargeable batteries and a charger, but the least expensive dry sets enabled people like me to buy a Kraft and then to upgrade it to NiCad and twin frequency operation themselves if they so desired.

AND FINALLY, INTRODUCING A 'TOP OF THE LINE' KRAFT FROM 1973

Late in their existence and just before the Kraft family sold the company on to a large concern, Kraft Systems Inc manufactured, at extremely high prices (a staggering \$750, if I recall rightly), the custom designed and built Phil Kraft Signature Series custom radio for 'money no object' clients who wanted a truly one-off radio built partly to their own specification. Orbit (see next month), did the same with their even posher \$1,000 Elite. Well, I don't own either of those (no great surprise there maybe!), but, to finish off my Kraft Systems pen picture this month, I will briefly share with readers of this magazine my own, recently rebuilt, example of the Kraft factories top of the line radio from the year 1973. Their model KP7Z, 7-channel, open gimbal stick equipped system is still exactly as it was built 41 years ago. I will return to the KP7Z later in the series when Chatter examines its 'head to head' competitor – the Pro-Line Competition Six.

I'd like to contribute a final word on the DIY restoration of Kraft radio gear. You'll find that you need to obtain spares from the USA if following in my footsteps. I can heartily recommend parts supplier Peter Waters (Krafty.Pete on eBay). Peter, who traded in Michigan as Kraft-Midwest for many years after emigrating from Wales, is now retired but, in 2014 when this was written, he still had plenty of stock left in his workshop. I have found him to be an invaluable source both of parts, technical documentation and advice. For now then, I will bid you all 'au revoir'. **MMI**



The KP7Z was 1973's top of the Kraft range. It used Pro-Line sticks and will be examined in a future column

SCALE SCENE

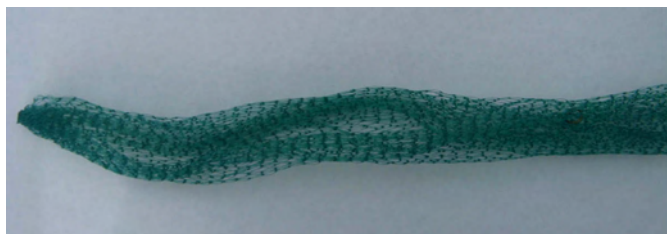
IAN CONTINUES HIS HINTS AND TIPS

AUTHOR: IAN WILLIAMS  GREAT BRITAIN
electro-marine@talktalk.net

Last month I gave you some hints and tips from the 1990s and I'm going to continue that theme this month. So first off we have...

CHEAP AND CHEERFUL NETS

The fine mesh bags you sometimes find on fruit at the supermarket, especially apples and oranges, can substitute for nets on small fishing boats. They can look quite realistic if placed correctly (see photo).



Useful fruit bag will make a decent looking net

HOMEMADE PROPS

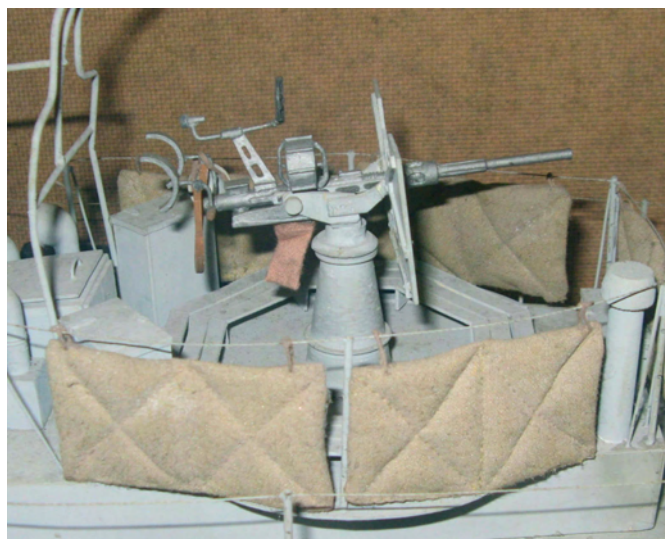
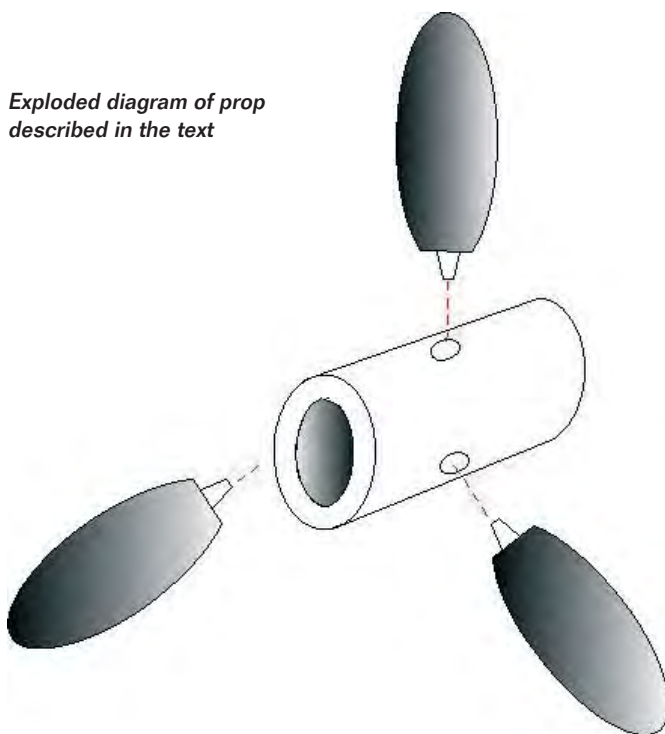
Many modellers I've spoken to over the years have said they would like to try and make their own props, especially as it sometimes can be difficult finding the correct type of prop for the model you are building. However, quite a few people I have talked to feel that propeller construction is beyond them, because of the need to make and set up soldering jigs. Here is a fairly simple way of making props without the need for any type of jig. You will need access to a lathe, but even if you haven't got one I'm pretty sure that you will know someone at the club who has!

Make the prop boss from brass rod and if you can get rod of the diameter you need so much the better. That's one less lathe operation. Drill right down the length of the boss and tap to suit your shaft. The drilling operation is best done on the lathe. Then you will need to mark out and drill the holes for the number of blades you require (see the diagram). The blades are made from sheet brass by scribing the blade shape onto the sheet, then clamping all the blade blanks together in a vice and cutting and filing to shape in one operation. This should ensure that all the blades are identical.



Handmade prop using the method outlined in the text, the blade roots aren't actually as thin as they appear in this photo

Exploded diagram of prop described in the text



The Splinter mats on my HDML as explained in the text

The clever part is in providing tapered tangs at the bases of the blades. When gently tapped into the hole in the boss, these will supply sufficient rigidity for soldering and initial setting up of the blades by eye. If you get the dimensions of the holes and tangs right you don't need a jig. The tangs will also help to prevent loss of a blade due to impact damage, which can sometimes happen with a normal soldered on blade. Once you are satisfied with the position of the blades they can be soldered in place. Make sure the blades are well fixed, but don't go mad with the solder as you will just have to file it off again. By the way, as long as you are not making huge props for a 7 foot tug, or something that will put a lot of torque on the blades, electrical solder will work fine, but do use a good flux.

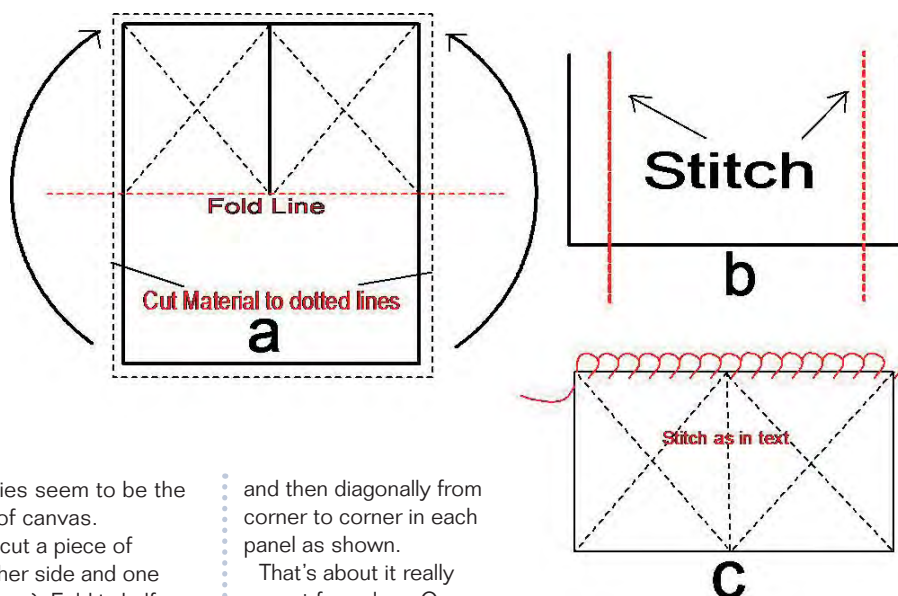
When completed, clean up the solder joints with a needle file and carefully twist in the required amount of blade pitch. You could also sharpen the edges of the blades if you want and you may have to run the tap through the shaft bore to clear any excess solder.

Many full size boats, especially older types, had the prop shaft running straight through the prop with a locknut on the outboard end of the shaft. This type is of course easy to reproduce with the prop just described. If you require a more modern type with a bullet shaped boss, you can close up the outboard end of the boss with solder and file to shape. Or if you are clever with a lathe a tapered locknut or insert could be turned.

SPLINTER MATS

Several years ago I built a 1/24th scale HDML and several kind people have commented on the splinter mats and how realistic they look. The general method of construction of these mats seems to be either to mould them from epoxy putty, or carve them from balsa. Both of these methods give acceptable results especially in smaller scales, but in 1/36th or 1/24th scale can look a bit lifeless. The real things were basically envelopes of canvas stuffed with Kapok and sewn up so why not make the model version the same way? All you need is some fine weave material such as cotton handkerchiefs, some cotton wool and access to a sewing machine. Ladies hankies seem to be the best material and give a good representation of canvas.

Start by deciding the size you need and then cut a piece of material twice that size PLUS about 1/4" at either side and one end (the diagrams here should be self-explanatory). Fold in half as shown and stitch the sides as shown. Hand stitching is OK, but a sewing machine on the smallest stitch will be much better. You should have an open-ended envelope that now has to be turned inside out. If necessary, trim back the unwanted material outside the stitch lines before turning inside out. You should still have your envelope but with hidden seams. The next job is to tease out some cotton wool so it is not compacted and lumpy, then stuff the envelope with it. Don't overstuff as the mats weren't all that thick and you won't be able to do the next operation, which is the diagonal stitching. Once you are satisfied you need to close up the open end. I used a fine overstitch as per the diagram. Next use a sewing machine to stitch vertically down the mat to divide it in two



and then diagonally from corner to corner in each panel as shown.

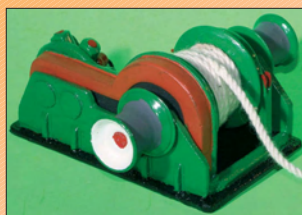
That's about it really except for colour. On my particular boat they were a dirty brown 'canvassy' colour. Often they were painted over, especially if there was some kind of camouflage scheme. I found the best way was to use very thinned enamel paint, but don't wet them too much as if the cotton wool stuffing becomes soaked they will take ages to dry, become very stiff and you want the mats to remain pliable. Do a search on Google Images to see examples of the real thing.

Well once again I'm out of space, so see you next time. **MMI**

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LIVEWIRES

A COUPLE OF HANDY TIPS AND THE CONVERSION OF A BIG I/C BOAT TO ELECTRIC POWER

AUTHOR: IAN WILLIAMS  GREAT BRITAIN
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A bit of a mixed bag this month and as I've been resurrecting hints and tips in the Scale Scene column, I thought I would start off with a couple of handy little tips here.

TROUBLE FREE DECALS

Competitive FE racing boats are usually brightly painted and apart from being attractive to look at they have to be colourful so that they can be seen easily during a race. If you are like me and can't be doing with all that masking, spraying, rubbing down etc., you will be going the self-adhesive vinyl decal route. These can be a bit of a pain to apply, especially if both sides of the boat have to match.

The trick is to fill a saucer with barely lukewarm water to which two or three drops of washing up liquid have been added. Then using a sponge, sparingly apply the water to the required area on the model. The self-adhesive vinyl will actually slide around quite easily for accurate positioning. When satisfied, use a clean, dry cloth or a piece of kitchen tissue to gently press down the decal and remove any air bubbles and excess water, being careful not to move the decal. If a large area of trim has air bubbles you can use something like a credit card to squeegee the air bubbles out. Once again be careful the decal doesn't move and make sure not to damage the film. Leave overnight and in the morning you will have perfectly positioned and stuck decals.

HAVANA HELMETS!

Models of open cockpit offshore type racing boats look better with a crew aboard. Quite often there is no need to provide fully detailed crew members; a simple stylised representation is usually all that is required. However, there do not seem to be all that many commercially made figures of

Cigar tube helmet
(see text)

CUT AS SHOWN

CIGAR TUBE

this type available for boats. Some figures for model aircraft use are available but are not always suitable.

Making your own figures is relatively easy, as the shoulders and arms can be simply carved from balsa or moulded from an epoxy putty such as Milliput, however, the heads can cause a problem. Of course if you happen to know someone with a 3-D printer, problem solved! Luckily you don't often need to worry about facial features, as the use of modern fully enclosed helmets will solve that problem. But even these can pose a problem especially if you need two or three identical ones. An easy solution, if you know someone who smokes cigars, is to cut the helmet shape from the domed end of the tube as shown in the diagram. With the addition of paint and a plastic visor it can really look the part. Cigar tubes come in different sizes, so it is possible to provide heads for figures to several different scales. If you want a more detailed crew figure, one of the many available military figures could be used with this type of helmet. The advantage here is that being hollow the helmet should just fit over the head. If you can't find cigar tubes, have a look around in sweet shops as the cheap and nasty confectionary, unfortunately aimed at children, can often come in test tube shaped containers. Just keep your eyes open!

I/C TO FE THE KITON

Aren't abbreviations great! What I am actually about to describe here is the conversion of a model from internal combustion power to electric power. The model in question is a large, semi-scale version of a P1 class offshore powerboat. Before detailing the model, a little background on the full size boat may be useful.

THE PROTOTYPE

Firstly, the boat wasn't actually called Kiton! This was one of the major sponsors and as their logo is very prominent on the side of the hull the boat came to be called that in general usage. This is borne out if you simply do a Google search for Kiton or Kiton powerboat. In fact the Kiton advertising logo appeared on several different hulls between 2007 and 2011 as far as I can tell. This boat was definitely running during the 2007 season and possibly 2008. (Details are a little sketchy)



The real thing! Kition flat out during the British Grand Prix of the Seas 2007

This particular boat was a Metamarine TNT 46 hull run by the Italian Trident Team in the P1 Evolution class of the UIM Powerboat P1 World Championship. A sister boat, Fainplast, was run by the Italian Seabuster Team. The 46 foot hull was moulded in GRP/Kevlar and was powered by twin Seatek Diesel engines of 820 hp each. The hull, as can be seen from the photo, was a two-step design. I must admit that I have not done a huge amount of research on the full size boat, but I believe it was quite successful, certainly competitive.

THE MODEL

The model hull is from MHZ and is moulded in epoxy glass with a length of 1480 mm and a 335 mm beam. Although the full size boat has steps the model hull does not, but it does have ventilation inlets in the scale position of the steps. So visually the boat does appear to have steps when running. MHZ say that the ventilation slots do actually provide aeration of the running surfaces.



The model in all its glory. The Tx gives an idea of the size of the beast



General view of the interior. Lots of wiring. Note waterproof boxes for radio and cells

As completed, this model had twin 26 cc Quickdraw motors which provided around 7 hp each. Although I never saw the boat in this configuration, I have been told that it was quite fast, but virtually uncontrollable other than in a straight line. Trevor, its owner gave up on the boat, removed the I/C motors and the hull languished in his garage until another Herrington club member, Keith Mallam and I suggested it might be a likely candidate for an electric conversion. As Keith knows Trevor better than I do, it fell to him to do most of the persuading and all of the parts ordering!

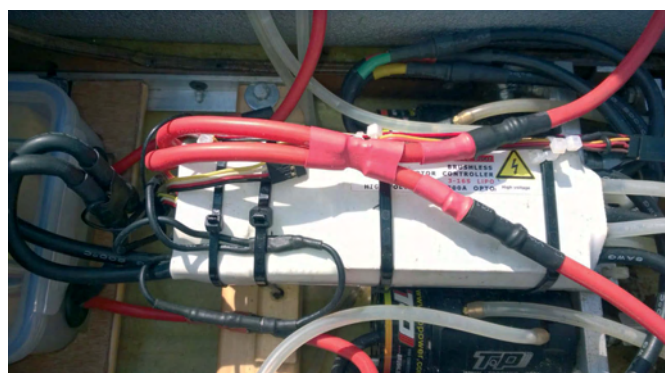


Close-up of one of the big TPpower motors supplied by Bruno Tollot at Alien

Most of the electrical components, ESC, motors etc. were sourced from Alien Power System. The ESC is one of Alien's own, a 300 amp 3-16S water-cooled type. The motors are TP 56-60 inrunner brushless types, at around 1000 kV and rated at up to 10 kW power handling (1 hp is 745.7 watts, so these motors are rated around 13 hp each). Personally I don't think you will get anywhere near that in practice, however, any way you look at it, these are very powerful motors. As you can imagine, the wiring is quite complex with six wires for the motors, wires to and from the two safety links via 'Y' lead to the

battery box etc. To further add to all the wires, the ESC has a spark suppression circuit and also separate BEC circuitry fitted as the ESC is an Opto Isolated type. The wiring is arranged so that each motor has its own safety loop.

Before starting the conversion, several decisions had to be made. Firstly the drive shafts, which were 1/4 inch flexis, could they be left in or would they be too 'heavy' for the motors? The decision to leave them in without change (other than couplings) appears to have been the right one, as the motors don't seem troubled and it



300 watt 3S to 16S dual ESC supplied by Alien Power System

has saved an awful lot of work and extra expense. Another major concern was all the holes in the hull. As a twin engine I/C powered boat, plenty of air was needed for the engines, so all the available scale air intakes had been utilised, not to mention the two big holes in the back of the boat where the tuned pipes exited. All the air intakes were closed off with aluminium plates and sealed. The two scale intakes in the hull (one each side) were used to mount the two safety loops.

Although it is not going to be raced, it was felt that as the boat is so big and heavy to lift out of the water, having the safety loops made a lot of sense. The aluminium cover plates have not been painted as yet but although not a scale feature do actually look quite good. Regarding the weight of the boat and safety considerations, have any of you sharp-eyed readers noticed what my 12-year-old grandson saw the first time he looked at a photo of the boat. Well, his first comment was to ask why the boat had handles. Big I/C boats often have lifting handles fitted for safety reasons. Don't forget that these boats are launched with their engines running and have the sharp whirly things at the back spinning while someone picks the boat up and launches it for you. So it makes sense to be able to pick the boat up without having to get near the prop. In this case it was decided to leave the handles fitted as the boat is so heavy.

After deciding on the motor and ESC combination, the final thing to think about during the conversion was which batteries to use. Keith suggested Zippy Compact packs as they have been very reliable in our racing boats. These are obtainable from HobbyKing in the UK and are very reasonably priced. The boat runs 7S 4000 mAh packs, which are fitted to the boat in pairs wired as 14S. Strangely the balance leads on these 7S packs are separated into two parts with one having a 4S connector and the other a 3S connector. I am not sure of the truth of this, but someone said this had something to do with the regulations governing the transport of LiPo cells larger than 6S.



Overhead view of rudder and props. Note how close together they are (see text)



Another view of the business end. Note extra water pick-up not used as yet

RUNNING THE KITON

I am not going to detail the conversion itself as it was fairly straightforward, consisting mainly of removing a lot of weight connected with the dual I/C installation. With that amount of room, you can put the equipment exactly where you want it!

So once Trevor and Keith had got passed the initial problems of the conversion, motor mounting, equipment positioning etc., the boat was ready to hit the water for the first time in quite a while. There were a couple of areas where we thought there may be problems and we were right! The first was water ingress into the hull. The hatch area is not easy to seal and virtually impossible to seal completely. Not only that, but as it is so big, you only get to seal up about three times before you've used up a whole reel of waterproof tape. In actual fact it didn't seem to make all that much difference whether the boat was taped up or not. There always seemed to be about the same amount of water in the hull. Even though it was a considerable amount of water by Fast Electric standards, the hull is so big that the water mainly stays in the very bottom of the hull and well away from the electrics. The problem then became one of removing the water. You couldn't just turn the boat over to empty it as a) it is big and heavy; b) the water then runs all over the electronics! The usual things such as syringes with tubes on etc. worked but were slow. So eventually a small electric bilge pump was fitted, worked manually by a switch. So the drill now after running is to tilt the boat on its stand so the water runs to the back and start the pump. It seems to work quite well, although there is still a small amount left to mop up.

The second problem we envisaged was with the props. We didn't know what size to choose, especially as we wanted to keep them to scale-like three-bladers. Anyway there aren't that many handed sets available in the sizes we were looking at. In the end the boat hit the water with the original I/C props fitted and surprisingly they worked well. This was surprising because they are huge props by FE standards. They are 6717 three-blade cleavers from Voodoo in the USA. As you might guess from the numbers, they are 67 mm in diameter with a 1.7 pitch. The boat ran pretty well with these props and even better, nothing was all that hot inside the boat after the run. There was a problem indirectly caused by the props, but it wasn't what we envisioned, as size wise they seem OK.

STEERING PROBLEMS

Although I never saw the boat run when it was I/C powered, I was told that it was very 'twitchy' and that the slightest movement of the rudder stick on the Tx would have the boat spinning out. You could only run it in a straight line (just) and slow down to turn (carefully). The first time the boat was run after the conversion Trevor was disappointed to find that the boat still did the same thing, albeit not so viciously (see photo).

Having seen what the boat was doing, my first thought was that something was loose at the back end. Perhaps the rudder mounting was loose as I had seen unpredictable and sharp steering like this before. The culprit there was a loose rudder bracket that was moving around under load. Not the case here as everything was secure and in fact there wasn't a huge amount of rudder movement anyway. This is where we get to the prop problem. If you look at the photo looking straight down on the props and rudder, you can see how close together they are. This is the main cause of the steering problems. With the props so close together and the rudder mounted right in the middle of them and only slightly behind, the rudder was being influenced totally by the wash from the props. Even the slightest rudder movement had a big effect on the hull due to the amount of water flowing across it from the props.

At first I couldn't think what to do about it other than removing the rudder and mounting it further back on a bracket. This suggestion wasn't received all that well as it would spoil the scale appearance. So another solution needed to be found. The only thing I could think of was to reduce the rudder throw as much as possible, but as there really wasn't all that much to start with I wasn't sure how this would affect the low speed handling of the boat. But it was driving

This is what used to happen if you tried to turn. A lot of spray and a spin out



Trevor crackers so something had to be done.

As Trevor had done all the driving during testing I had no idea how bad it was to drive, until he handed me the Tx and I found out! To give you an idea you only needed about 1/4" of Tx stick movement to make a tight turn at low speed and probably half that at full speed. You just couldn't move the stick a small enough amount to get the required rudder response. I suddenly realised that if the Tx had variable rate adjustment that might do the trick. As Trevor's Tx was an all singing, all dancing Spektrum computer type it had fully variable rates on several channels. Although many of you will know this, perhaps I should explain the significance of the use of rates in this case. If your Tx is on 100% or has no variable rate adjustment, when you move the rudder stick (or wheel) on your Tx the servo moves through the same angle, no matter how much you restrict the physical movement of the rudder. For example, by using the inner holes on the servo arm or rudder arm, full movement of the rudder stick on the Tx will give 100% of the physically allowed movement at the rudder. The variable rate control can reduce the output of the servo as a percentage of the input from the Tx stick (if that makes sense). As an example, if you set the rate control to 75%, moving the Tx stick through 100% of its movement will result in the servo moving 75% of its physically allowed movement.

After trying a few different settings on Trevor's boat we arrived at 50% and even though the rudder now only moves a little way it works fine because of the wash from the props. Even though low speed turns have been affected there is still enough manoeuvrability for this type of boat. At full speed, sweeping turns can be achieved with what feels like a 'normal' amount of stick movement. Even full stick turns flat out don't produce a spin-out, just a lot of spray and a very tight turn, but still with full control. The boat is quite quick and certainly looks the part on the water. The motors and the ESC from Alien Power Systems work excellently and strangely the boat will run for around 6 minutes continuously on just the 4000 mAh batteries. I would say that that was success! Trevor certainly thinks so and that's what matters.

I haven't included any costs here, because to be quite frank it was a little expensive, however, much, much cheaper than two Quickdraw or Zenoah engines. Possibly the same results could have been achieved with less powerful motors and electronics (less cost too) if the boat had been constructed as a fast electric from the start, as a lot of bracing and metal work from the I/C installation could not be removed easily from this boat and a lot of weight could have been saved. Nevertheless it just shows what can be done. **MMI**



Close-up of the boat at speed. Trying to look like the real thing!

MEETING POINT

REPORTS FROM SOME RECENT EVENTS

37TH INTERMODELLBAU AT DORTMUND, GERMANY, 9TH TO 13TH APRIL 2014, BY KIM BELCHER

'Five Go To Dortmund' – that's how it should have read. Enid Blyton got it right on two counts – the Secret Seven became the Famous Five, as a couple from our group could not fit into Phil Locke's wife's brand new Volkswagen Passat. Just like four years ago, Phil was very altruistic by offering to 'run in' the new vehicle with a four day trip back to where it had been manufactured! That meant four more modellers – Kevin Annetts, Gary Underwood, Martin Clifton (Mr. Macs Mouldings) and myself, and with the name of Kim I must have been Timmy the dog!

The final rendezvous was Ashford International railway station in Kent, then on to Folkestone where the Eurotunnel train took us all quickly under the English Channel and into northern France. Leaving Calais via the E40 we went through Belgium, the Netherlands and into Germany where, as we entered Dortmund, the A40 became the Rheinlanddam with the Westfalenhallen on our right, beyond which was the home of the Borussia Dortmund football team (a small hiss from a Manchester United supporter on the back seat!). All of this had taken less than eight hours.

The next morning we were there as the doors opened and spent two days visiting the 37th Intermodellbau 2014 show. Every modelling discipline was covered within eight very large halls, with 561 exhibitors representing many hundreds of clubs and societies, displaying thousands of some of the very best models seen, alongside almost countless trade stands. The UK was represented by the Peterborough MBC and Deans Marine.

I shall now concentrate on just a few of the marine models that caught my attention, firstly, those cardboard static models.

Although not normally for me, (that said I have bought a 1:250 scale buoy laying vessel Bruno Illing – €9.99 – and the laser cut upgrade kit – €11.99 – to try in the winter!), I just cannot state enough how detailed and meticulously built these kits are – good eyesight and a steady hand are the order of the day. I have seen nothing in the UK that gets anywhere near the finish of these – I will let the pictures speak for themselves.

I had a long talk with Benjamin from Hamburger Modellbaubogen Verlag – just one of fifty manufacturers of card models in the paper models catalogue from www.kartonmodellbau.de who are about to bring out the fleet of each different German lifeboat (DGzRS) class in 1:250th scale.

From the sublime to the ridiculous brings me to my favourite subject and marine model builder, Michael Rüttel and his colleagues with their DGzRS 1/10th scale lifeboats. These attracted a large audience every time they went on the indoor pool. With working lights and water cannons they are quite a spectacle!

From here to another gentleman I enjoy having a talk to each visit – Simon Weemaels from Belgium. He and his colleagues have seven World War 2 large dioramas at 1/96th scale. This year's display was of the PLUTO (Pipeline Under the Ocean – August 1944) which went from Shanklin on the Isle of Wight to Querveville, west of Cherbourg in France. This is the third diorama I have seen over the last four years and this one did not have simulated water, but the real thing, hence radio controlled models manoeuvring around within it. The team also construct models during the course of the event and like to engage with the public as to what they are building. An unusual subject, a great stand and modelling standard throughout with a very welcoming host and a tea, coffee and beer corner!

Gary, who was travelling in our group, works for Sunseeker yachts in Poole and Kevin lives just down the road from them. It was therefore 'home from home' when we found a stand featuring a number of Sunseeker models and some sailing yachts too. They had some well made and painted figures on the models, but when I went back to photograph them they had been removed, maybe to



The groblinienschiff SMS Baden, a 1:250 scale card model by HMV and built by Peter Schiffer. Note the use of patterned glass to simulate water – most effective



An unusual diorama, a launch slipway area, in card and built by Kurt Spittler



Also in card, the USS Gerald R. Ford, a Nimitz-class aircraft carrier



A completed model of the Tonnenleger Bruno Illing at the Intermodellbau and bought as a kit for a winter project by the author



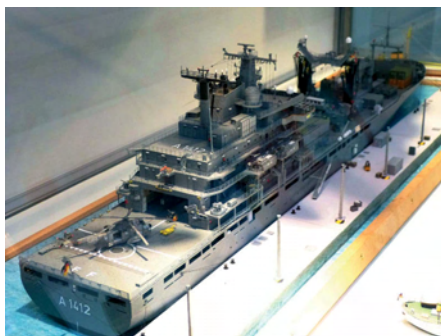
The actual book 1:250 card kit and the laser cut upgrade bought by the author at the show



A card diorama built by Philip Tietz



Another card diorama built by Philipp Tietz, again using patterned glass for a seawater effect in this US helicopter rescue scene



An impressive stern shot of the German naval supply vessel A1412 Frankfurt am Main. 1:250 scale and 695 mm (27.63 inches) in length the kit cost €49.99 with a laser cut upgrade kit at €79.00



A mid-ship photo of the fine detail of the A1412 Frankfurt am Main kit by HMV – model number 103220. Not for the fainthearted and best kept in a glass case when completed!



Fathers and sons are early morning visitors to Simon Weemaels' radio controlled diorama PLUTO August 1944 at Querqueville, Cherbourg



Simon Weemaels talks to a visitor about the PLUTO diorama



While Simon Weemaels talks to a visitor, a colleague operates the pipe laying tug Guardsman, part of the radio controlled PLUTO Querqueville, Cherbourg diorama

go on the pool and give a demonstration. Gary spoke to the team and offered to send some badges and insignia to them for their display – a nice touch and good for international relations!

Well, two days passed very quickly and we were just five of some 88,000 visitors across the five days. We soon had to pack all our new models, tools (Martin bought a wonderful vacuum machine to take the air bubbles out of his resin moulded figures – Macs Mouldings), Bühler motors (just can't resist buying matched pairs when I see them!) and various catalogues into the boot of the VW Passat.

The return trip was without incident, except for a delay at Customs on the French side, but we caught up the time and were soon at Ashford International station to go our different ways back to Surrey, Kent and Dorset.

Our thanks to Phil for organising the trip and making this report possible and maybe a few of us will return by air next year – watch this space. However, I would suggest you give it a go yourself – it really is worthwhile (look at the many YouTube videos and photo records) and you don't need to speak German – Ich spreche kein Deutsche. Danke. Auf Wiedersehen!



The radio controlled pipe laying tug Guardsman in the Querqueville harbour of Simon Weemaels' PLUTO diorama



Very typical, the attractively designed and manned SMC Gelsenkirchen eV stand. This photo was taken just before some of the 18,000 visitors for the day arrived!



Different – the all wood beam trawler Niet Aankomen SVP built by D.G. Moot from Holland



One of Udo Hekenrath's 17 model boats, a model of the anchor handling vessel Normand Draupne. Visit their club site at www.b-o-s-berlin.de for more models



Quality! A drop in the ocean of this vast show, where every display is meticulously laid out to display the models for the visitor



A fine 1/10th scale 20 metre class DGzRS lifeboat model of Eiswette



The superbly detailed flying bridge of DGzRS lifeboat Eiswette



Michael Rüttel's 23.1 metre class DGzRS lifeboat Hermann Rudolph Marwede, yet again entertaining and hopefully inspiring the audience



Eiswette, a 1/10th scale 20 metre DGzRS lifeboat displaying on the water

THE LIFEBOAT ENTHUSIASTS' SOCIETY (LBES) WEST MIDLANDS MODEL LIFEBOAT RALLY, DUDLEY, 11TH MAY 2014, BY KIM BELCHER

Having been invited to this event last year, but with a conflict of model boat loyalties that weekend I had to turn it down, I made sure this year's date was firmly in my diary so I could partake!

Run by Rob Smith and John Owen (they plan and organise our LBES stand at the Warwick International Model Boat Show each year) the event is for like-minded model lifeboat enthusiasts to meet, sail and talk lifeboats. Held at the Dudley Watersports Centre in the Black Country, just to the west of Birmingham, this large lake is in fact the Netherton Reservoir. A vast water with plenty of decent wildlife, which Rob just happens to be fortunate enough to view from his workshop! However, due to the limited car parking it is not publicised, but the odd few ramblers passing by popped in to have a look at what these mad modellers were doing in such atrocious weather conditions.



With John Owen's Arun class and Atlantic 21 RIB in the foreground, Alan Turner and Jeremy talk lifeboats in front of Alan's Tyne class



Jeremy's award winning 1/12th scale Brede class lifeboat

Yes, the wind was blowing extremely fiercely and there were heavy intermittent showers throughout the day, with small waves making sailing 'fun'. Unfortunately this put off some clubs and modellers who were hoping to attend. That said, Droitwich, King Lear and Dover-MBA clubs all had members present, most of which were LBES members in their own right. The clubhouse was open for us to display our boats in and John Owen's other half provided five of the most delicious large sponges and cakes, along with copious cups of tea and coffee. Outside, but under cover of a garage, John and Rob's good friend John had a great barbeque on the go most of the day! Sue and Adrian Clutterbuck were also in attendance as Adrian's Marine Figures, selling plenty of various scale figures – on this occasion



Alan Turner and his Tyne class prepare for stormy waters



Alan Turner's 1/12th scale Tyne class powering through the waves

mainly lifeboat men – and a good selection of Nicholas Leach's lifeboat books at very good prices!

John and Rob had set up a great harbour section so that we could shelter from the storm and also have some fun steering and negotiating ourselves in and out of. Access to the water was from a sloping slipway used by the club's sailing dinghies and also fixed and floating jetties.

'For those in peril on the sea...' as the famous hymn recalls, applied to our intrepid cox'ns on the day. I think each boat that



Alan's Tyne class heads for harbour – this one built and laid out by John Owen and Rob Smith



Alan Poole's 1/12th scale Brede class being put through its paces – its self-righting capabilities were not tested! The original boat RNLB Inner Wheel 33-07 was based at Poole in Dorset

attended – mainly 1/12th scale – ventured onto the water! My 'heart was in my mouth' most of the day watching what was going on – and only one boat belonged to me!

Graham and Marie from King Lear MBC had both a Solent and Waveney class boat between them, Jeremy from Droitwich his wonderful award winning Brede class, Alan Turner a truly great Tyne class, Alan Poole from Dover another award winning Brede and also one of the small 1/32nd scale RNLI Impact Severn class, then John Owen his Arun class and Atlantic 21 RIB (Rigid Inflatable Boat) – powered by two outboard motors whose drive systems function like the real version! Then Rob Smith had his well-known and much photographed (also appearing on TV recently!) Severn class, which really did look as if it could handle the weather! Lastly, I was asked to take my divers' boat Diving Belle at 1/8th scale and built on a Models by Design 1/12th scale Holton 32 fishing boat hull. This was because the sub-aqua section of the Watersports Club were using the lake until 1100hrs, while we set up. They were very interested and gave a few ideas on how to improve the overall presentation – all comments were gratefully appreciated!

A really enjoyable day was had and a few funds for the RNLI were raised. For me (and especially Alan Poole) the real gem was that when Jeremy and Alan were talking it transpired that Alan's award winning Brede, displayed at a London Model Engineering Exhibition in the '90s was the inspiration for Jeremy to start building his Brede and other lifeboats – what a coincidence! It was a truly good 'meeting point' for all.

Later in the day Rob gave Alan Poole and myself a scenic tour



Marie from King Lear MBC steers a steady course, with a strong following wind, in her 1/12th scale Solent class lifeboat – a realistic looking shot



Meanwhile Graham, from King Lear MBC, heads into wind and keeps the 1/12th Waveney class from rolling in the swell!



Rob and his Severn class rendezvous with John Owen's 1/12th scale Atlantic 21 RIB, being a much modified Lesro kit. It took me back to an actual situation a few summers ago whilst out on the Newhaven Severn exercising with the Brighton Atlantic '85 class

around the local canal ways and then down to Netherton Green to show us a replica of the RMS Titanic centre anchor (a 1910 Halls Olympic Class) made for the 2010 TV documentary 'Titanic: The Mission' – see Jonathan Smith's article 'Titanic – The Hingley Anchors' on the Internet. This was for some time the largest anchor ever forged by hand. It was made by Noah Hingley and Sons Ltd.,



John Owen really does demonstrate the prowess of this wonderful Atlantic '85 RIB model – it has entertained and pleased the public at many shows



Rob Smith ploughs on, regardless of the weather, with his completely scratch-built 1/12th Severn class Falmouth based 17- 29 lifeboat

of Netherton, along with its cable chains (go to YouTube – Hand forging chains (1) – Blacksmithing – to see some real team work!). After use it seemed fitting to 'rest' it here – where the originals were forged.

Our thanks must go to John and Rob for organising the day, also to Rob for his wonderful hospitality throughout the weekend to both Alan and myself. A special thanks to Timothy Newey, the landlord of the famous Old Swan pub in Netherton village, who went above and beyond the required need to make us very welcome, until 0200hrs on Monday morning!

Maybe next year the weather will be more inviting and we shall get some more lifeboat model enthusiasts with their Watson, Rother, Tamar, Trent, Mersey, Clyde and Shannon classes. See you there.

Post Scriptum – four large pieces of Jo's superb ginger cake made their way back to Kent, where they were shared with no one!



The author's 1/8th scale Diving Belle in the hands of Marie and coping with the conditions, its deck awash most of the time, but the scuppers worked well!



On Netherton Green the Noah Hingley & Sons Ltd., replica RMS Titanic hand forged Olympic class anchor, weighing 16 tonnes



Rob Smith and Alan Poole stand by the replica RMS Titanic anchor on Netherton Green for scale!. It was a hand-forged Olympic class anchor, weighing 16 tonnes and originally built by Noah Hingley & Sons Ltd., of Netherton

MARGAM PARK MODEL BOAT CLUB SHOW, 24TH TO 26TH MAY 2014, BY GRAHAME BOLDING

In spite of the rapidly deteriorating weather the club's Event Committee managed to set up the marquees, tables and all the other major equipment on Friday afternoon. Saturday and Sunday we spent most of the time hiding from some ferocious downpours, however, some members braved the elements and sailed their boats. As always, our 'Have-a-Go' boats were made available for any children who turned up.

Monday, however, was a totally different story. The sun came out as did the public. There were also lots of other events going on in the park. The annual kite festival, magicians, jugglers, Civil War enactment group, craft displays and much, much more. The queues for the Have-a-Go boats were never ending and the static displays were very popular with the general public. One model of particular interest was a huge Sunderland seaplane owned by Grahame Bolding. This was a non-flying model but it could race across the lake in a most realistic manner.

The whole show was more than worth it in the end. Monday was a great success and made it all more than worthwhile. Big thanks to all our members who attended.



The huge non-flying Sunderland



Rainy days



Queues for the Have-a-Go boats

18TH ALFOLD CHARITY MODEL BOAT SHOW, SPRINGBOK ESTATE, ALFOLD, SURREY, 31ST MAY AND 1ST JUNE 2014, BY KIM BELCHER

The show went on! After a rather wet build up to this great little family show, the main display area was waterlogged in places and soft under foot. The CEO of Care Ashore (formerly The Merchant Seamen's War Memorial Society), Trevor Goacher, sent out a communication to all exhibitors and traders asking for a reduced amount of vehicle access to the display area, meanwhile locating the caravans and tents to other areas within the estate. He asked for patience and understanding regarding the circumstances, so that a cancellation did not have to take place and nearly all complied. It worked and 26 model boat clubs exhibited with some 350 models on display, a large percentage of which went onto the water across the two days. There were also six traders – Models by Design and D.K. Figures (1/12th scale), Hunter Systems, DBH Services (modelling supplies), Mastman and Tony Mudd (Models U Display) with his plastic models stand. Then there was the large Bring and Buy marquee, with a 10% donation from all sales going to Care Ashore. Finally, and most importantly, the 1st Roffey Girl Guides Company and their Rangers section were in attendance again, thankfully, to bring us good quality refreshments at sensible prices.



Saturday morning just before the gates opened. In the foreground Phoenix Marine Model Club with Black Park and the Association of Submariners before the LBES and MBA – Dover stands. In the background the wonderful white set up of the Moorhens MBC



Alan Poole's 1/48th scale HMS Anglesey, a Fishery Protection Vessel. Scratch-built on a Sirmar hull



Alan's attention to fine detail on HMS Anglesey stands up to very close attention at the stern of the superstructure. Well researched and finely scratch-built



Alan Poole receives 1st in category and the cup from Alan Colson at the close of the show, with Chris Eager in the background giving the commentary

I do not have the space to mention all the clubs involved or their models, or even all the award winners, but here are a few which caught my attention and I trust you will enjoy seeing.

Being a 'figures on boats' man myself I did like several of the little groups on Phill Sadd's paddle steamer Compton Castle, a semi-scale model on a Models by Design hull, using photographs of the original boat. The figures were Preiser (www.preiser-figuren.de) 1:22.5 scale (railway 'G' scale) and to me were a refreshing set of poses. I must mention that the fenders were made by Phill's wife Carol; the couple were representing the Shepton Mallet Drifters MBC.

Next were a few 'grey funnel' items! On the Model Boat Association – Dover stand an Island Class Fishery Protection Vessel, to 1/48th scale, of HMS Anglesey. This was made by Alan Poole, using a Sirmar hull and then totally scratch-built – the detail of which could stand up to very close inspection. It had single shaft propulsion using a Swiss Maxxon motor with a 3:1 reduction



Southern Model Lifeboat Society member Tony Olliff receives his awards – I have shots in old Model Boat magazines of the same thing happening 30 years ago!



More fine detail, this time on one of Peter Henwood's 'E' Class – Tiger – lifeboats. Fully scratch-built from photos and measurements he took of the actual boat



A top shot of Tony Olliff's Speedline 1/16th scale model of a Severn Class lifeboat, for which he won 1st in category and the cup

gearbox. This model won 1st place and the cup in its category. Amongst the sailing craft was a beautiful looking French Bautier (fishing boat) at 1/10th scale and named Louis Heloise. This was scratch-built plank on frame by Lou Monk from the Southend Model Power Boat Club. It is now owned by Peter Bone, of the same club, who has recently fitted a sail winch. All the fixtures and fittings were scratch-built by Lou and the model has an overall height from waterline to mast top of 1200 mm.

On the Southern Model Lifeboat Society stand Reg Woodcock, Peter Henwood and Tony Olliff had another great display of mainly modern lifeboats, amongst which I really liked the 'E' Class (sometimes referred to as Tiger Class) RIBs used on the River Thames and scratch-built by Peter to 1/12th scale, they really do show some fine detail. Tony had a 1/16th scale Speedline model of a Severn Class lifeboat based on the one at Newhaven 17-21. This won 1st in category and the cup.

Then there was Ken Murray and 'The Beastie' from the West Hampshire Modellers – every year he pulls out another winner in the Novelty category. This was her maiden 'swim' and at over 14



Louis Heloise, a 1/10th scale French fishing boat built by Lou Monk and now owned by Peter Bone

feet (4.27 metres) in length the rest of us had to keep out of the way. She had electric drive, sprayed water from the mouth, smoke (pellets) from her nostrils, the eyes lit up and the tongue moved. It was a three month build using expanded polystyrene and each scale on the bodywork had to be painted four times to get the desired effect!



The exhibitors' area for on the water displays, with Chris Eager's commentary caravan in the background. Some identified, left to right, Alan Poole, Sean, Jonathan Atkins and Alan Bond of Technobots sound module fame



Sunday afternoon and on the left part of the Portsmouth Model Boat Display team entertaining part of the 70 plus audience with their WW2 convoy and U-boat enactment



Up close and personal on Phill Sadd's West Country paddle steamer Compton Castle. Some wonderfully posed figures throughout



Another part of the display team entertaining another section of the audience with their Mulberry Floating Harbour, landing craft and Sherman tanks

they were very grateful. Go to their website (www.careashore.org) for more information and if your club or society has some spare funds for a charity, please consider this very worthy cause. See you there again next year!



Ken Murray collects his 1st in category award and cup



Ken Murray's The Beastie on her maiden swim. At 14 foot (4.27 metres) we all kept out of the way!

Lastly, the Portsmouth Model Boat Display Team. This year, again under the direction of Alan Taylor, the team gave us a great finale to the show with a WW2 convoy and U-boat item and plenty of depth charges, followed by a Landing Craft (LCT) demonstration using a Mulberry Floating Harbour section designed to facilitate rapid unloading of vehicles, armaments or stores. They gave us M4 Sherman tanks – which really entertained the audience at the place of disembarkation.

Well, all in all, another great weekend, supported by many clubs and modellers. Some 300+ paying visitors attended over the two days and were kept informed over the PA system by Chris Eager's commentary. Elsewhere models and equipment changed hands, many barbeque meals were eaten and Care Ashore – a truly marine based charity – were supported. A few days after the show I spoke to Trevor Goacher, their CEO, who said that after all expenses for the weekend had been paid they had £1,320 for their funds, raised or donated by the model boating fraternity, for which

FOLKESTONE AIR SHOW, 7TH AND 8TH JUNE 2014, BY PATRICK BONIFACE

Folkestone Air Show provided many thrills in the skies above the Kent seaside town; but on the historic Leas that looks out over the English Channel there were plenty of attractions at ground level too. Amongst them was a large display area provided by the Royal Navy Reserves. One of their number A/B Matt Beck of Gillingham was present as part of HMS President Medway Division. Matt is an accomplished model boater, often found on the lake at Maidstone's Moat Park with the Cygnet's Model Boat Club with his impressive 1/72 scale model of the Type 22 frigate HMS Chatham which took him two years to complete. Matt's next project is a massive 1/72 scale model of the new Royal Navy aircraft carrier HMS Queen



Elizabeth. The model, Matt says, will probably be in three parts and when complete be a staggering 14 feet in length.

HMS Chatham and its builder A/B Matt Beck

RICHARDSON TROPHY, FOOTY TEAM RACE, 22ND JUNE 2014 AT FRENESHAM POND, BY ROGER STOLLERY

This event was organised by the Guilford Model Yacht Club, with the support of the FPSC Model Yacht Group, at the Frensham Pond Sailing Club. The event went very smoothly with five teams of Footys from across the country competing in teams of three.

Twenty races were sailed in two rounds of a schedule sailing each other team twice; each team sailed a total of eight races. The names of the teams were made up to differentiate between the two teams from the Abington Park and a related name for members of different clubs forming a team. The final result was a three-way tie between AP Assetts, Swords and Frenshpoole with six wins each. This was decided by a sail off with three more matches with AP Assetts winning the event.

Overall it was an excellent day's sailing and Angus Richardson, in whose memory the trophy was given, would have been pleased with the sporting way it had been sailed and the input by the young dinghy sailors in the AP Assetts and Frenshpoole teams.

Results:

1st – Abingdon Park Assetts – 6 wins: Peter Jackson, Slim; Peter Shepherd, Fat Boy Slim; Andrew Sturt (Jnr), Slim

2nd – Swords – 6 wins: David Wilkinson, lambus 2; Scott Wallis, Ranger; Sid Sims, Ice

3rd – Frenshpoole – 6 wins: Martin Raishbrook, 1299 mod; Rory Burdock (Jnr), Supabug; Nick Royse/Roger Stollery, Ice **MMI**



The winning team

MYA UPDATES

UP TO DATE NEWS ON THE RADIO YACHT RACING SCENE

AUTHOR: TIM LONG, MYA PUBLICITY OFFICER

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Welcome to the second of our bi-monthly MYA updates. Last time we looked at the three most popular International classes that are sailed by the MYA, and at the time of writing this article the M Class World Championships have just reached their conclusion with GBR's Brad Gibson and Graham Bantock topping the score sheets and with two other UK skippers, Peter Stollery and Darin Ballington, placing in the top ten it was an excellent showing from team GBR. There will be a full event report in a future edition of the magazine.



Different design ideas are the norm in the Footy class (Pic Peter Jackson)

At the end of June the Vane 36 Nationals took place at the recently rejuvenated Llandudno MYC, it was a very well subscribed event with the largest entry to the event in over 25 years. With the event being decided between the final pair on the final run down the lake it can only be described as a great success for vane sailing. The winner was Andy Fernie by a couple of points.

By now many of the MYA Classes National Championship events will have taken place and in some respects from September onwards the radio sailing season starts to wind down for many after what will have been a very busy couple of months of racing. One of the last of the big UK Championships was the IOM Nationals held at Datchet over the August Bank Holiday weekend, which had a full complement of entries from both the UK and abroad. The fact that there are so many foreign entries is a testament to the quality of competition at UK events.

There are, however, still lots of events to take part in, from the smallest, and newest MYA Class, the Footy to the Radio A Class veterans National Championship at Gosport, as well as an M Class ranking event at Fleetwood and a smattering of IOM events across the country there is something for everyone during September.

NEW CLASSES AFFILIATED TO MYA

As reported in last month's Sail Free article I can confirm that the Footy, RG65 and the Dragonforce 65 were all affiliated to the MYA at the June council meeting. This is fantastic news for all three



Blue skies and a light breeze for the V36 Nationals at Llandudno (pic Mike Gibson)



A mixed fleet of RG's and DF's making to windward (Pic Matt Riley)

classes and I am sure that there will be more classes looking to make the step of becoming affiliated in the near future.

Peter Jackson is the newly appointed Class Captain for the Footy and had the following to say about the recent affiliation. "The Footy Class goes from strength to strength; recently affiliated to the MYA the class now boasts a full program of events throughout the year, from early spring through to autumn". If you are interested in a challenging design project at low cost then you could do a lot worse than stepping into the world of the Footy.

The class ethos has been from its very inception to share ideas and designs, and so a lot of free plans and sail details are available from some of the top Footyists to download at the extensive UK class website. These range from the very simple to get you started to the more intricate for the experienced builder/skipper, in addition the website also covers build details for various elements and has reports from all the major race meetings throughout the year, everything you need to make your Footy journey a success."

Mark Dicks and John Tushingham are the appointed Class Captains for the RG65 and the Dragonforce 65 classes. "We are pleased to now be part of the MYA's growing portfolio of classes and feel that both the RG and DF classes will continue to grow and develop through our affiliation to the world's most prestigious Model Yachting Association." writes joint class publicity officer Tim Long, who goes on to say, "There is still plenty of racing to be done during the autumn and winter months with the conclusion of the Midland District RG series and the pre-Christmas DF series at West Lancs YC in Southport which proved to be a great success last year."

All three classes are working together to encourage new skippers into the sport of radio sailing at both a development level and restricted class level in the case of the DF65 and the MYA sees this as a great opportunity to bring new membership to the association at a grass roots level who can then permeate upwards into other, more technical and high performance, classes which will serve to continue growth and strengthen our excellent sport.

If you are considering taking up radio sailing then you could do a lot worse than to pop along to the MYA trade show which is to be held at the Rowheath Pavilion at the end of November. It is an excellent chance to come and take a look at many of the classes and chat to the designers, builders and suppliers of the boats and equipment, many of whom are top skippers.

For more information on the MYA in general please check out www.radiosailing.org.uk and for specific information on the three newly affiliated MYA classes please take a look at their websites.

Footy – www.sailfooty.com

RG65 – www.rg65.org.uk

Dragonforce 65 – www.df65racing.co.uk **MMI**

CHANDLERY

NEW BOOKS AND ITEMS OF
HARDWARE OF INTEREST TO THE
MARITIME MODELLER

ST OLAF HOSPITAL SHIP 1/96 SCALE

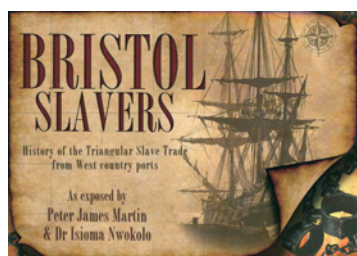
This attractive model with a length of 1.4 m, beam of 385 mm makes into a super detailed replica of the ship, with all of its cluttered appearance. It has lots of carrying capacity for the largest NiCads to please those who like a long sail together with plenty of room inside for adding smoke, sound, and if ever a model would show off her lights, this has got to be the one.



Three trays of fittings come with the kit to add all the detail, including cast metal fittings for fine details such as bollards, fairleads, anchor windlass and deck fittings. There are cast resin fittings for the huge number of Carley floats. A large brass etch sheet with

over 1000 parts supplies all the extra fine details such as vents, stanchions, ladders, companionways, etc. The complete assembly from the main deck to the top of the bridge is all laser cut, and laser engraved, from five sheets of 1.5 mm, 1 mm, and .5 mm high impact styrene sheet for rapid assembly of this complex model. The funnel and the 16 lifeboats are in vac formed styrene, with laser cut seats and laser engraved detailed foot boards. All this is on Deans Marine's standard plated and detailed glass fibre hull. Running gear includes a scale prop, prop shaft with fitted oiler, a comprehensive set of instructions and a full size plan. Also included in the package is a build CD of the original prototype models with hundreds of pictures plus pre-cut cast vinyl green line and red crosses. First release price will be £399 (limited edition only).

Further details from Deans Marine, Conquest Grove, Farcet, Peterborough, PE7 3DH. Tel: 01733 244166 or www.deansmarine.co.uk



BRISTOL SLAVERS

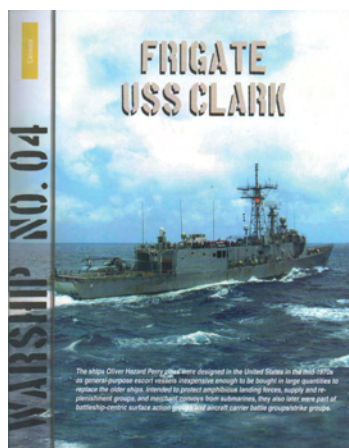
The book tells the history of the Triangular Slave Trade from West Country ports. The first leg of the trade is by goods sent from the Bristol port to Africa and exchanged for kidnapped slaves, the second leg is the harrowing journey for these slaves

transported on the same ship to America and the Caribbean. Here they were unloaded, sold and put to work, the ship is reloaded with sugar, tobacco, rice and all types of goods for the third leg of the journey, the return to Bristol – hence the triangular trade. The book also details the people from Bristol and the West Country who were involved in some way or another with the slave trade. Many of the people who made vast fortunes are names many will recognise such as Fry (Chocolate) and Wills (Tobacco) – you will be surprised by the people involved.

Dr. Isioma Ndili Nwokolo; a doctor and psychiatrist also goes into the psychosocial aspects the trade had on the slaves, although born in England her family tree can be traced back to the time and area from where the slaves were kidnapped.

The book is well written and fully illustrate and very informative – well worth reading. (Review by RT)

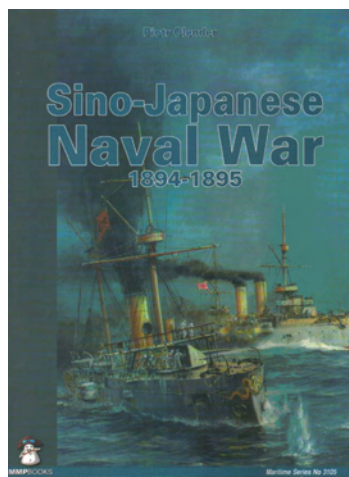
Authors: Peter James Martin and Dr. Isioma Ndili Nwokolo
Publish date: 2014
RRP: £12.50
ISBN: 978-0-956002-11-2
Paperback: 44 pages
Illustrations: Colour, black & white and drawings
Dimensions: 30 cm x 21 cm
Publishers: Bristol Maritime Heritage



WARSHIP 04 FRIGATE USS CLARK

The ships of the Oliver Hazard Perry class were designed in the United States in the mid 1970's as general-purpose escort vessels inexpensive enough to be bought in large quantities to replace the older ships. The book shows many very detailed colour pictures and line diagrams of the armaments. A useful reference book for the maritime modeller.

Author: Rindert van Zinderen Bakker
Re pub Date: 2014
RRP: €14.95
EAN/ISBN: 978 90 8616 194 2
Format/Pages: Softback/48 pages
Illustrations: Colour pictures plus line diagrams
Dimensions: 22 cm x 27 cm x 6 mm
Publishers: Lanasta, Slenerbrink 206, 7812 HJ Emmen (NL)
www.lanasta.com



SINO-JAPANESE NAVAL WAR 1894 – 1895

This new book covers the Sino Japanese Naval War 1894 -1895, a little known part of late 19th century naval history. The First Sino-Japanese War was fought between Qing Dynasty, China and Meiji, Japan, primarily over control of Korea. The background, operations and outcomes are described in detail. All the ships involved, both Japanese and Chinese, are described and illustrated

with scale drawings, maps and rare pictures. **MMI**

Author in Chief: Dr Roger M. Wallsgrove
Re pub Date: 2014
RRP: £24.95
EAN/ISBN: 978 83 63678 30 2
Format/Pages: Softback/228 pages
Illustrations: Black & white pictures plus line diagrams
Dimensions: 21 cm x 30 cm x 1.3 cm
Publishers: Mushroom Model Publications, 3 Gloucester Close, Petersfield, Hants GU32 3AX
http://mmpbooks.biz/mmp/books.php?book_id=245

WATERLINES

BLAME IT ON BRADSHAW – BRITAIN'S RAILWAY STEAMERS

AUTHOR: KELVIN HOLMES  GREAT BRITAIN
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With the explosion of rail travel in the 1800s there came the introduction of ferries to provide onward transportation from the end of the seaside line. So for example when railways finally reached Weymouth in 1857 the London & South-Western Railway (LSWR) were first off the mark with PS Express which departed on 13th April taking eight hours to reach Jersey. The Great Western Railway which ran trains down from Wiltshire and Somerset quickly followed suit forming the Weymouth and Channel Islands Steam Packet Company. The steamers Aquila and Cygnus were chartered starting their service before April was out.

The huge proliferation of small independent companies saw many mergers and takeovers, and with the outbreak of war in 1914 all these were placed under government control. In 1919 it was determined that the railways should be returned to private ownership but with significant rationalisation. This was achieved with the Railways Act of 1921, which established four large operating companies: London North Eastern Railway (LNER), London Midland & Scottish Railway (LMSR), Great Western Railway (GWR) and Southern Railway (SR). In the case of the latter this led to the incorporation on 1st January 1923 of SR, which amalgamated LSWR, London Brighton & South Coast (LBSCR), South-Eastern and London Chatham & Dover Railway companies. Similarly LNER was formed from six smaller companies including Great Eastern, Great Northern and Great Central. When the railways were nationalised in 1948 the huge British Railways comprised six regions with the former SR becoming BR (Southern Region) and LNER becoming BR (North-Eastern Region).



Basic but rare – Hydra's Shepperton Ferry (John Taft)



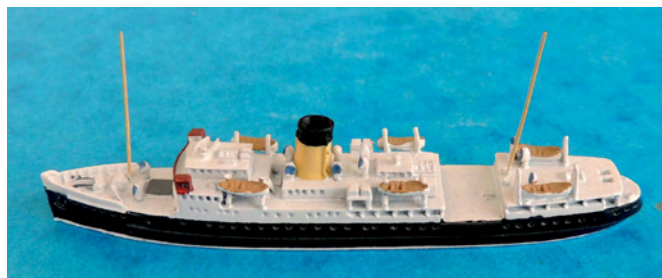
Original 'G' model of the Isle of Jersey



Rhenania's Wingfield Castle in British Rail colours



Albatros model of the Malines



Princess Maud by Albatros



Princess Victoria (as in the profile)

The London Midland & Scottish Railway (LMSR) brought together the North Western, Midland and West Scottish Railways. The GWR having taken over many smaller companies in the preceding years became from January 1922 one of the big six operators until nationalisation as BR (Western Region). GWR were also famous for the biggest 'ferry' of them all back in 1838 when the paddle steamer Great Western departed from Bristol for New York. The iron-hulled screw fitted Great Britain followed in 1845 and today in Bristol she is well worth visiting, but we digress. Hopefully this background will help place the various ferries and models in context.

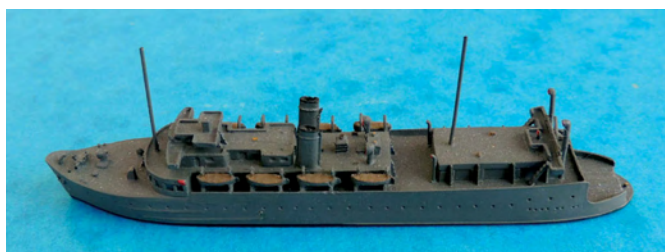
A significant innovation in the early 20th century was the steam turbine. Amongst the earliest ships so fitted were the cross channel steamers, The Queen and Brighton (LBSCR), both completed in 1903. There have been six Brightons, the latter being the fourth and that modelled by Albatros the fifth, this ship being bombed and sunk at Dieppe in May 1940.

The three Triang models are identical although in reality the Isle of Sark had a different bow shape known as maierform (first British ship so fitted) and in 1934 was given experimental Denny-Brown stabilisers, another first. As regards the real ships all three were sold in 1960/61 and had been scrapped by 1963.

Princess Victoria was the first drive on/drive off car ferry and was operated between Stranraer and Larne by the LMS. She was sunk by a mine in 1940 off the mouth of the Humber. Princess Maud was the last ship to leave Dunkirk in 1940; she survived the war to be sold to Panamanian owners in 1965 as Venus. Malines was torpedoed off Port Said in 1942 but raised and refitted by the MOWT; she was scrapped in 1948. The Hampton Ferry and two sisters served until the early 1970s. The Wingfield Castle found a permanent home in Hartlepool where she is open to visitors; her sister ship Tattershall Castle is a floating pub near Victoria Embankment. Winchester was sold in 1971 and eventually scrapped in 1988. Hythe had plied between Southampton and the Channel Islands pre-war so was used to help evacuate the islands

Name	Operator	Date	Model (* = illustrated)
Malines	Great Eastern (later LNER)	1922	Albatros (AL) 183* (class of 3)
Hythe	Southern Railways	1925	Solent Model Ships (SOM) 2*
Isle of Jersey	Southern Railways	1930	Triang (Tr) 722, G43*, GLR 18a, Navis 901, GLR 18b (hospital ship)
Isle of Guernsey	Southern Railways	1930	Tr 723, GLR 18, GLR 18c (1946)
Isle of Sark	Southern Railways	1931	Tr 724
Brighton	Southern Railways	1933	AL 7 (plus 7N with painted decks)
Princess Maud	LMSR (later BR Scottish Region)	1934	AL 85*
Wingfield Castle	Great Central (later LNER)	1934	Rhenania SM-3*
Shepperton Ferry	Southern Railways	1935	Hydra 26* (blue hull)
Twickenham Ferry	Southern Railways	As in 1965	Hydra 26a (black hull)
Hampton (Ferry)	Royal Navy	1940	Neptun 1195* (minelayer)
Princess Victoria	LMSR	1939	AL 94*
Winchester	Southern Railways	1947	SOM 1*

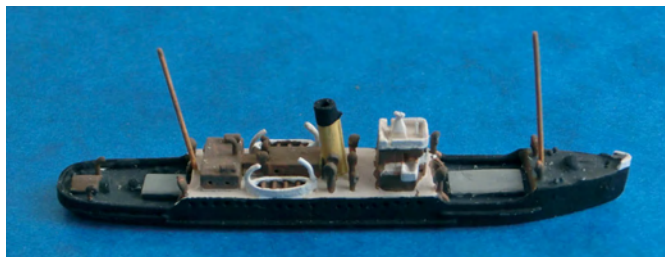
Waterline Models of Railway Ships



Neptun Hampton Ferry as a minelayer



Solent Ship Models' debut was the Winchester



Hythe could also represent Southern Railway's Ringwood, named after the small market town once on the main line to Weymouth

in 1940; she was scrapped in 1955. She had three sister ships namely Minster, Maidstone and Ringwood.

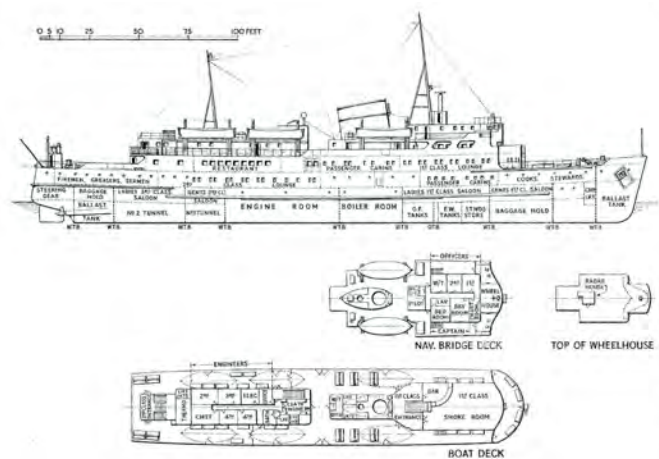
In 1963 the British Railways Board was established and in 1968 all ferries were transferred to the Shipping and International Service Division. Scottish vessels including those of Caledonian and Macbrayne were assigned to the Scottish Transport Group at which point they were no longer owned by BR. In 1979 Sealink UK was created owning both ferries and ports although as the use of vehicle roll-on/roll-off increased the links with the railways were diminishing. In 1982 Associated British Ports (ABP) took over the ports and two

years later the ferry business of Sealink was sold off to the American company Sea Containers Ltd who created British Ferries Ltd. In 1990 the ferry business was sold on to Stena. Perhaps the final twist is that ABP in 1989 bought the original Southampton, Isle of Wight & South of England Steam Packet Co (aka Red Funnel), although ABP themselves have now been acquired by Dubai Ports (World) who from 2006 also took over P&O Ferries (see Waterlines June – August 2011 and Revisted #10).

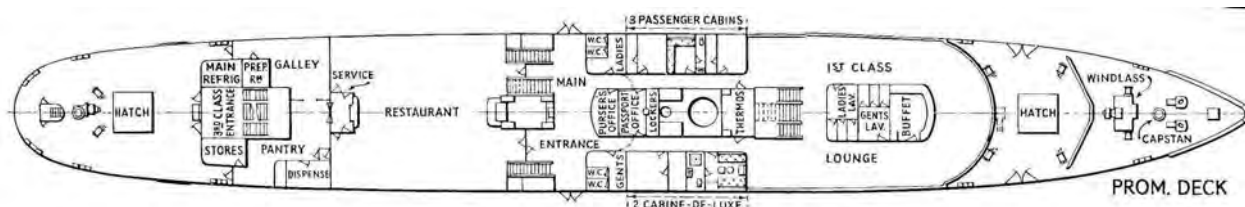
This month's manufacturers include the usual (and reliable) suspects, namely German made 1/1250 models by Albatros, Navis/Neptun, Rhenania & G, plus from home waters and in 1/1200th scale, Triang and Solent Ship Models who first appeared in Waterlines in late 2012. This range specialises in smaller vessels to be seen in the Solent between approximately 1955-1965. The first two models were in 1/1200 but the most recent (John Biscoe, SOM3) is in 1/1250. For further information please contact John Pomeroy at 5 Montreal Rd, Brighton, BN2 9UY (john_pom@hotmail.com).

REFERENCES AND FURTHER READING

Recommended (in chronological order) are Boat Trains and Channel Packets by R. Bucknall (published 1957), Railway and Other Steamers by Duckworth and Langmuir (2nd edition, 1968), British Cross Channel Railway Passenger Ships (1994) by John de S. Winser and Railway Steamers at War (2008) by AJ Mullan plus of course the invaluable Duncan Haws Merchant Fleets Volumes 24 – 26 which detail Britain's Railway Steamers. **MMI**



BELOW/RIGHT: For the modellers: Southern Railways Brighton of 1950





ABEILLE BOURBON: THE ST. BERNARD OF THE HIGH SEAS

ERIC DESCRIBES HOW HIS FRIEND JEAN-LOUIS DIARD DESIGNED AND BUILT AN ACCURATE 1:50 SCALE MODEL OF THIS VERY POWERFUL SEAGOING TUG

AUTHOR: ERIC BAUTHIER

The Abeille Bourbon, the flagship of the company Abeilles International, is a tug for assistance and salvage, operating in sea areas with heavy traffic. At 80 m long and 21,740 hp it is one of the most powerful tugs in the world. This article describes the sailing model of this behemoth in 1:50 scale by the talented designer Jean-Louis Diard.

Designed by Norwegian architect Sigmund Borgundvaag and built by the Myklebust shipyards in Norway the sister ships, Abeille Bourbon and Abeille Liberté, are the result of a highly successful project in 1999 called 'Abeille 2000'. The initial deal was to begin work on two tugs to replace the Abeille Flandre and the Abeille Languedoc which, although very good ships, now lacked performance in some areas. Included in these were the firefighting, pollution control, the passenger capacity and the overall lack of power. In addition, this new design was based on the opinions and comments of sailors who served aboard the tugs to be replaced, a first for this kind of design.

Although belonging to the shipping company Abeilles International, the ship was chartered for a period of 14 years by the French Navy and so she wears a blue livery topped with tricolor stripes. The homeport of the Abeille Bourbon is Brest, while the Abeille Liberté is based in Cherbourg.

A MODERN SHIP

L'Abeille Bourbon is a vessel adapted to tomorrow's requirements; it is equipped with the latest technology in every area. For example, two controllable/variable pitch propeller and nozzle systems developed by Rolls-Royce, a niche that the public does not expect from this company, but works excellently. Moreover, the design features a 'liner' type finish, especially with respect to the staff accommodation and the level of technology used in welding the hull.

Its on-board electronics, propulsion power and pulling capability, decontamination systems and stabilisers are all the best available.



ABOVE & BELOW: The Abeille Bourbon, the original ship on parade at 'Tonnerres de Brest 2012'





Thus, the Abeille Bourbon is equipped to respond to the demands of all types of ships in distress. This includes the largest oil tankers and container ships transporting 1,200 containers sometimes carrying very dangerous products.

SOME CHARACTERISTICS

With an overall length of 80 m, width of 16.50 m, shallow draft of 6 m and 3,200 gross tonnage the Abeille Bourbon is one of the largest and most important tugs in the world while having only a 12 man crew. It can reach a speed of 19.90 knots (36.8 km/h) at full load and in a calm sea using its total power of 21.740 hp. It is powered by four main engines, MAK 8M32C, which consume 68 tonnes of fuel oil a day at full speed. There are also four lateral thrusters.

The ship is also equipped with plenty of rooms, which are used, amongst other things, for the reception of survivors, and where a command post may be established in the event of crisis, but in normal times this is a conference room. Also included is space for the storage of a range of specialist equipment such as pollution control apparatus, hoists for lifting, rescue and firefighting resources, which in the latter case consists of several pumps and water cannons and a foam gun as part of the external equipment. In addition there are toilet facilities, a radiological decontamination area, a full nursing station and a number of cabins for passengers.

The Abeille Bourbon has a Hydramarine crane with a boom of 11 m, two capstans pulling 10 tonnes each, a third winch installed on the main deck which can pull 20 tonnes, and two reels. As for towing, there is a double winch with a towing cable 1600 m long with a diameter of 8 cm capable of pulling 200 tonnes. A roll stabilisation system increases the capacity of the vessel to transport the two fast rescue boats, MP-741 Springers, and a third of a similar type for the recovery of survivors.

Amongst its advanced facilities, the Abeille Bourbon has a containment space where the crew is protected from explosive chemicals for 30 minutes. Moreover, it has a gas sensing device and it can deploy an explosion prevention system. In short, enough to face any contingencies and accidents she might encounter at sea or on-board other vessels. In addition, there are two helicopter landing pads. In a nutshell this is a brief presentation of the Abeille Bourbon, a modern rescue tug, which might, if paging permitted, be given in more detail.



Jean-Louis Diard, the builder, with the first sea trials of his model

THE DESIGNER

Jean-Louis Diard, Chalon-sur-Saône, has had a passion for model ships since 1976. Working alone, he has built various models over the years. In 2011, with the encouragement of a friend, he participated in his first meeting of model makers. Interested in the subject and wanting to show off his know-how, which by the way was more than justified, he took part in other events of this kind. Thus, out of necessity he joined a club, and not least, the 'Club Modelisme Naval Chatenoyen'. There our designer of the day fitted in perfectly and gave of his modest skills, as he likes to say, to the junior members. It wasn't, therefore, a question of participating in competitions, but to promote the subject among the younger generation, a noble task!

THE CHOICE OF MODEL

In the summer of 2009, Jean-Louis Diard completed the finishing touches on his Abeille Flandre, his twenty-first boat no less! This craft was to be the last in his personal fleet. He intended to close the doors of his naval workshop after a long and distinguished career. This choice was made without counting on the determination of the son of our model maker who has always been a fierce defender and is an admirer of the works of his father.

Indeed, there was no question for him that the workshop should not close after creating such beautiful models. Also, during a family holiday in Brittany, the lad cunningly led his dad to Brest where the Abeille Bourbon was docked and he suggested to him that he made a working model of it, the last in the series... In front of this majestic ship, Jean-Louis Diard agreed, but he had no idea of the adventure which he was committing himself to...

BEGINNING THE PROJECT

Having a computer and Internet access is certainly a plus when undertaking such a project, as it gives access to information, details and full view photos of the craft. In addition, image editing and drawing software can be used to interpret the images and produce the best looking plan. A scanner and a printer are the final pieces of technology needed to complete the planning. Hence, knowing the dimensions of the Abeille Bourbon, a scale of 1:50 was chosen, giving a model of 160 cm long, 33 cm wide and a draft of 12 cm.

The plan of the Abeille Liberté, the sister ship of the Abeille Bourbon, published by MRB, was helpful when building the hull. Only the profile of the propeller shafts and rear side thrusters required adjustment. Through the Internet, it is now easy to discover what lies beneath the hull of a ship, which was not necessarily the case when the original plan was drawn. Although the above plan offered a basic outline, Jean-Louis Diard wanted greater accuracy and thoroughness and was not satisfied until every detail was correct.

A new Internet search provided some answers to his questions, but not all. Too many grey areas still existed, particularly with regard to the upper decks, and playing Russian roulette with the design of the bridge is certainly not the attitude of our experienced modeller! Also, as in a well-known game show, he played his joker: he asked his brother, who lived in Brest and knew how the model was progressing, to knock on the door of the boat. On seeing the work already done the assistant captain agreed to help. Therefore, everything was much clearer and more accurate, and construction continued with the assurance that it would not contain any clumsy errors!

THE HULL

The hull is composed of a keel and twenty-one frames, all of ordinary plywood 10 mm thick, installed and built upside down. The decks are at two levels, the lower and upper decks, so a jig was constructed to keep the keel horizontal during construction. To obtain a perfect curve and exact shape for the frames, each element was copied, printed and pasted onto the plywood.

Thus, it was easy, for example, to reproduce frames and keel accurately, and precisely locate the position of the bow thrusters,



The frames for the hull have already been positioned across the model



A hole saw, attached to a PVC tube of the same internal diameter as the thruster propellers, was used to cut the thruster holes



The four holes for the thrusters are made. The model is worked on upside-down



The planking of the hull is completed



Wooden blocks showing the techniques used to shape the bow



The bow blocks fully shaped

engines, propeller shafts etc. This avoided complex calculations and also helped with the writing of this article, as there was plenty of information to answer any questions!

Following the completion of the frames the hull was planked with 3 mm x 10 mm of samba wood and then four holes were drilled for the lateral thrusters, two in the bow and two in the stern. Due to the length of the latter, the holes are formed using the blade of a circular cutter mounted on a PVC tube; one of the designer's useful tips.

Then, the model is returned to the jig for the completion of the bow and stern using blocks of ayous, an African species more commonly known as obeche. After extensive polishing, parts are shaped to finally blend into the hull. The advantage of using solid wooden blocks was that complex shapes could be formed, which is not feasible with planks, and they also protect the sailing model against possible future knocks.

The fitting of the propeller nozzles and shafts is performed using a template which ensured a perfect symmetry of the assembly. Then the PVC propeller nozzles were positioned. To ensure a long service life, but also allowing for variations in humidity and temperature, the hull was strengthened with glass fibre (142 g/m) and epoxy resin on the outside, then the interior was simply coated with epoxy resin. To obtain a good finish additional layers of polyester were applied followed by several sessions of sanding using progressively finer sandpaper.

The livery of the Abeille Bourbon is made using oil based paints (*), using acrylic brushes, and thanks to the use of different masks the three coloured hull was achieved. Some markings are reproduced from the original photos, reduced to the scale required using Photoshop and printed onto a transfer sheet. Others are 0.2 mm Plasticard while the lettering 'Abeille Bourbon' and 'Brest' are transfer letters. In future some markings will be made of photo etched metal.

(*) The oil-based paint has a large covering capacity and it dries slowly, which allows you



Covering the hull with glass fabric and epoxy resin

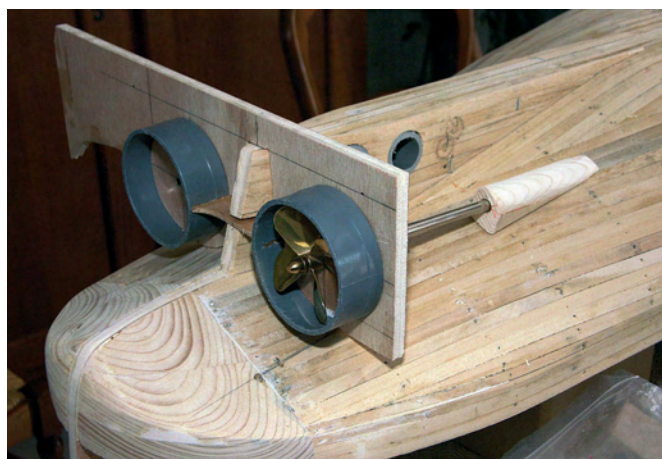


The first stage of painting

to make alterations along the way. It is washable, highly resistant to moisture and weather due to the synthetic resins it contains, however, due to its high solvent content; it gives off an unpleasant odour.



The distribution of ballast, at the rear of the hull



Installing the drive shafts is done using a positioning jig to get perfect symmetry straight away

SUPERSTRUCTURES

The whole superstructure was made from marine plywood of various thicknesses. The bridges are 0.8 mm or 1 mm thick, while the superstructure frames have a 6 mm x 0.8 mm wall with 0.6 mm used where there are curves. The funnel is made in the same manner as the main mast, it was topped off by a streamlined beech section. The bulwarks were of 0.8 mm ply finished with a pine block at the stern. Afterwards, all of these elements were coated with polyester resin and sanded.



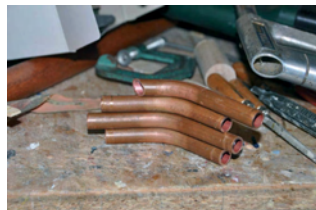
Starting assembly of plywood superstructures



The parts of the bridge (like hats!) are made of balsa



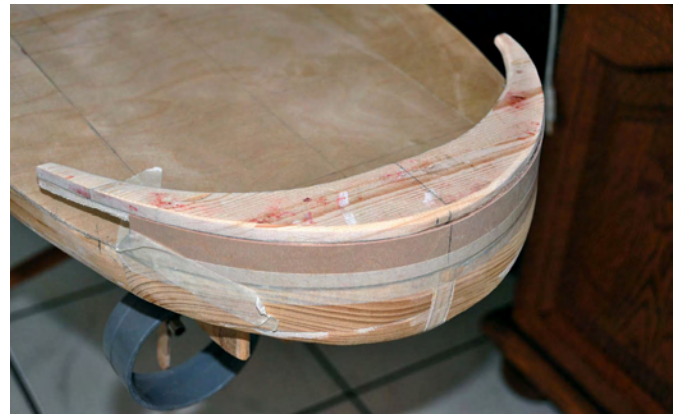
The superstructures being finished



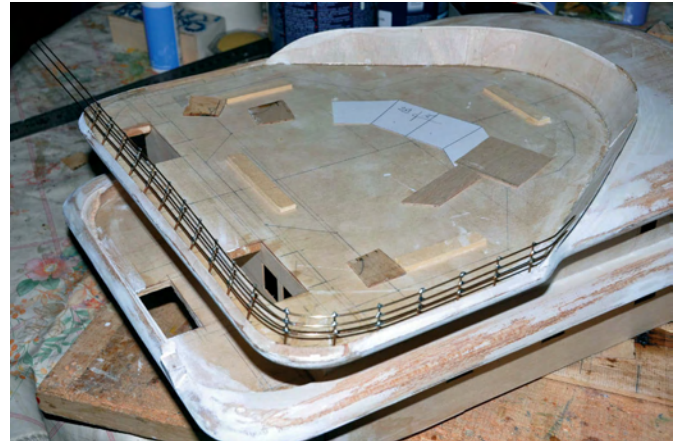
The preparation of the exhaust funnel exits



Details of the funnel with the exhaust outlets



The construction of the bulwark and stern gunwale



The bridge with soldered brass rails



The main crane made of wood, plastic and aluminium



The son of Jean-Louis Diard has the task of carving the rescue boats from wooden blocks

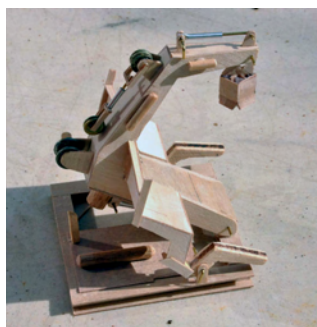


A picture of one of two fast rescue boats, type MP-741 Springer, on its davit

EQUIPMENT AND FITTINGS

Like the superstructures, the equipment was made from plywood of different thicknesses, with details added in PVC, aluminium, or formed using epoxy. These included cranes, three rescue boats, carved from blocks by the son of Jean-Louis Diard, davits, etc. Other materials, such as copper pipes were used for the exhausts in the funnels, and silicone tubes were used for the fire hoses. In the case of the bridge roofs, laminated balsa boards impregnated with epoxy resin and finished in polyester putty were used.

All this seems very simple at first glance, but this is not always the case. Take the example of two davits: although construction was not a problem for our designer, it was the understanding of how they operate which provided the challenge. Hence, he studied photos from various angles and his final decision was confirmed by an animation he discovered on the Internet at the following address: <http://www.youtube.com/watch?v=zZT6dXn7ERo>



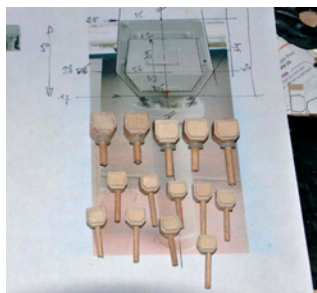
A well made working davit



One of the rescue boats and its davit before painting



The starboard crane turned towards the bow is ready to be painted



Aerators and photo from the original ship used to accurately transfer measurements to the model



Some details of the upper deck



The rail formed using templates

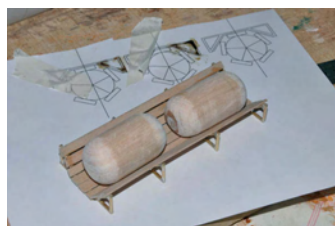
Another difficulty was the exhaust funnels which were originally straight but are now curved in order to divert gas to the side. This was done to annoy model designers; Jean-Louis Diard was told with a smile. In short, he contacted a friend with good experience in plumbing and they spent one afternoon cutting and bending many copper pipes until they had the right parts.

As for the other exhausts, they were made from aquarium silicone hose, without a stiff metal core, while others are wooden. Rails, in turn, are shaped in round profile 1 mm brass, soldered using templates. The water hoses installed on the upper deck are also made of aquarium silicone tubing. On the original ship, when they are placed horizontally and under the maximum pressure, the Abeille Bourbon is pushed backwards at a speed of 4 knots! When the propellers are stopped of course... As a precaution, the antennas are then removed.

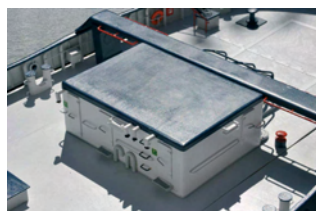
Following a visit aboard the Abeille Bourbon, other components could be reproduced exactly as on the full sized boat; like the furniture on the bridge, the gangway ladders and the lighting in the cabins. The assistant captain pointed out to our designer that hinged side projectors are still lacking on the model, something that has now been resolved.



Dinky Toy tyres at 1:43 scale linked by chains are made into fenders. You can see the drilling template



The construction of the two fenders installed on their support



Some details of the rear deck



The rear deck



Inside the bridge with faithfully modelled furniture



Detail of one of the buoys



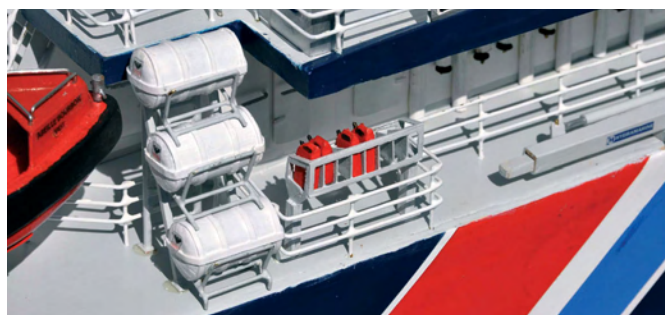
The outlet point of the towing winch



General view of the rear of the bridge block can be seen, among others, and in the centre, the two fenders



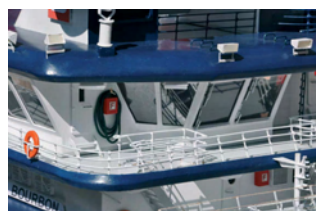
The port side which contains the lateral docking support, marked with an arrow



The Bombard life rafts. Since this photo was taken the gasoline rack has been removed because it is only present on the port side



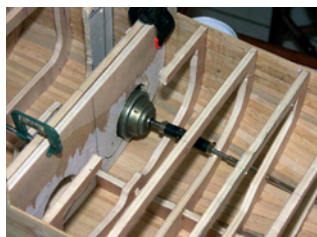
The upper decks



Some details of the gangways



The board made to accommodate four batteries and a variable speed fan from a PC



Positioning the panel that supports both Fiat Uno fan motors



The four 6 V/10 Ahr batteries installed under the bridge. You can see the lead ballast in the front

correct waterline.

(*) For the novice: when we speak of a closed switch, it means that the circuit is complete and, in our case, the motor is powered. So, open the switch the motor circuit is broken and it gets no power.

THE TECHNICAL PART

This very beautiful model of the Abeille Bourbon is powered by two Fiat Uno ventilation motors, which turn two 80 mm four-bladed brass propellers. Each motor is controlled by a switch mode electronic speed controller, Speed Profi 40R by Graupner. To clarify how this type of controller works; it is just like a switch that opens and closes very quickly, but the inertia of the engine removes any judder and appears to operate smoothly. To change the speed, the controller adjusts the two periods when the switch is closed and opened. Thus, if the switch is closed (*) for 70% of the time and open for the remaining 30%, the engine will operate at 70% of its original power.

The mountings for holding the two fan drives came from an old PC. Four lead/acid batteries are required each 6 volts 10 Ahr. Currently all the lighting on the ship is fully functional and, before long, a sound generator will broadcast the sound of horns that will be recorded on the full sized vessel.

The first tests on the water were made in a friend's fishing boat and it took 14 kg of lead plates to ballast the boat to its



The first launch

ON THE WATER

The L'Abeille Bourbon weighs 37 kg. It is a model of 15 kg, with 8 kg of batteries and 14 kg of ballast. A test was carried out at full speed for 10 minutes: it got hot but the model held up. Her behaviour on the water is remarkable and, thanks to independent motors, it can turn in its own length. Like the original ship, which can achieve 19.90 knots in a calm sea (36.8 km/h), the model looks very realistic sailing at high speed. In addition, the bow wake is the same moustache shape and the assistant captain noticed that the waveform was identical to the original.



The completed model on the water



September 8, 2013 Jean-Louis Diard presents his faithful reproduction of the Abeille Bourbon alongside the original ship (on the left is the Armorica, ocean buoy layer, under construction)

COMPARATIVE CHARACTERISTICS

As we have seen, the Abeilles Bourbon and Liberté replaced the Abeilles Flandre and Languedoc. Here is a chart that shows the comparative characteristics of these ships.

Abeille Bourbon/Abeille Liberté

Length: 80 m
Width: 16.50 m
Speed: 19.90 knots
Power: 21,740 hp
Traction: 209 tonnes pulling capacity
Average Displacement: 3,200 tons
Maximum Draft: 6 m
Crew: 12 people

Abeille Flandre/Abeille Languedoc

Length: 63.45 m
Width: 14.40 m
Speed: 15 knots
Power: 13.040 CV
Traction: 160 tonnes pulling capacity
Average Displacement: 3,500 tons
Maximum Draft: 7 m
Crew: 12 people

CONCLUSION

In July 2012, during the 'Tonnerre de Brest' event, Jean-Louis Diard was invited, with his completed model, aboard the Abeille Bourbon. He travelled by rowing boat because the ship was moored in the harbour. "This is a very special feeling", says our designer as he goes aboard the full sized ship for the first time, "a ship where

every detail is so familiar to me...". Several photos were taken on site allowing for the correction of some mistakes and further refinement details.

Finally, on September 8, 2013, our expert was invited to present his model at the Open House Day at the Abeille Bourdon where the 'small' model next to the big ship was a big hit!

Will the Abeille Bourbon be the final model for Jean-Louis Diard? Nothing is sure, indeed another 'last' build, the ocean buoy layer, Brittany, in 1:40 scale this time is already nearing completion. "Once a designer, always a designer...!" It will be a new adventure that we will probably be unveiled in a future issue. **MMI**

GENERAL INFORMATION

Jean-Louis Diard belongs to the 'Club Modélisme Naval Chatenoyen', 27, rue des Rotondes, F-71880, Chatenoy le Royal. Tel: 06.62.15.39.10.

Contacts: jean-charles.neel@wanadoo.fr or jeanpierre.hattet@gmail.com

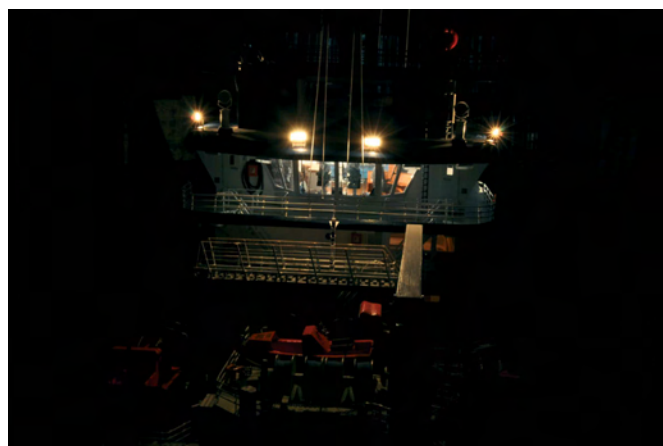
If you want to see some video clips on the Abeille Bourbon, simply log onto YouTube (<http://fr.youtube.com/>) and search using the name of the boat.

Model Features

Scale: 1:50
Length: 160 cm
Width: 33 cm
Displacement: 37 kg
Draft: 12 cm
Engine: 2 fan motors from a Fiat Uno
Photos: Jean-Louis Diard



The assistant captain, on the right, and the bosun examine the model with some interest



Sailing at night, this is the model!

It's going to be one not to miss!



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VERONICA

PART 3

IN THIS FINAL PART RICHARD COMPLETES THE BUILD AND TAKES THE VERONICA OUT ON THE WATER

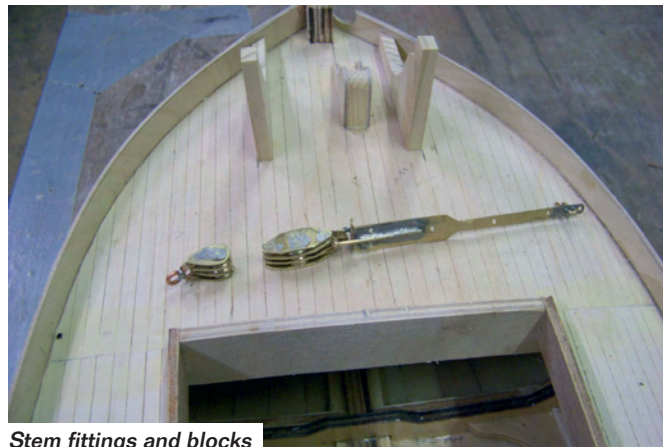
AUTHOR: RICHARD CHESNEY

METAL WORK

The major brass fittings are the mainmast case, mizzenmast case, leeboard winches, main brail winch and the anchor winch fittings. These are cut from an assortment of sizes of brass sheet and strip using fretsaw, fine drills, and needle files and soft soldered together. The large bearing on the anchor winch is the brass centre from a Ripmax gear with a flat filed on one side to solder it to the brass backing plate that bolts to the winch upright. The large gears for the winches are mainly Ripmax and the small gears from Proops. Those of you with an engineering bent could probably cut your own gears with a prototypical 'T' section spoke, but the Ripmax gears are close enough for me.

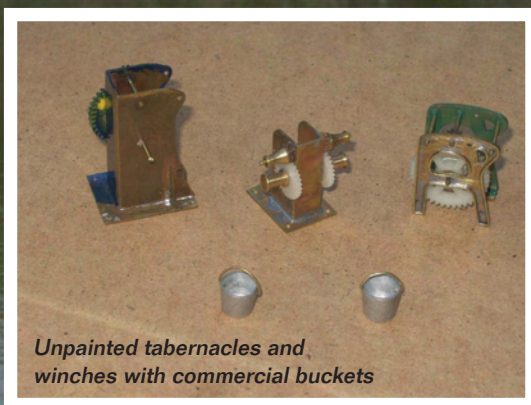
The rudder head is a square brass loop with the control horn soldered to the fore edge and force fitted over the rebate in the rudder head. The leeboard chain rollers and anchor chain roller are made of brass sheet and a commercial sheave found to fit the bill and then bolted in place with 12BA or 14BA bolts. The hatch cover batten hooks are brass strip folded to shape and either glued or drilled, glued and pinned (shortened model railway track pins – Peco) to the hatch sides.

I have seen the metal work of the winches and mast case painted a number of colours but I used Medium Green on Westland and Dark Blue on Jo Piper. Maroon has also been documented. The mast bands, mast cap and crosstrees etc. are white.



Stem fittings and blocks

Veronica sailing free



Unpainted tabernacles and winches with commercial buckets



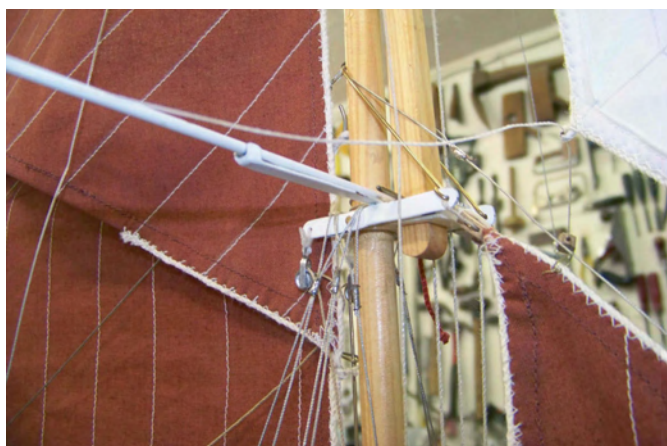
General view of deck and fittings from the stern



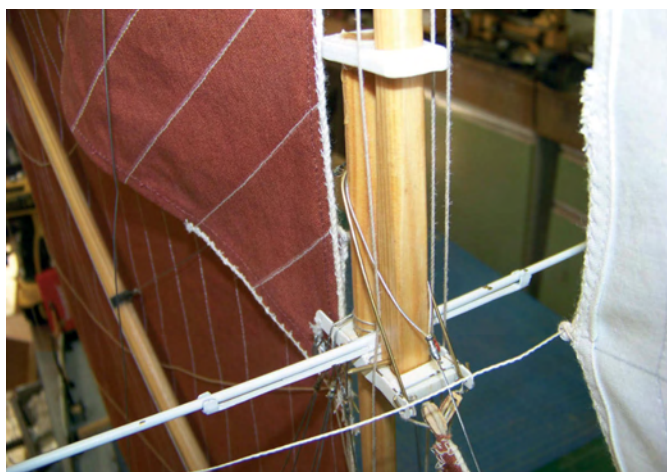
General view of deck and fittings from the bow

SAILS AND RIGGING

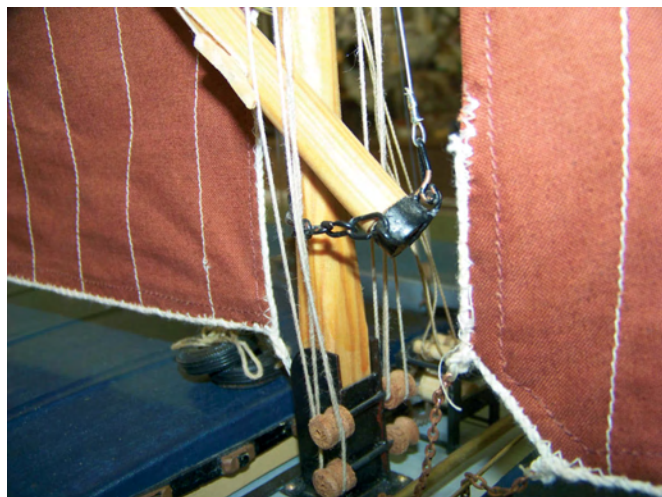
This should actually be rigging and sails but never mind and I won't give a blow-by-blow account of the rigging either. The 'working' rig would have been red/brown sails and white staysail whilst the 'Big Rig' of the 1950s was all white sails. Some of the publications that can be referred to for this task are 'Sail Making' by Mike Taylor of the Scale Sail Association, 'A Handbook of Thames Sailing Barges' by John Chancellor and Fred Cooper and 'Sailing a Thames Barge Sail by Sail' by Peter Hearn of the Thames Sailing Barge Trust (Further information at the end of the article).



The hounds at the top of the main mast support the main mast rigging as well as the topmast spreaders and also the foot of the topmast



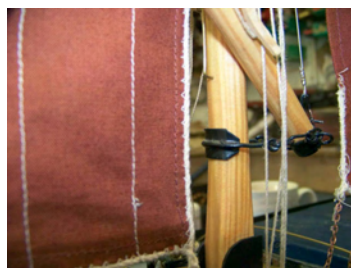
The hounds from above with the upper topmast support. Note the lower housing has a square hole to stop the top mast twisting



Mainmast tabernacle with muzzle at lower end of sprit and stayfall wire which stops sprit from sliding down the mast

The rigging is made with an assortment of 'rope' sizes roughly comparable with the prototype – rope where it should be rope and wire where it should be wire, although I found a very nice black leather cord in the haberdashers which was ideal for the shrouds. The model shops should have a range of cordage by several manufacturers that you can sort through to find what you want.

Wooden block making can be very time-consuming and a variety of methods have been proposed in past issues of model magazines and in scale model building books. Good sheaved blocks made by RB Models are available from a number of suppliers. Most of the metal blocks are commercial products – fairly expensive but a lot easier than making by hand. The deadeyes are Billings and the shackles hand made on a jig, out of fine brass wire and/or from the 'eye' part of a set of hooks and eyes (size 00 black from your haberdashery). The loop at the end of the eye has to be turned at 90° but that is quick and easy enough with a fine pair of pliers. The wire ones were used for the main rigging and the 'eyes' for the foresail and staysail fitting to the forestay and topmast forestay.



Collar around the mast supporting the sprit. This was a fairly massively constructed unit chained to the muzzle as it took the whole thrust of the big mainsail



The stemhead was a busy place: the three-part tackle that hoisted the mast up, the jib downhaul, topmast forestay and staysail downhaul

(Some modellers use the 'hook' for this purpose as the sails can be taken down if the wind strength requires it)

The shackle jig is two vertical pins on a brass base spaced the correct distance apart for the size of shackle being made. A loop is made in one end of the wire, placed over one pin and the loose end wound round the other pin to make the other loop. The free end is cut off and using fine nosed pliers the loops are centred on the central rod – making a dumb-bell shape. This is then folded about the centre to make the shackle. If you are careful the end loops are about the size for a 12BA or 14BA bolt. There are other shackle making methods (see Mike Taylor's 'Sail Making' book).

The masts and spars were set up with the shrouds, stays etc. and then temporary 'sails' made of paper as a pattern to ensure a good fit (as all models will

be built and rigged slightly differently) before cutting the relatively expensive sail material. As mentioned earlier I found a pleasant red/brown shade of polycotton at my local haberdashers that was not overly expensive and a metre length by 1.60 m wide provides more than enough for a suite of sails plus practice pieces. The material was cut oversize to take in the size of the hem, the sail panel lines machine stitched in about 28 mm apart and then hemmed around the edge. I made my first sails on an electric sewing machine but found it kept running away with me and I hadn't the fine speed control required so a local sewing machine retailer was contacted and a Singer hand machine was acquired. It runs so smoothly that I know the meaning of the phrase 'as smooth as a Singer sewing machine'.



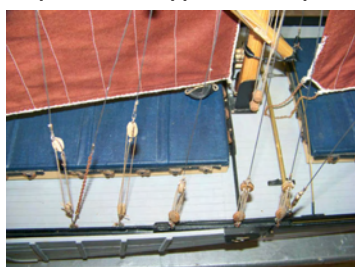
Cleats for downhauls on the bits for the massive anchor winch



General deck layout at foot of mainmast shows brail winch, jib horse and tabernacle crab winches



Outer end of sprit. Fitting to take the vangs and topsail outhaul. Mainsail has a loop sewn in that drops over the upper end of sprit



General deck layout around mainmast with chainplates for main shrouds, mainmast running backstays, and topmast running backstays

NOW FOR THE HAND CRAFTING

All the sails have a bolt rope around the edge on the port side. This is a heavy weight rope sewn to the sail to prevent too much stretch and to make and take the loops (cringles) for attaching the ropes, sheets and brails. The head rope on the main sail is the heaviest and has a loop for the end of the sprit at one end of the head and a smaller loop for the mast collar in the other. All the bolt ropes were sewn at a rate of 4" per tea break and about 6" per dinner time! It took about three weeks altogether to sew all the bolt ropes. If you wish you can also include proper 'cringles' in the sails – details of a construction method can be found in Mike Taylor's book.

Included in this section of construction are the hatch cloths as these are also polycotton. I have seen numerous colours for these cloths so you can choose your own from brown, green (light or dark) or blue (light or dark). The hatch cloths can either be laid on the hatch and held down by the hatch battens around the edge or matt varnished to stick them down and proof them or even seamed to represent joined canvas covers then attached as previously mentioned.

OTHER BITS!

It is amazing, when typing up something like this just how many bits and pieces you find that you have left out from elsewhere.

The main and fore horses are made from the required diameter of dowel bent using the same method as the topmast. The fore horse



The rudder fittings and rudder servo

rests on the rail between the fore hatch and the mast and is held in place by a twisted (brass) bracket bolted to the inside of the rail. The main horse rests on and is bolted to a shaped mounting/cleat at the deck edge between the rear of the main hatch and the wheel.

The wheel can be of two designs – the usual spoked wooden variety at about 42 mm overall diameter or a 'chaff cutter' wheel cut from brass or plastic. This is fitted to the shaft that runs through bearings on the cabin top to the steering gear casing at the stern. The shaft will have some form of brake immediately behind the wheel – either a screw down clamp or a ratchet in a cog on the shaft. There may also be eyes in the deck alongside the wheel for a rope lashing to tie the wheel in place to stop the rudder from moving when anchored.

The rudder is a 1/2" sq post with a 1/4" ply blade let into it and covered in balsa planks running vertically and tapered from 1/2" at the post to approx 1/4" at the aft end of the blade. These planks are 'locked' together with brass bands around the post (taking the hinge) out along the blade and another shaped one following the top edge of the blade. Model railway track pins were used to simulate the bolts holding the bands to the rudder.

The rudder hinges were made from small eyebolts bought from Squires Model & Craft Tools (part No. EN5646/08) screwed into the stern post and rudder post where the brass bands (above) are. The rudder pintle is 1 mm brass rod.

The leeboards are a sheet of 1/8" ply and then balsa planked. Thin plastic strip (3 mm x 0.5 mm) is glued, with epoxy, to the face to give the impression of iron bands holding the planking together and as on the rudder railway track pins representing the bolt heads are used. On the hatch would be mooring ropes, sweeps (long oars), boat hook, ladder, mop, bucket and any other paraphernalia needed on deck (tea mug, baccy tin, ship's cat!).

RADIO CONTROL

This covers a multitude of sins from single channel up to whatever you can afford. In 1999 to 2006 I used one channel of a two-channel set on the rudder only, having set the sails to suit a moderate wind range (actually very light to almost impossibly windy) and sailed well enough to qualify for (and win) the Staysail Barge Championship Finals with Westmoreland in 2000! You can do this or fit a sail winch servo or sail arm servo (the Hitec or GWC – a smaller size case – versions are reasonably cheap) to control the main sail through a sheeting line, up a tube behind the main horse. Going even further you can link the foresail and staysail to this or have separate winches. I have seen barges with an amazing amount of rope-work under the hatch giving differential control to the various sails and vangs (for controlling the movement of the sprit). But it is not really necessary; two channels for rudder and mainsail are all that is really needed.

The rudder servo is hidden under the rear of the cabin with the output arm through the cabin top and push/pull control links under the steering cover, connecting to the rudder head with Graupner or BalsaCraft metal clevises.



Rudder servo installed

The receiver and batteries are on a raised platform in the hold under the rear of the main hatch alongside the winch with the closed loop pulley system of sail control running to a pulley accessible through the fore hatch.

If you are in any doubt about the radio control and

sail control – speak to a fellow scale sailor or look in any of the books on yachting or scale sail that can be obtained from libraries or commercial model magazines.

SAILING

By now you will have a flat bottomed 4 ft + high sailing boat that weighs about 5 lb. You can put it in the water in this state but without a shadow of a doubt it will heel over and attempt to sink in the slightest breeze. A couple of model barges have sailed with ballast in the bottom of the hold but they do not grip the water well and tend to make a lot of lee way quite rapidly – even the leeboards in model size or even doubled in size are not enough to combat this.

The best method is to use a non-scale keel about 8" deep with a lead weight on the bottom – either as a torpedo shape or in my case as a 'duck's foot' winged keel. There are varying thoughts on the weight to be used and whether to carry around several weights of keel for different weather conditions. Probably the lightest practical keel is around 5 lb working up to 9 lb as the heaviest. (This will now provoke a violent argument on optimum weights and shapes to be used!)

To fit the keel (unless using a GRP hull in which a keel tube or fixing point has already been moulded) a brass tube (or laminate of brass tubes for strength) of sufficient internal diameter for 6 mm studding is fitted into a hole drilled through the keel aft of the mast (approx 21" from the bow), glued in place using epoxy and braced in four directions by 1/4" ply triangles mounted on a 1/4" ply floor plate across the full hull width. The tube should be of sufficient height to be above any abnormal water levels it may encounter. The keel therefore has a 6 mm studding rod protruding from the top to pass through the tube and be fixed with a washer and wing nut. (If you have a friend with suitable engineering knowledge and tools, ask them to make you a combined keel nut and 'T' shaped carrying handle that fits under the hatch cover.) If using wing nuts don't forget to take a few spares with you!

As the rudder is fairly small and near the surface, an extension downwards is required to improve the steering qualities. I made mine from a scrap of 1/4" (6 mm) acrylic sheet about 4" x 5" from a friendly double-glazing establishment. Two holes drilled in it to match two holes in the bottom of the rudder and lengths of brass rod epoxied into the extension achieved a snug fit with about a quarter of the extension rudder length as a leading edge counterbalance to reduce strain on the servo. (It is advisable to fit a 'preventer chain' to this fitting type as they have been known to fall off and be lost.)

An alternative fitting is to cut/leave a slot in the base of the rudder to take the top extension of the extension (you are now completely confused!) and hold it in place with small split pins.

SO, TO THE WATER

Fit the keel and rudder extension, switch on the radio, check that everything moves correctly and launch. Your barge should now sail away in a nostalgic cloud of red/brown sails and gasps of awe from the watching public. As with all sailing vessels you should not fight the elements. Let the barge make its own course through the wind and water and tack onto the next course when appropriate. That's about it!

There are a number of associations that can help with information on barges and a lot of interest is now becoming apparent in building and racing. Don't hesitate to contact any of these if you are interested, have problems or wish to join in. If you wish to forego the task of hull building there are 1/24th scale hulls available from Kingston Mouldings, Models by Design etc. A lot of work is still required to construct the deck, masts, spars and fittings so you pay your money and takes your choice! **MMI**

For further information on AMBO contact Mr Richard Chesney, 49 South Avenue, Thorpe Lea, Egham, Surrey TW20 8HQ. Email: rchesney@tesco.net



Veronica at Herne Bay



Veronica and James Piper

BIBLIOGRAPHY

Spritsail Barges of the Thames and Medway – Edgar J March
A Handbook of Sailing Barges – F S Cooper & J Chancellor
Modelling Thames Sailing Barges – Ewart C. Freeston & Bernard Kent
Scale Models – Phil Vaughan-Williams (Traplet Publications)
Sailing a Thames Barge Sail by Sail – Peter Hearne (Thames Sailing Barge Trust)
Sail Making – Mike Taylor (Scale Sail Association - available from AMBO)



Veronica on her stand

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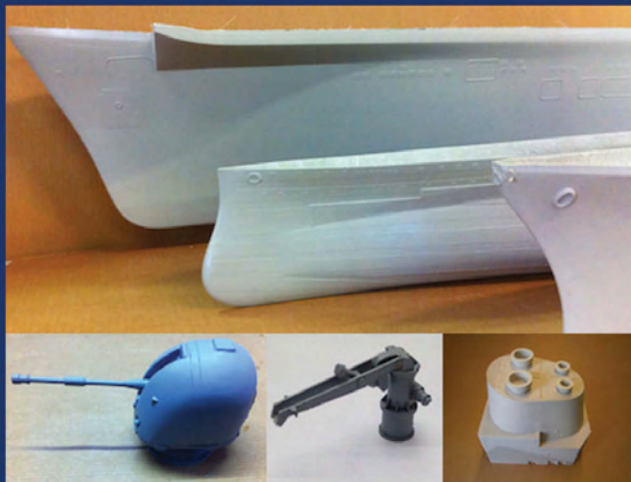
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- Dumas 17" Ace "racing sloop" builders kit with fitting, nylon sails, and keel. The hull is mahogany, balsa and ply, and looks incredible when varnished! Designed for free sailing. £29.95



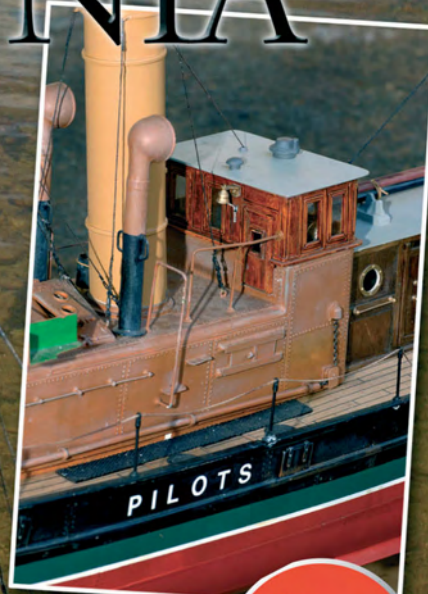
- Aeronaut Bella 810mm semi-scale builders kit of a 1950s day sailing yacht with laser cut mahogany and ply parts £149.95



Pilot Boat BRITANNIA



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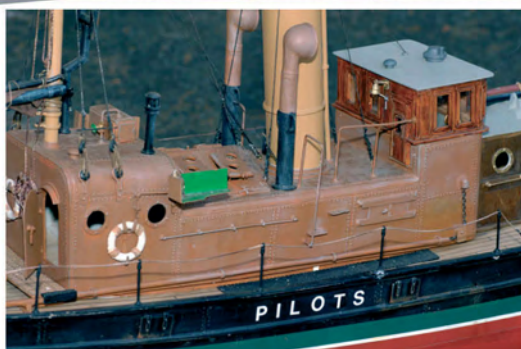


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This model is based mainly on old photographs of a Tyne Pilot Boat.

Little seems to be known now of her service career except that she was built in 1907 and was based on the River Tyne. So far as is known the colours are correct and she features a large anchor windlass on the fore deck. One thing that is certain is she was built onto the already proven 86' Steel Drifter Hull so fits readily into our range and builds into a clean uncluttered model which is ideal for steam or electric power. With the large saloon entry house good access is assured, and that, along with her funnel position makes her ideal for steam installation and the opening doors etc ensure a plentiful air supply to burners.

Photographs show a builders type ladder lashed to the forward boom and we have faithfully portrayed that on the model.



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DEANS MARINE HMS ZULU

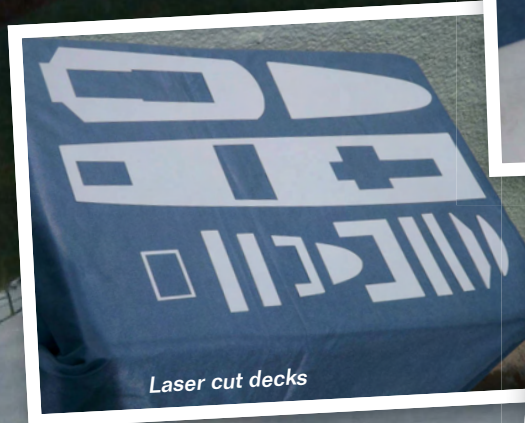
AUTHOR: ALLAN MILLER

THIS IS NOT A KIT REVIEW BUT IS AN ARTICLE WHICH DESCRIBES HOW ALLAN MILLER BUILT HIS MODEL FROM THE KIT

PREPARING FOR THE BUILD

It is not a new kit but one that I purchased a few years ago and placed to one side as a future project. The future was now for the HMS Zulu kit. Before commencing I contacted the kit's manufacturer and asked if there had been any upgrades made to this kit recently and the answer was yes. I went ahead and purchased these upgraded items which were a laser cut deck, which was 1.5 mm thick plastic, stringers which the deck sits upon and these too were 1.5 mm thick plastic, two lasered wooden planked overlay decks.

The completed model of HMS Zulu



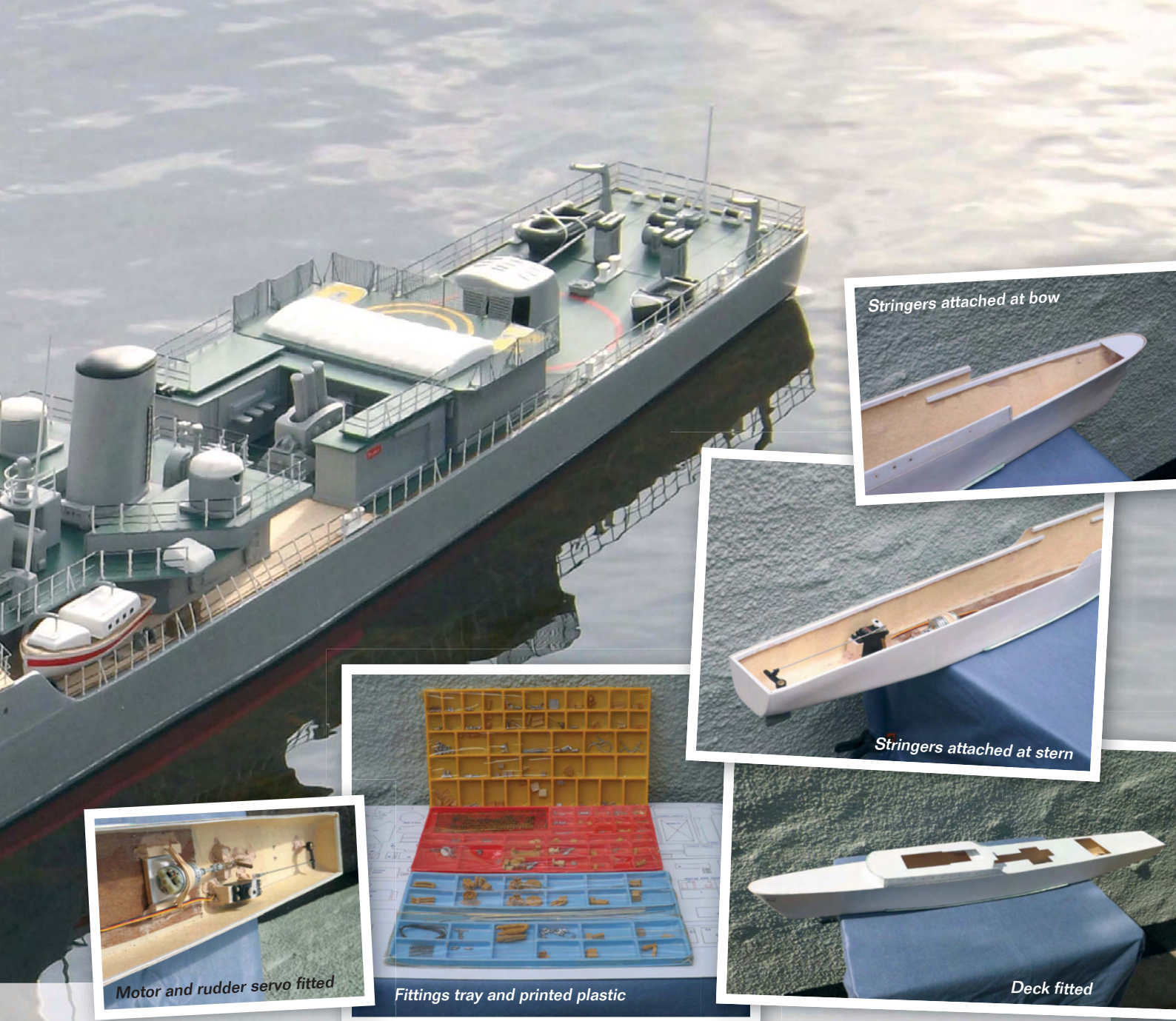
Laser cut decks



Prop shaft and rudder fitted



Bilge keels fitted



Stringers attached at bow

Stringers attached at stern

Deck fitted

Motor and rudder servo fitted

Fittings tray and printed plastic

The next step was to take a few days planning the build, reading and understanding the instruction book and cross-referencing all the fittings with the plan, which is to scale. There were a couple of items, mainly numbers on the plan, which were not correct so I contacted the manufacturer and these were put right. Having checked the kit's contents which I found all correct I started the build, commencing with the hull.

WORKING ON THE HULL

Firstly, as normal, the hull exterior was rubbed down with medium wet and dry. The top edge of the hull was then sanded down level and finally the interior top area was sanded using a small drum sander attached to an electric drill. I purchased two packs of these drum sanders on a DIY stall in a market. After completing all the sanding jobs I washed the hull in soapy water and left it overnight to dry. Masking tape was attached to the hull areas that were to be drilled and these were the prop tube, the rudder tube, portholes and the anchor recesses. The hole for the prop shaft was made first and this was drilled smaller than required and then it was filed to the correct diameter and also it was elongated to allow the tube to sit correctly. The holes for the tube bracket were next and when both tube and bracket were positioned to my satisfaction I glued them in situ using two-part epoxy glue. Progressing on I drilled and

filed out the hole for the rudder tube and again this was secured to the hull with epoxy glue. While the glue was setting I kept checking that the rudder position was correct. Finally, using a 3.5 mm drill all the portholes were opened up and all the raised section around the portholes was removed using sandpaper. Car body filler was mixed and applied around the interior joints of the prop and rudder tubes. Now it was time to construct a stand for the model because the prop and rudder protruded beyond the hull base.

All the laser cut stringers were made ready to be applied and after drawing a line 1.5 mm from the top of the deck interior the first layer was attached with the top of the stringer on this line. Thick superglue was used to apply the first layer followed by Plastic Weld to fix the next two layers. I decided to lay a piece of 5 mm thick plywood along the interior base of the hull upon which to attach motor and radio gear. A card template was produced to obtain the correct shape then this was drawn around onto the plywood. Once this base had been cut to shape and sanded it was glued in place using epoxy glue and scale weights were used to hold it down until the glue had set.

Although the deck thickness makes it strong enough to be attached without using any crossbeams I decided to apply a couple of beams to help open up the hull to its right width. Two lengths of 6 mm square ramin were used for this job and I obtained the width required from the plans.

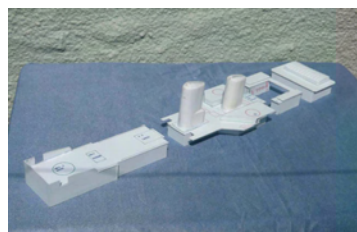
All around the underside of the stringers and the crossbeam joints I applied car body filler to add strength. The anchor recess parts were attached and these also had filler applied around the joints.

The motor and coupling were next to be fitted and both these items were the ones recommended by the kit manufacturer. After this job was complete all the decks were fitted and glued in situ only a small amount of sanding was required to achieve a snug fit. Any gaps were filled in with filler and when set sanded smooth.

COAMINGS AND SUPERSTRUCTURE

Using 1 mm thick plasticard I cut some lengths 10 mm wide for the coamings. Having cut the parts to length each one in turn was glued around the access areas using Plastic Weld. The hull was put to one side to await painting.

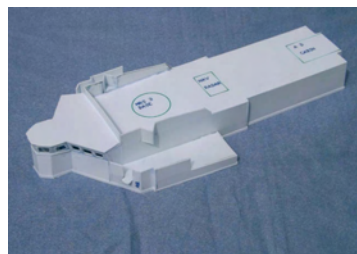
The next job was to construct the superstructure parts and in this kit it means having to cut parts from the printed plastic sheets. Before starting check that all the parts are the correct size as spotting a mistake now parts can be altered before removing them from the sheets. I used a pair of dividers to check if each part was correct, it is a lot easier than using a rule, but this does not mean that a rule cannot be used for this job. If for instance a box shaped section is to be constructed check both end parts are the same length and the side parts are the same, finally check all four parts are the same width. By spending a small amount of time checking before cutting can save a lot of frustration. Also if a part of the superstructure is to fit over an access area check that it will fit snugly over the coaming.



Superstructure parts being assembled



Superstructure parts fitted to deck



Forward superstructure



Bridge area

There are four superstructure parts to be built in this kit and I started from the stern with the helicopter hangar. Everything fitted together as instructed, but I did keep checking the fit over the coamings to make sure everything was square.

Moving on to the section that surrounds the limbo motors there were a couple of parts which I altered before removing them from the sheet, which meant that everything went together as instructed. The centre superstructure went together with no major problems. I finally moved on to the main superstructure section. I would suggest any windows be removed while the part is still attached to the sheet. Around the wheelhouse needs time and care to achieve a good result. I raised the base of the wheelhouse up by 5 mm for I found it easier to glue the parts around it. Also the centre of this base was removed so after painting and varnishing had been completed access could be obtained to complete the glazing. The front windows of the wheelhouse are vac-formed so firstly the windows were removed, and then the top and bottom were cut away making the part simpler to glue in situ.

When all the parts from the printed sheets had been constructed it was now time to add the details these being, junction boxes, cable trunking, doors, ladders and any other part that is to be the same colour as the superstructure. Once all this was done I moved on to the vac-formed parts and these were the funnels, radar, gun shields and the ship's boats. I marked with a pencil around the vac-forming parts where it needs to be cut so the excess can be removed; I find it helps if a pencil is used to identify the correct place. Having removed all the excess from the mouldings the edges are cleaned up using a sheet of sandpaper. When these parts were being constructed I used Plastic Weld.



Wooden deck ready to be installed



Wooden decks fitted



Circular red line on aft deck

The next section was attached using the same method and when all four parts had been soldered together I assembled the radar following the instructions. Four pieces of brass rod were soldered

PAINTING

Moving on, it was time for the fittings to be prepared for painting. I attached to the superstructure the parts that were to be the same colour, the remaining parts were stuck onto pieces of card using double-sided tape. Each fitting was segregated in their respective colours; so they would not be mixed up I gave each one's given number onto the underside of the card.

The paints I used were Halfords' acrylic spray paints. The colours used were red primer, white and grey primer with the finished colours being Peugeot Tartan Green for the decks and Ford Polar Grey for above the waterline and the superstructure.

One of the main features on this model is the radar and mast and it is made up from brass etched parts. The first thing to do is to clean each part using a fibreglass pen, this helps with the soldering. Small metal clamps were used to hold the joints steady while the solder was applied.



Front superstructure partly painted



Brass etched parts for mast and radar

to each corner of the base and then four holes were drilled into the superstructure deck to locate the mast. A basic coat of white paint was given to the whole of the mast and radar and when dry I hand painted the black areas before giving it a couple of coats of enamel satin varnish. This part was now ready to be fixed in place when the time came.

After all parts had been primed I checked for any gaps in the joints and they were filled using fast setting green putty. The putty excess can be sanded off before a top coat is applied.

In the kit are two sheets of brass etched railings and stanchions and I added to these by buying two more sheets so that all the railings on the model would be alike. All four sheets were sprayed white the railings were picked out using matt black enamel paint. Adding this black paint was done in stages because it has to be done carefully and it does get a bit tedious.

During the painting of the decks the area to which the wooden decks were to be applied was masked off and it was time for these decks to be placed in situ. Thick superglue was used to attach these decks and some flat weights were placed onto the decks while the glue was setting.

Around both guns forward and aft are a red circular line and I knew that my hand painting is not that proficient to achieve an acceptable finish. I went along to a company that made signs using self-adhesive vinyl and I purchased some off-cuts making sure one of the colours was the shade of red that I required. I got a large bundle of various colours for a few pounds and I think I can make use of it all in the future. Taking a piece of the red vinyl which was oversized to that required, I removed the backing from each end, approximately 10 mm was removed, then it was fixed to my cutting mat and using a circular cutter I was able to obtain a very neat red circular line. Once this operation had been repeated and both lines had been achieved they were fastened onto the decks. Extreme care needs to be taken when doing this job because once the backing is removed they will stick as soon as they touch. I used a couple of pairs of tweezers to guide the lines into place.

ADDING THE FITTINGS

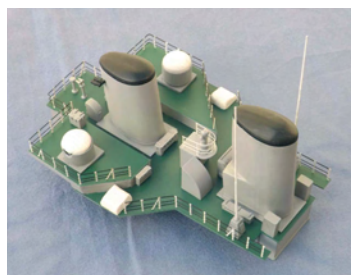
Starting from the bow I added the fittings which had all been painted in their respective colours. Thick superglue was used throughout this task and the foredeck completed before moving along to the next deck. I placed, then marked with a pencil where the railings were to be attached to the deck. A pin drill was used to create the holes for the stanchions to sit in and once a section had been done they were glued in place.



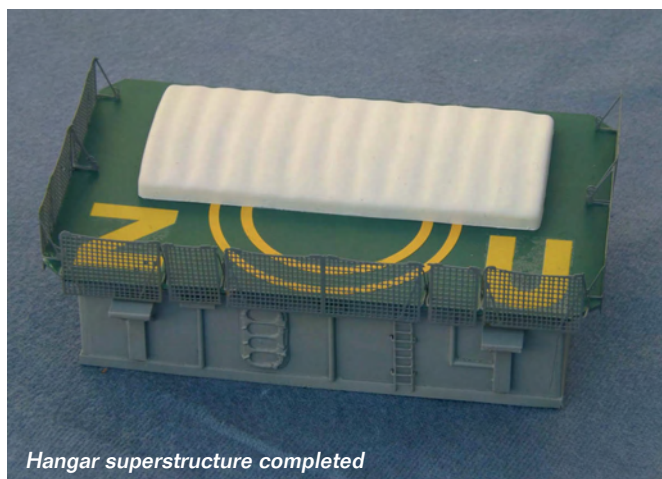
Vac-formed parts to make the ship's boats



Forward superstructure completed



Centre superstructure completed



Hangar superstructure completed



Hull and main deck completed

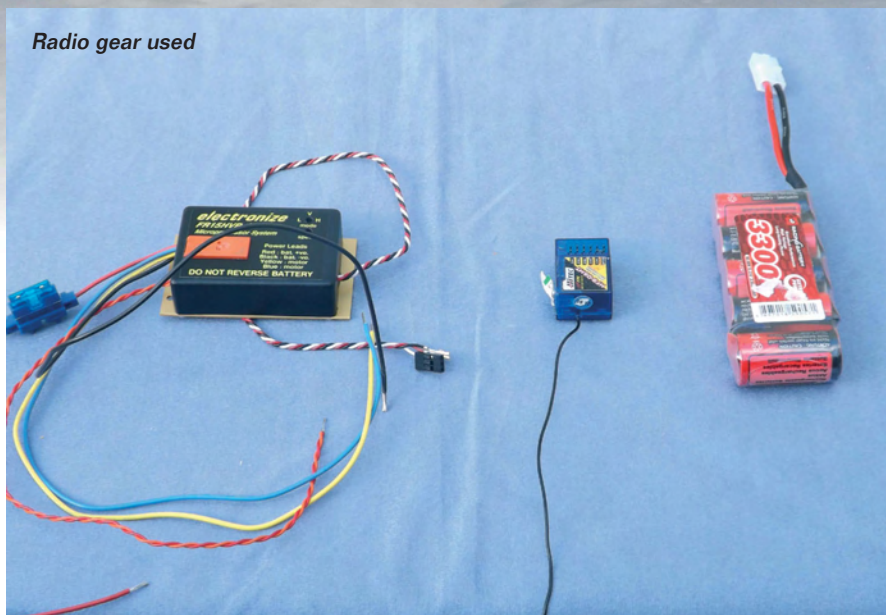
Next, all the fittings around the wooden deck were glued in their respective places but the superstructure was removed and the fittings were attached to this while away from the model. I found it easier and safer to conduct this operation this way. When all had been fitted including the rails and the radar mast it was all given a couple of coats of satin enamel varnish. The final job to be done on this section was to glaze the windows and then everything was complete.

On the next deck, moving aft, both ship's boats are situated and I decided to fix these in place before removing the superstructure section that surrounds it. Both these ship's boats are made up from vac-formed parts plus parts cut from 1 mm plasticard. This is not a difficult job if all the parts are assembled before construction begins. I applied all the details to the boats using Plastic Weld and after completion they were painted matt white and I finally finished them by hand painting with a matt brown.

On the water trials



Radio gear used



the rudder servo. The on/off switch for the speed controller was positioned under the removable hangar and also the rudder servo plus the prop shaft oil tubes are also accessible from here.

The next job was to ballast the model and along with pieces of lead I used some flat round scale weights that I had purchased from a car boot sale. A 1 lb scale weight was placed onto the plywood base to help finalise the ballast and this weight also helped with the trimming.

ON THE WATER

Waiting for a nice day was not long and although the wind was blowing I found a partly sheltered place to try out the model. The battery was connected and the radio gear was switched on and tested and then it was onto the water to begin sailing. The manufacturer states that there are no vices when sailing this model and I have to confirm this is right.

The model responded to every command and

When both boats had been glued to their davits they were placed upon the deck.

The centre superstructure was then removed and all the fittings were attached including the rails and the funnels before two coats of varnish were applied.

After adding the railings to the top of the building that surrounds the mortars it was varnished then when dry it was glued in place just aft of the plank decking.

On top of the helicopter hangar section are two circular lines and these were made using the same method as previously explained and after adding these and the hangar cover it was finished off with varnish. Before adding the fittings to the aft deck I added all the railings including port and starboard and finally finishing off along the stem. After the gun had been glued in place the remainder of the fittings were applied.

With all the removed superstructure parts already complete the hull and decks were varnished and again satin varnish was used. When all had been done and dry it was time to add the radio gear.

THE CONTROL AND PROPULSION SYSTEM

The boat was powered by a 6 V flat rechargeable battery pack and speed controller linked to the receiver which also operated

sailed exceptionally well, a good turning circle was achieved as well as steerage in reverse.

The way to construct this type of model is to check before progressing and the end result will be pleasing. **MMI**



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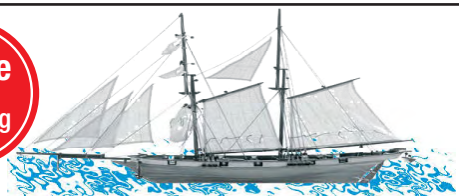
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Bluenose

BUILDING SCHOONERS IN AUSTRALIA

AUTHOR: RICK MAYES

RICK HAS HAD SEVEN BUSY YEARS BUILDING SINCE HIS MODEL OF THE SEA CLOUD APPEARED IN MMI OCT 2006

This article is about my last seven years since completion of my four-masted barque Sea Cloud. After nearly 11 years in build, she was only sailed four times, and is now displayed in a large cabinet in my garage. Full details of her, including a video are at www.cocatrez.net/water/RickMayes

EARLIER PROJECTS

Very briefly, four models have been built, including refurbishment and a re-build of Bluenose, a fibreglass hull similar to the real Bluenose, and built as Bluenose from deck up. She is controlled with four channels. Second model built, was a ketch rigged plank on

frame Vic Smeed Starlet named Southern Starlet, with two channel control. This was followed by my own designed schooner Sea Hawk, plank on frame construction, which was built from a yachting magazine spread of the real schooner Borkumriff IV, she has three channel control. The fourth model was a fibreglass Canterbury 'J' class yacht, Sea Lion, along the lines of the modern 'J' class Lionheart, with four-channel radio control. These four models were all 1.2 metres in length. All four models have now been sold to other club members. At this point I will now describe the construction of a further two schooners, both of which commenced as other projects.



Southern Starlet with ketch rig



Sea Hawk – Borkumriff IV inspired



'J' class yacht Sea Lion



Meteor making good speed showing deck layout



Meteor – Clipper bow with fine entry

THREE MASTED STAYSAIL SCHOONER METEOR

After building my Sea Hawk, I was advised by a friend that modellers' plans were available from John Alden's office in Boston. I subsequently purchased these with the intention of building the Borkumriff IV from the actual plans. However, I then decided to build her sister Meteor (with higher masts and longer bowsprit), and commenced the build with good intentions. But, during the course of the build, I then decided, because of my love for the schooner Creole (1927), to make her into a three masted staysail schooner and retain the name as Meteor.

CONSTRUCTION

She is constructed in the usual plank on frame construction using 4 mm ply for the frames and 1.5 mm hoop pine ply x 10 mm wide planks. After filling and sanding, the complete hull was resined inside and out, to obtain a watertight hull. The deck has a 0.8 mm ply sub deck, and planked with 4 mm x 2 mm lime wood planks, which were arised on each top edge to give the look of corking between each plank when resined. All deckhouses are built with 3 mm mahogany, with silver ash strips planked on top, to match the main deck planks.

All window style skylights have protective bars, and all doors to the deckhouses were also given hinges and door handles to create realism. There is plenty of deck access through the three large deckhouses and forward hatch to the equipment below. Once



Sea Empress and Meteor – plank on frame with retired Sea Cloud

again, finishing resin was used to seal the timber. The masts and booms are of Tasmanian oak, with brass fittings used where necessary, and two spreaders to each mast were made using teardrop aluminium with a brass internal rod through each spreader. All goosenecks are also handmade from brass and soldered.

The standing rigging is of



Meteor – plenty of deck access

plastic coated stainless steel fishing trace, with fly line backing (braided) used for the running rigging to the winches below. Sails are made from 1.5 oz spinnaker cloth, with battens on the main sail. The sails are normally cut out, using a soldering iron and sharp tip. Stick on reinforcing tape is used throughout.

Plenty of accessories were used including deck stanchions, wind cowls, deck winches, two rigid inflatable boats, bollards, ship's bell, twin plough (CQR) anchors, tables and seating in both cockpits (with cushions) and flush deck skylights around the deck and tops of deckhouses.

RADIO CONTROL

I use a Hitec Optic 6 FM transmitter, using four channels. (One day I may change over to the more modern 2.4 GHz!) Channel 1 is used for the rudder – channels 3 and 4 are used for the two overlapping jibs, this operation is achieved by having a 'floppy' (no springs).

As I have overlapping jibs on most of my models, it is necessary to control these using two channels, by having a 'floppy' (no springs) left hand gimbal on the transmitter for their operation – left bottom corner for port sheet lines in, top left hand corner for both port and starboard sheet lines out, and top right corner for starboard sheet lines in, which are controlled using two Hitec standard servos with metal gears with arms atop. Channel 6 (lever) is used for the main winch to control the main sail and the three lower staysails, using a Hitec sail winch with arms, with a second sail winch in tandem, using a 'Y' piece, for the upper two staysails.

The reason for this was to distribute the load of the mainsail and the five staysails to two winches, and also in case the wind was too strong, I could disconnect the second winch, and furl the two upper staysails. This has never been used, and she can sail in quite windy conditions.

Also, to help with the loads of the sails and to get the desired length of pay out on the sheet lines, I connected all sheet lines to the winch arms via a pulley positioned in the appropriate position on the arms, with the sheet lines being fixed to inside the hull. Power for the receiver/winch is by a 6 V 1.2 Ahr gel cell battery.



Meteor bowling along on port tack



Meteor hard on port tack

DIMENSIONS

The model has a sparred length of 1.540 metres with a beam of 28.5 cm. The draft of hull is 15 cm with an attached keel of 20 cm with lead ballast of 3 kg. Height of main mast above deck is 1.015 metres. Maybe one day, I may build her again as the correct Meteor (two masted schooner).

THREE MASTED BERMUDAN SCHOONER SEA EMPRESS

Once again, like the Meteor, this particular model did not commence as she is today, but in fact started out as the very modern clipper yacht, The Maltese Falcon. However, after building the hull, and rigging a temporary jury rig with the fifteen square sails, and test sailing her in my local pond, it was decided not to proceed, because of reservations she might not sail correctly. The hull was put aside for later use, and a new hull commenced in the form of a plug, to produce a fibreglass hull for The Maltese Falcon.



Sea Empress ready for first sail

In the meantime, in reality, the schooner 'EOS', which is the largest privately owned yacht in the world, was built for movie and media billionaire Barry Diller and his wife, fashion designer Diane von Furstenberg. This yacht I liked the look of, so it was decided to use the discarded Maltese Falcon hull and build her into what she is today. So, The Maltese Falcon was put 'on hold' (again) and the Sea Empress commenced.

CONSTRUCTION

As with the schooner Meteor, the construction was exactly the same, but with windows and portholes along each side of



Sea Empress showing deck layout



Sea Empress hard on port tack



Sea Empress – bow showing figurehead

the hull, which needed much consideration for watertight integrity. The superstructure is 3 mm mahogany, which was more detailed and complex, with windows and skylights a plenty. Also plenty of accessories were positioned around the model to give added talking points and realism, including deck chairs/lounges with tables and seating, with a 'love seat' lounge aft (with cushions) and wind break, which acts as a hatch for the receiver and rudder mechanism, a table and chairs positioned under the aft awning, life buoys and life raft canisters, a half cabin speed boat (to starboard) and a large rigid inflatable (to port), with gantry style davits positioned on top of the superstructure. There are two open areas with seating at the rear of both upper and lower superstructures, and adorning the bow is a gold painted nude woman figurehead.

Access to the winches below is achieved through two removable hatches in the top superstructure. The masts have four spreaders each, with the fore, main and mizzen sails receiving four battens each. Radio control, battery power and the operation of the model, are also exactly the same as Meteor.



Sea Empress

DIMENSIONS

She has a sparred length of 1.69 metres with a beam of 26 cm. Draft of hull is 14 cm and a 20 cm keel attached with 3.5 kg lead ballast. Height of main mast above deck is 1.04 metres. She can handle a good breeze, and is admired by the members of our club, the Sunshine Coast Model Boat Club in Queensland, Australia (www.scmbsc.org.au).

PRESENT PROJECT

I am now back into completing The Maltese Falcon (with absolutely no more distractions!!!), and hope to have her completed during 2014 (sometime!). After building all three masts (including 30 LED lights – two per spar), and producing a fibreglass hull from the second plug constructed, and with all radio equipment and winches installed to operate the rotating masts, she was test sailed back in November 2011, and to my satisfaction she sailed reasonably well, which gave me hope to carry on.



Sea Empress on port tack

Initially, I thought this project would be relatively easy, how wrong I was, and like the 'real' yacht, she is a very complex model to build. Unfortunately, while testing the lights on the mizzenmast, I inadvertently connected them up to a 12 V battery instead of a 6 V battery, and blew all the lights. Consequently, lighting will now not be used!

I hope to have a full build description in a later MMI issue. I have made email contact with another Dutch modeller, who is also building The Maltese Falcon, but at a scale of 50:1. My model is 1.6 metres, at a scale of 55:1.

FUTURE PROJECTS

My next project will be the two masted staysail schooner Astor. As a boy, I built a model of and followed her progress in the Sydney to Hobart yacht races in the late 1950s-1960s. I still follow her today during her travels around the world, including the recent Fife regatta in Scotland, where she returned for the first time, since leaving Scotland in 1923 for Australian waters, to participate with many other William Fife III yachts. She has been meticulously restored and maintained by her present owner Richard Straman and wife Lani.

There are also three other fibreglass hulls in my workshop, also waiting to be constructed into yet more schooners – a three masted gaff schooner Atlantic, a three masted very modern Bermudan schooner with canoe hull (my own design), and a two masted jackyard topsail schooner, with the same fibreglass hull as Bluenose! With all these projects to complete, I can't afford to stagnate in my retirement!

Until next time, happy modelling to you all!

If anyone wishes to contact me about this article I can be contacted through the Sunshine Coast Model Boat Club, www.scmbsc.org.au **MMI**



Maltese Falcon on trials, November 2011



Maltese Falcon test ballasting – she will be painted black



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PUFFIN

Designed by Hal Harrison

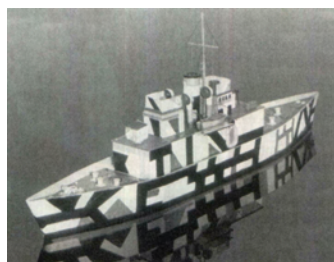
A semi scale Clyde puffer 460mm long by 100mm beam for balsa ply and card construction. Simplified underwater shape with ample displacement. Electric drive and 2 function RC. Featured in MMI April 1994

Difficulty Rating ● ● ● ●

MAR2420

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HMS KILBURY

Designed by Clive Halliwell

Balsa and card semi-scale model of a KIL class patrol boat. Length 760mm and beam 140mm. Simple superstructure and easy access to motor and gear. Featured in MMI Nov 2000

Difficulty Rating ● ● ● ●

MAR2802

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CHOUPEPTE

Designed by Bernard Retif

Choupette. A chine hulled open launch for steam power. Designed as a first model to enable rapid construction of the most practical hull for steam operation.

Featured in MMI Sept 1996

Difficulty Rating ● ● ● ●

Plan MAR2560

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AURORA

Designed by Jim Pottinger

The well known Cygnus Marine 44 GRP fishing boat hull with transom stern open after deck forward wheelhouse and raised forecastle.

Whilst not a named boat the arrangement and rig is typical of the small inshore trawlers. Drawn on two sheets showing general arrangement all deck details and full hull lines and body plan at a scale of 1:18 to give a heavy displacement model 735mm long and 280mm beam.

Featured in MMI May 2000

Difficulty Rating ● ● ● ●

Plan MAR2798

Was £15.00 / \$20.00 + p&p/s&h

Now £13.50 / \$18.00 + p&p/s&h



SEA GRIFFON

Designed by Jim Pottinger

Aberdeen harbour and coastal tug built in 1962 on one sheet showing both full size data and frames and keel layout for plank on frame hull. Model is at 1:32 scale size 790mm loa. by 200mm beam

Featured in MMI Jan 1986

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LAURENTIAN HILL

Designed by Jim Pottinger

Two sheet plans for the North Sands Standard Cargo Ship built 1943. Simple construction ample displacement 1:100th scale 1325mm loa and 170mm beam make for an excellent working model.

No construction data on plans.

Featured in MMI Aug 2000

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PHOENIX XL

Designed by Ten Ratler

An Australian Ten Rater class design optimised to the then new 1994 class rules. Plan has all body sections and fin/rudder profile shown at full size with all rig/sail plans reduced.

Featured in MMI Nov 1994

Difficulty Rating ● ● ● ●

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● ● ● ● **Three** ratings mean that the plan involves methods that require a lot of knowledge and several previous models should have been completed before tackling this one.

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Former Dutch trawler underway circa summer 1941

DKM AUXILIARY ESCORTS – A PICTORIAL

AUTHOR: CHRIS KOENIG EMAIL: christian.koenig@btc-europe.com

THIS IS A SHORT HISTORY OF HOW THE DEUTSCHE KRIEGSMARINE DEFENDED THE SHORES OF EUROPE DURING WW2 AND INCLUDES SOME HINTS ON MODELLING AUXILIARY ESCORT CRAFT

DEFENDING THE COASTLINE

During World War 2, DKM (Deutsche Kriegsmarine) was forced to safeguard 18,000 kilometres of shoreline. No navy in the world would have been able to do this, but the German naval forces were particularly overwhelmed by this enormous task. Converting fishing trawlers and whalers into auxiliary minesweepers and patrol boats was the only possible way to take on the task. Auxiliary patrol and escort vessels are ideal subjects for the modeller as there are many plans available.

Before the invention of radar, success or failure in naval encounters relied on the first sighting. All eyes scanned the sea to spot any threat as early as possible. Auxiliary patrols offered the ability to search further out and identify an enemy long before he reached the area where his artillery could be brought into use. DKM divided their aux forces into two areas – North Sea and Baltic Sea – the same arrangement as used in WW1. When strong British forces sneaked into the North Sea off Helgoland to engage the Imperial German Navy's cruisers SMS Cöln, Mainz and Ariadne on 28th August 1914, and sailed home after a tremendously successful mission, the Imperial German Navy

had to rethink their defence strategy. The three cruisers and the escorting torpedo boat V 187 suffered severe damage; 684 German soldiers died. The Navy realised that light cruisers were not able to fend off British forces in a determined attack. Hastily auxiliary patrols – converted fishing trawlers – were sent to patrol off the coast. This tactic worked well, and surprise attacks were reduced to a minimum.

THE AUXILIARY ESCORT FLEETS

Before the outbreak of WW2, DKM faced the same situation as the Imperial German Navy had to cope with 25 years earlier. Even before the outbreak of WW2 experimental auxiliary escort and patrol units were formed. These units gave insights into how civil vessels could be converted into auxiliaries. They solved problems such as where to add supporting structures to provide more stable gun platforms, and developed some early anti-submarine tactics. Regular auxiliary patrol and minesweeping flotillas were formed by September 1939. Usually a newly formed flotilla consisted of eight boats. Their armament, at first, was a single 2 cm machine gun but 7.5 and 8.8 cm AA guns and a huge variety of machineguns,

depth charges, even flame throwers (!) were added as they became available. Commanding officers often served as merchant marines before joining the navy, as did many of the NCOs or reserve officers. In quite a few cases the fishing trawlers, captains were helmsmen or navigators, for a few months, until they were awarded the rank of a reserve officer. At the end of the conflict Deutsche Kriegsmarine had roughly 4,000 such craft in operational status, with 126,000 soldiers manning them!

Auxiliary patrols were associated with two commanders in chief. While BSN (Befehlshaber der Sicherungskräfte Nordsee) was the commanding officer for all North Sea related patrol and escort services, BSO (O = Ostsee, Baltics) was in charge of safeguarding the civil and military port installations there. In addition, both commanders supervised auxiliary minesweeper, AA and surveillance units. At the same time both BSN and BSO built up their own flotillas: Vorposten-Flotillas No. 1, 3, 5, 7, 9, 11, 13 and 17 were formed in September/October 1939 for Baltic Sea operations. They largely comprised fishing trawlers and former whale catchers. North Sea ops relied on No. 2, 4, 6, 8, 10, 12 auxiliary patrol flotillas – the technique of designating the units helps tremendously when trying to identify footage of boats. Also aux patrol flotillas were formed for minesweeping.



Former British built HMS trawlers sailed with a jolly roger at their funnels when attached to Sonderstaffel/ Hafenschutzflottille Molde in Norway



Running side by side this shot depicts an unidentified trawler built between 1935 and 1938 at Norderwerft, Hamburg



Winter 1941: rough weather as a former whale catcher bounces off the Norwegian coast



Sub chaser UJ 123 Franz Dankworth and UJ 124 Heinrich Günther during a practice run in August 1939



1939 war patrol – note the absence of any protective armour!



The chef prepares fish aboard an auxiliary patrol at Wilhelmshaven, autumn 1939



Aux patrol off Wilhelmshaven, autumn 1939



Bound for Norway, German freighter Friedenau was lost to a torpedo from the submarine HMS Triton (LtCdr. Pizey), 10th April 1940. Escorts picked up the survivors



The fish hold was usually converted to accommodate the naval crew of an aux patrol. Picture stems from 6th aux patrol flotilla, Xmas 1939

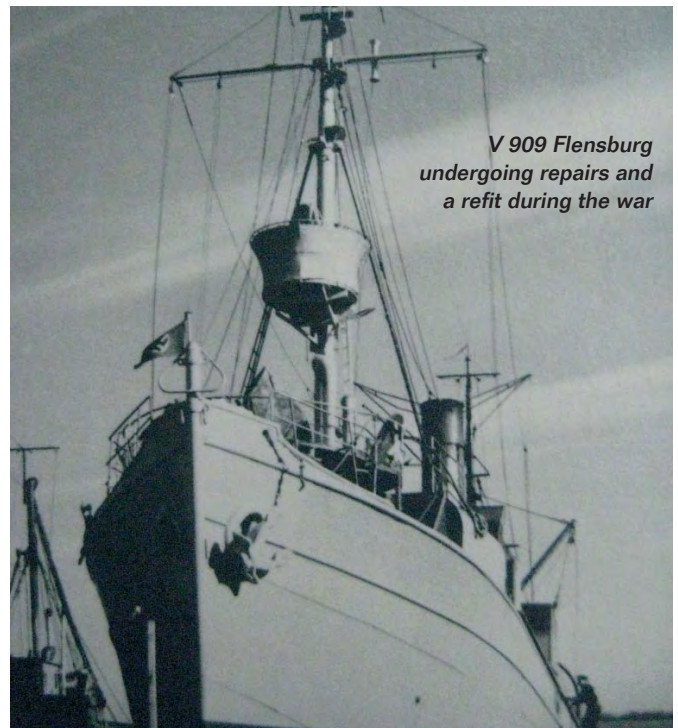


Gun crew in front of their Bofors L 40 AA. Such modern weapons were the exception to the rule on most vessels

THE 13TH FLOTILLA

The fate of the auxiliary patrol flotillas is best illustrated by picking the 13th flotilla. Established by September 1939, shortly after the outbreak of hostilities, the flotilla was intended to safeguard shipping and fend off aerial strikes in the Baltic theatre of operations. Its initial fleet was comprised of old fishing trawlers but was later modernised to include 600 ton trawlers originally planned and built to be sold to the Soviet Union. After the Western campaign in May/June 1940 the unit was sent to Rotterdam, Netherlands and patrolled waters off that country and the North Sea. Encounters with the Fleet Air Arm and occasionally RAF and RN aircraft were frequent. The flotilla was meant to serve as convoy leaders for the invasion fleet leaving German and Dutch ports for Operation Seelöwe (Sea Lion = invasion of the British mainland); further convoy tasks between Cherbourg, France and Rotterdam were planned for.

Armament differed, but usually the boats sported a single 8.8 or 10.5 cm naval gun, up to two 3.7 cm AA and various 2 cm machine guns (including the highly efficient 2 cm Flak 38 quadruples). Rockets and depth charges were for use against aircraft and submarines. All vessels had steam engines and operated on coal, their speed was usually below 12 knots. Depending on the size of the craft the crews seldom exceeded 80 men, which included 35 – 40 soldiers. Between September 1939 and January 1945 (when the flotilla was withdrawn from service) nine out of 18 aux patrol



V 909 Flensburg undergoing repairs and a refit during the war



Starting by 1942/43, quadruple 2 cm AA guns were added for additional firepower against British aircraft



French Thermidor became V 1603 with 16th auxiliary patrol flotilla



M 1407 Brösen in rich livery – a pity this is not a colour shot!



7th auxiliary patrol flotilla guards a heavy cruiser. The flotilla was formed 22nd September 1939 in Kiel. Intended for Baltic service the unit used Brest, France as a permanent base after June 1940



To prevent collateral damage, swastikas were painted on vertical surfaces



Early in the war aux patrols had soldiers on guard, but the crews mingled with locals and children played near the jetties!



Once cleared mines were detonated by firing rifle rounds



Front row M 1305 Hans Pickenpack (right) and M 1302 Schwaben (left), with M 1301 Gustav Hugo Deiters and M 1307 Neufisch I in the back row



M 1306 Hermann Krone suffered substantial damage when hitting a German mine



Battle damage ruined this boat's engine

vessels of the flotilla were lost. Out of 750 men manning the boats 202 were killed in action, another 293 were wounded. The loss rate was not that uncommon – of 20 boats in service, the 14th flotilla lost eight to enemy actions.

HINTS FOR THE MODELLER

There is an excellent plan of auxiliary patrol V 1102 Lützw available that was drawn by the late Helmut Meinhardt (h.meinhardt@wtnt.de). Please refer to the following link for a photographic documentation on the construction of V 1102: www.arbeitskreis-historischer-schiffbau.de/modell/2008/vorposten/vorposten.htm.

Helmut also did plans on the commercial fishing vessel Lützw. Another fine source for German aux patrol vessels are the archives of DSM Deutsches Schifffahrtsmuseum at Bremerhaven, Germany. Klaus Fuest of DSM told me that they have some 150 plans of German fishing trawlers built in the period 1926 – 1943. When thinking about building a German aux patrol you may want to contact Klaus and ask for his expertise: copies of original yard drawings may be ordered via Klaus and are as cheap as chips.

Finally there is a fine drawing available on the Internet, the link is (<http://de.academic.ru/pictures/technik/large/TL100338.jpg>).

Or, as usual, simply contact me. I owe a big thanks to DKM aux patrol expert Hans-J. Heise for his assistance in identifying vessels!

MMI



M 1306 Herrmann Krone was lost by 13th September 1940, off Hanstholm



During a violent thunderstorm this auxiliary patrol vessel virtually glows



A boat of 13th auxiliary minesweeping flotilla, M 1303 Emil Colsman in 1942



Scotty watches the gauges carefully. Most auxiliary patrols relied on steam engines



Stoker at work aboard M 1305 Hans Pickenpack, ca. 1941



Newly built just before the outbreak of hostilities, Hans Pickenpack became M 1305



M 1308 Otto N. Andersen at top speed



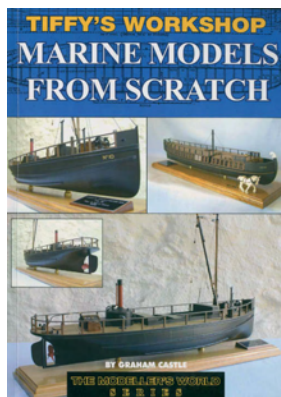
A horrifying picture: an attacking RAF Hudson crashes off Ijmuiden, Netherlands



V 6412 Frigga ex. Bjornoy was of Norwegian origin

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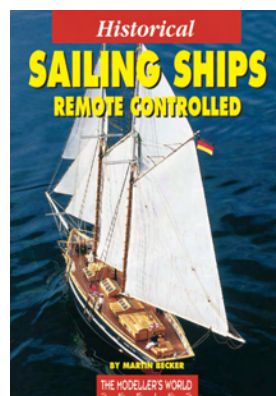
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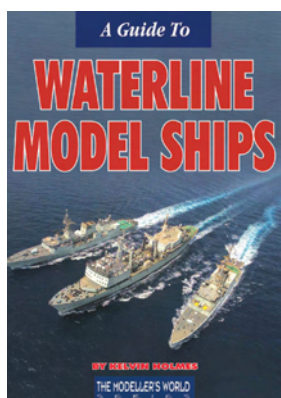
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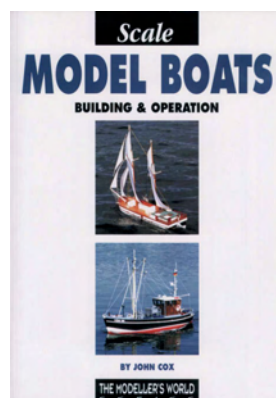
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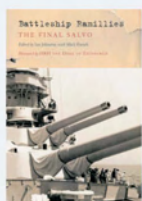
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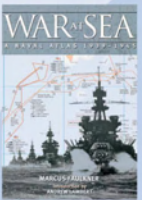
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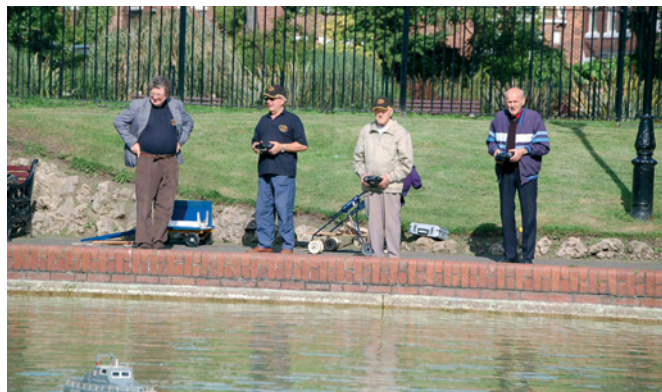
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Sunday 8th September saw our last Open Day of 2013. The weather was very kind with light winds and beautiful sunshine. As normal we erected our gazebo at the lakeside so the public could have a closer look at the different models. As usual all the members did their bit resulting in 28 boats sailing over the day and everyone appearing to enjoy themselves.

For further information about Roker Park MBC please visit our website: www.rokerparkmbc.webeden.co.uk **MMI**



Club Chairman, Edmond Foster watching the three wise men



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THE TUG MT KENT

PATRICK VISITS THE PRESERVED MT KENT TO GET USEFUL DETAILED PICTURES FOR ANY PROSPECTIVE MODELLER **AUTHOR: PATRICK BONIFACE**

It's good to see old tugs underway and such was the case recently with the preserved tug MT Kent. I saw her on a visit to Ipswich but had forgotten my camera. Fortunately a few days later I went onboard her at her base at Chatham Maritime to capture some detail photographs.

The MT Kent was built in 1948 by Richard Ironworks of Lowestoft for JP Knight of Rochester and spent the early part of her career at Sheerness and Rochester. The opening of the BP oil refinery on the Isle of Grain saw MT Kent nudging the first British oil tanker alongside. Like most tugs she went where the work was and was often found as far afield as Scotland and the near continent.

After 40 years of sterling service, MT Kent was retired from

service in the mid 1980s. Her new role, for a few years, was to be lit in floodlights and she served as a floating advertising hoarding on the river Medway for J P Knight's off Sun Pier in Rochester.

In 1991 MT Kent was towed from the moorings and moved the short distance to buoys off Thunderbolt Pier in Chatham Historic Dockyard, where she remained until October 1995 when she was bought for the princely sum of £1 by the South Eastern Tug Society. The society spent the next four years restoring the tug. The work to remove 13 years of decay proved to be a mammoth task for a team of dedicated volunteers. In January 1999 MT Kent's main engine was run for the first time since she was taken out of service in 1986. Within weeks basin trials at Chatham were conducted and



Portside looking forward



Portside amidships



Portside looking aft

in May that year she made her first post refurbishment voyage from Strood to Sheerness.

The South Eastern Tug Society maintain MT Kent in an excellent seagoing condition and she is frequently displayed at festivals as far apart as St Malo, Ostend, Maassluis, Rotterdam, Dover, Great Yarmouth and Whitstable. She even took part in the Queen's Diamond Jubilee Celebrations on the River Thames in 2012.

MT Kent is a remarkable vessel and because of this she was, on 30th June 2004, added to the Designated Vessels List of the National Register of Historical Vessels in the United Kingdom. **MMI**



Bridge details



Stern



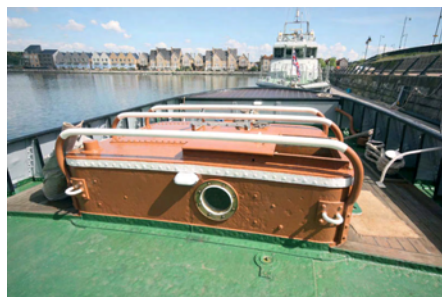
Aft deckhouse details



Looking forward from stern



Main towing rig details



Looking aft



Bow features

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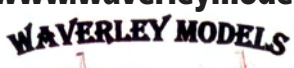
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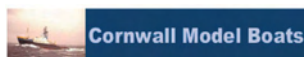
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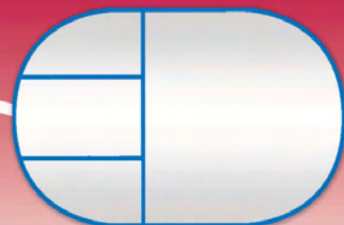
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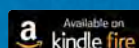
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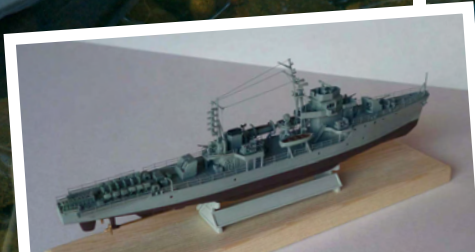
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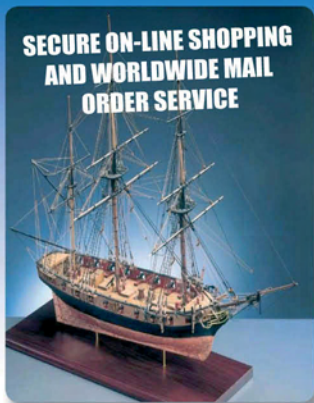
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