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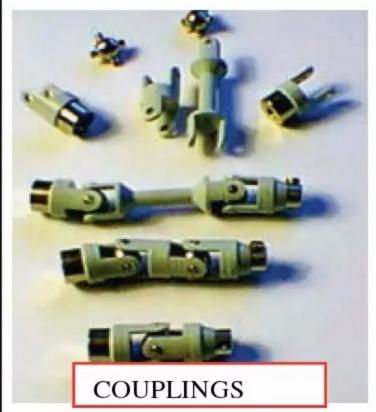
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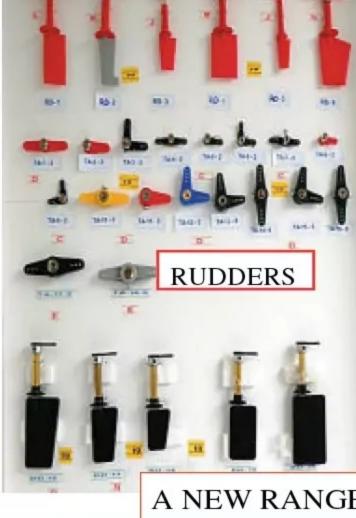






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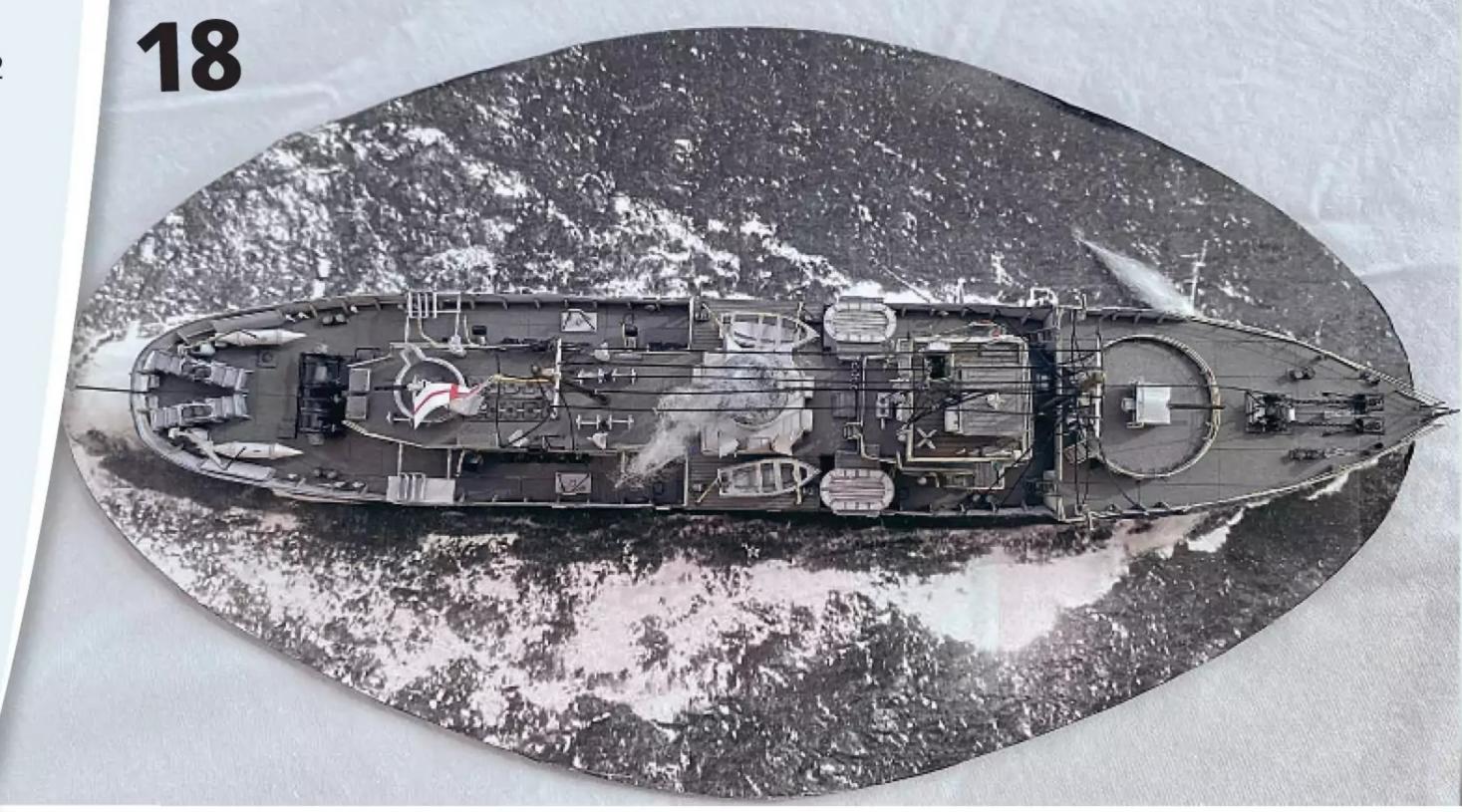
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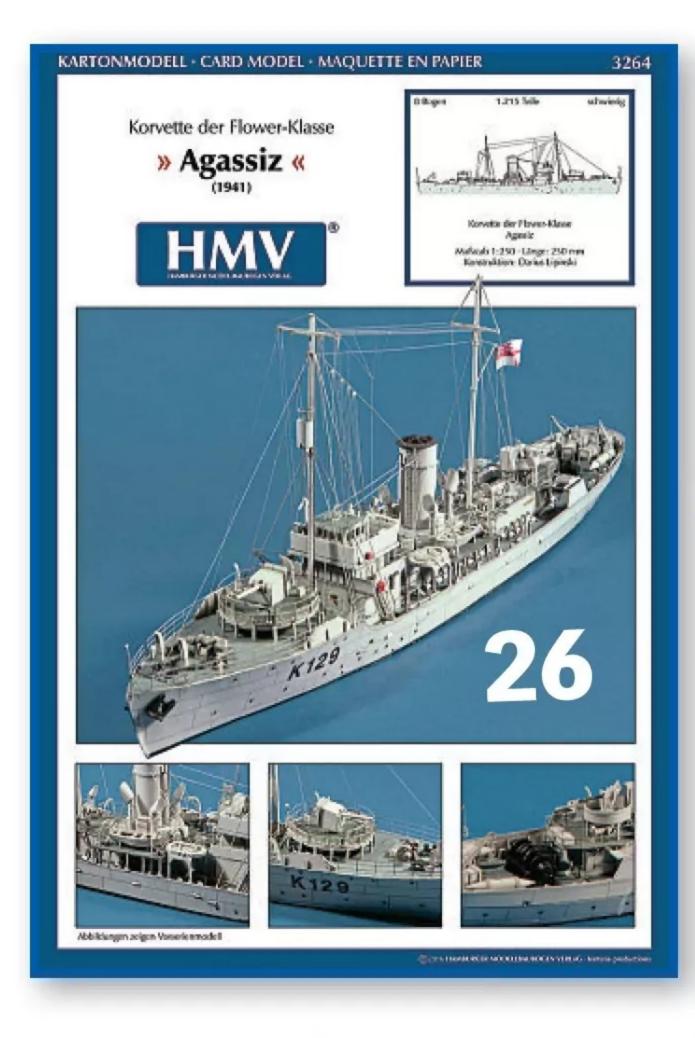
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WELCOME TO THE NOVEMBER **2025 ISSUE OF MODEL BOATS**

erhaps rather appropriately, as this issue goes on sale just ahead of Halloween, our free pull-out plan this month is Spooky! But fear not, as contributor John Goodyear has tried to keep his super-sleek Club RG65 Racer design (relatively) easy and inexpensive to build by following the instructions laid out in his illustrated guide to the model's construction (starting on page 42).

I think I've mentioned in a past column that I like to put together a themed play list of tunes I can have on in the background while I work. Naturally, this month it was cue Dusty Springfield's Spooky, followed by a whole host of fantastic tracks inspired by Nick Brown's AAR (After Action Report) on the build of the Dean's Marine 1:24 scale Vietnamera LSSC laser-cut kit (starting on

page 10).

But while Nick's crew figures conjure up the heat of the Mekong Delta, winter is now on its way (at least for those of us in the Northern Hemisphere). So, if you're looking for a project you can tackle indoors (rather than needing to spend hours in a perhaps less than warm and cosy garage, shed or workshop), then you need to check out this month's exclusive prize draw (see pages 26-27). Thanks to the generosity of Fentens Productions, we're delighted to be able to offer you the chance to win one of five of HMV (Hamburger Modellbaubogen Verlag) kits and laser cut set packages for the 1:250 scale Flower Class corvette HMCS Agassiz (as featured in the first instalment of Stuart Deacon's new series The Learning Curve, starting on page 18).

You couldn't really get three more different vessels/models/builds, but of course that's not where the variety stops, as you will discover in the pages ahead.

Enjoy your read,

Lindsey



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Compass 360

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Redcar MBC Boating Lake: fixed, filled and fabulous!



Redcar Model Boat Club is delighted to announce that repairs to its boating lake at Newcomen Terrace in Coatham, Redcar (originally constructed in the 1930s), have, thanks to Redcar & Cleveland District Council, now been completed, with the

lake having been successfully refilled this September.

Rob Heseltine,

Secretary of Redcar MBC, tells us: "It's very rare these days that there is a 'good news' story, but this is ours...

"For the past several years the club has suffered from a leaking lake and for the majority of that time we've had no water at all. A handful of members have been able to keep the club going by switching to R/C cars when there's been no water, using the bottom of the lake as a racetrack, but, sadly, this saw our membership dwindle to around just six members. The club was formed in 1995, and we once had a thriving membership of around 60 members.

"I am pleased to say that the local council and highways authority have spent a lot of time, effort and money on the lake and it has finally been fixed. The lake, which is more than 100 years old, is also a pillar to the local community and has been saved from being turned into a carpark.

"This year the club celebrates its 30th anniversary.

"We have our own Facebook page and

membership costs are £10 a year, this covering insurance and admin costs. We sail four times a week – Tuesdays, Thursdays, Saturdays and Sundays from around 1pm till about 3pm, and attend various events throughout the year.

"I'm very happy to report we've recently seen membership rise again, swelling our ranks to nearly 30 members, all thanks to our local partners and the community who have saved the lake from closure".



Congratulations to Redcar Model Boat Club, whose members can finally enjoy sailing again on the newly repaired and filled Coatham Lake!

OUT AND ABOUT

Scale Model World 2025

The hugely popular Scale Model World show will be returning to the Telford International Centre, International Way, St Quentin Gate, Telford, Shropshire TF3 4JH over the weekend over Saturday, November 8/Sunday, November 9.

Hosted by the International Plastic Modellers Society (UK), better known as the IPMS(UK), the show is widely acknowledged to be the largest fine scale model show in the world, attracting visitors from around the globe. Spread over five halls, those attending this year's event will be able to browse thousands of models on display, club, SIG (Special Interest Groups) and trade stands, and all of the entries in the show's internationally renowned competition, as well as being able to enjoy talks and demonstrations.

Please note that if you are not an IPMS member, tickets must be purchased online in advance. For further details visit https://ipmsuk.org/ipms-scale-modelworld/.



Blackpool Model Show 2025

The countdown to the 2025 Blackpool Model Show, organised by The Component Shop, is now on! This year's event, which once again will be held at the Norbreck Hotel on the Queen's Promenade, Norbreck, Blackpool FY2 9AA, is scheduled for the weekend of November 15/16.

At the time of going to press, 33 clubs, seven individual exhibitors and 16 traders have confirmed attendance (for a full listing, access to booking forms and updates in real time, visit the show's website at https://blackpoolmodelshow.co.uk.)

There will also be competitions held for models in the following categories:

- Best Scratch Built Model
- Best Semi-Scratch Buil

- Best Kit
- Best Fishing Vessel
- Best Tug
- Best Rescue & Lifesaving
- Best Pleasure Vessel
- Best Rigged & Sail
- Best Military Boat (includes submarines)
- Best Workboat
- Best Tank
- Best Truck
- Best Construction Model
- Best Novelty
- Best Club or individual Exhibitor Display
- Best in Show

Each winner will receive an engraved glass trophy.

Plus, of course, there will no doubt be brisk sales on the ever popular Bring &

Buy stand, which this year will be run by the Fairhaven Lake Model Boat Club. Each item submitted will be subject to a 10% selling fee (there will be no charge if your models doesn't sell), with 100% of all profits made from fees going to the RNLI and Air Ambulance. To save time on the day, a copy of the booking form can be downloaded from the website, but you can also just take the model/s you wish to sell to the stand on the day of attendance.

Tickets to the show itself will be available to buy on the door, but savings can be made by booking tickets in advance online (£8.50 for a day ticket or £12.50 for a weekend pass) via the website. Likewise, you will also find special deals for hotel accommodation and weekend show passes.

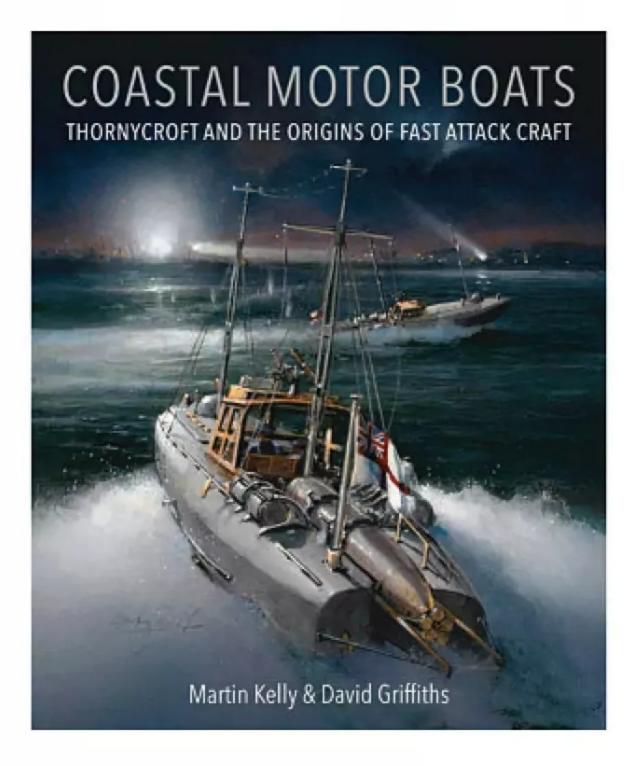


BUY THE BOOK

Coastal Motor Boats – Thornycroft and the origins of Fast Attack Craft

Following extensive research, this just released new book penned by David Griffiths and Martin Kelly delves much deeper into the previously documented history of these vessels, uncovering some surprising and previously unrecorded information.

The title, published in hardback format under ISBN 97810 36137939, carries an RRP (Recommended Retail Price) of £40, but can currently be purchased at a special introductory price of £32 when ordered directly from https://www.pen-and-sword.co.uk.



PRIZE DRAW ANNOUNCEMENT

Waveny winner!

In the August 2025 edition of Model Boats, we offered you the chance to win Billing Boats' 1:40 scale Waveny Class Royal Navy Lifeboat kit. We are now delighted to announce the lucky entrant drawn as:

Kenneth Baker of Usk, Monmouthshire.

Congratulations, Kenneth, and, of course, thank you Billing Boats for your ongoing generosity!





Nick Brown provides an AAR (After Action Report) on his build of the Dean's Marine 1:24 scale Vietnam-era LSSC kit

hat do classic rock songs and river patrol boats have in common? For me, they're both essential ingredients in capturing the spirit of the Vietnam War era. The title of this article is intended to reference the group Creedence Clearwater Revival and its Vietnam protest songs 'Fortunate Son' and 'Up Around the Bend' for those who are familiar with the band and the tracks. Combined with the Dean's Marine latest Vietnam era model, I hope you will enjoy the play on words.

The LSSC

The Grafton Boat Works of Illinois, a small boat manufacturer, constructed the Light SEALs Support Craft (LSSC), producing 22 vessels, with 20 deployed to Vietnam in 1969. The LSSC, measuring 7.3 meters in length, was powered by two water jets made by Jacuzzi and could reach speeds of up to 50 mph. Radar equipment was installed for night operations; however, the radome was susceptible to damage from Rocket Projected Grenades (RPG), which could result in splinters affecting the crew when struck. Armament choices were determined by the SEAL team members, leading to variations, but most included .50 calibre and 7.62mm machine guns,



as well as grenade launchers. Although 'STAB' (STrike Assault Boat) is a general term for this class of vessel, it does not specifically refer to the LSSC, though the designation is commonly used.

We are, indeed, most fortunate!

Upon Dean's Marine announcing the release of the STAB, I was

immediately impressed by its design and so purchased this kit at the Dean's Marine Christmas Open Day with the intention of providing a comprehensive build review.

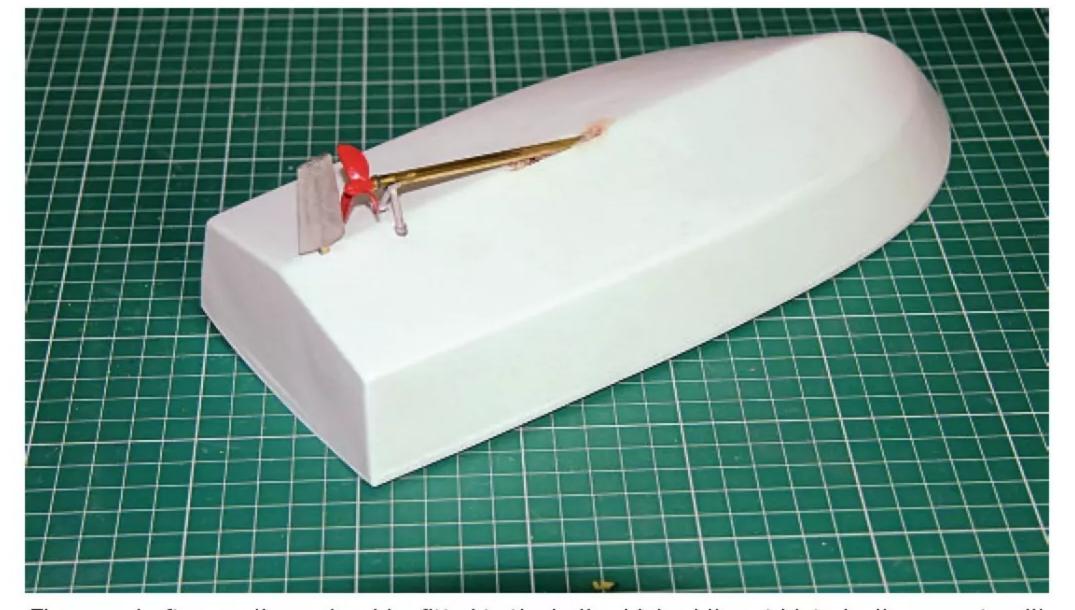
The contents of the package are as follows... Within the sturdy, moderately sized box there is a single-piece, robust vac-formed hull and deck that includes a radome, a fittings pack comprising



The compact but sturdy kit box from Dean's Marine, based in Farcet near Peterborough.



A close-up of the fittings tray which houses all the white metal parts, including the 0.5cal machine guns, mooring posts, hinges, and steering wheel.



The propshaft, propellor and rudder fitted to the hull, which while not historically accurate will make this model fly across the lake!



The instruction booklet details all necessary steps to complete the model

to an operational standard, including suggestions for motor, ESC, battery selection, and optional crew fittings.

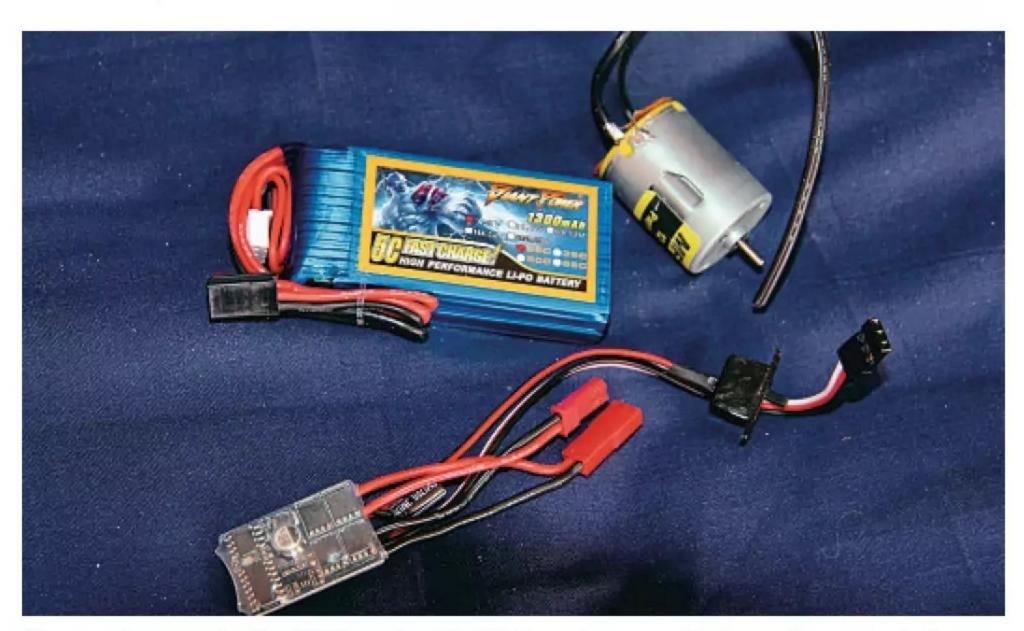
While the choice of additional features is left to individual preference, this model has undergone extensive performance testing, as demonstrated on the Dean's Marine YouTube Channel.



The contents of the kit. While looking basic, the model really captures the lines and general appearance of the vessel, allowing you to add more detail if you so wish.



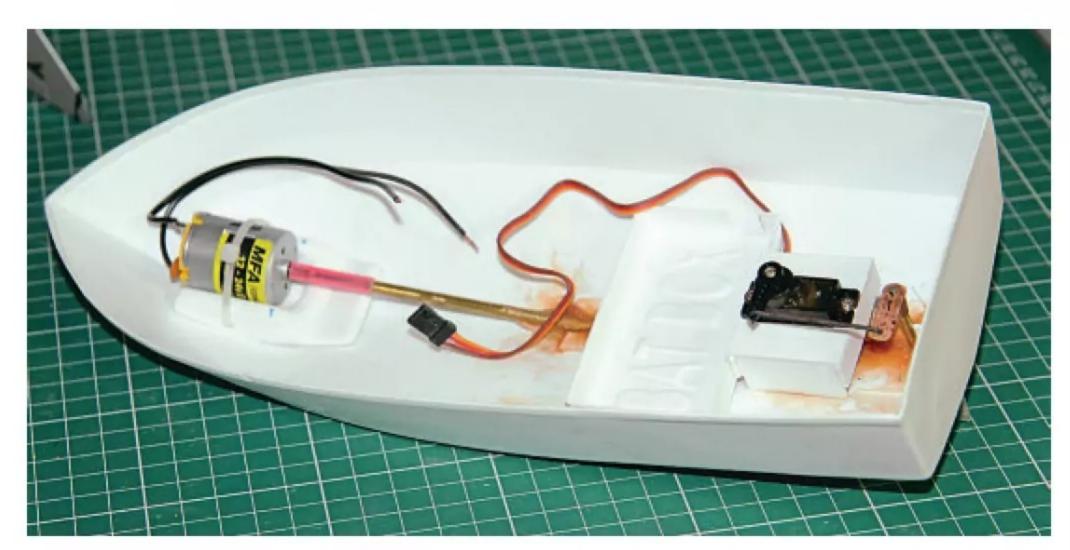
The smart vac-formed hull and deck show off the clean lines of the LSSC. The dome-like item is the optional radome cover.



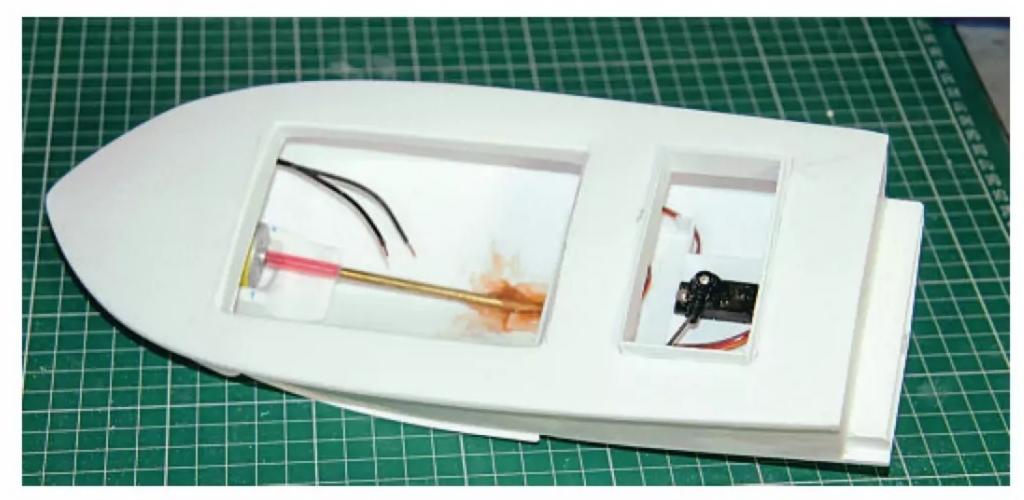
The running gear for the STAB, and, while Nick's motor proved to be underpowered, the Li-Po battery and cheap ESC (Electronic Speed Controller) is correct.

Fitting out the hull

Following the kit instructions, I removed the hull from its vac-form sheet, trimmed any excess plastic with scissors, and finished smoothing the edges with a file. To ensure a precise fit, I repeated this process for the deck so that both components



The running gear fitted inside the hull. Make sure it's all fitted prior to the deck being attached – access will be limited afterwards.

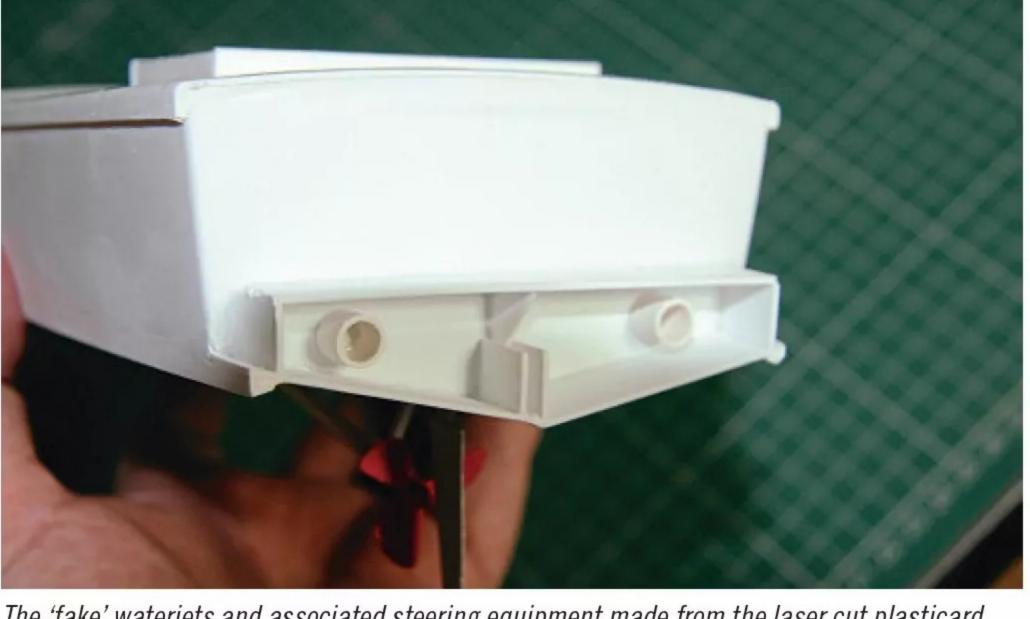


Once the deck is fully fitted, there's just enough in the way of access to get the Li-Po battery in and out, and to make minor adjustments with lead sheet to ballast to the trim line later.

SEAL of approval



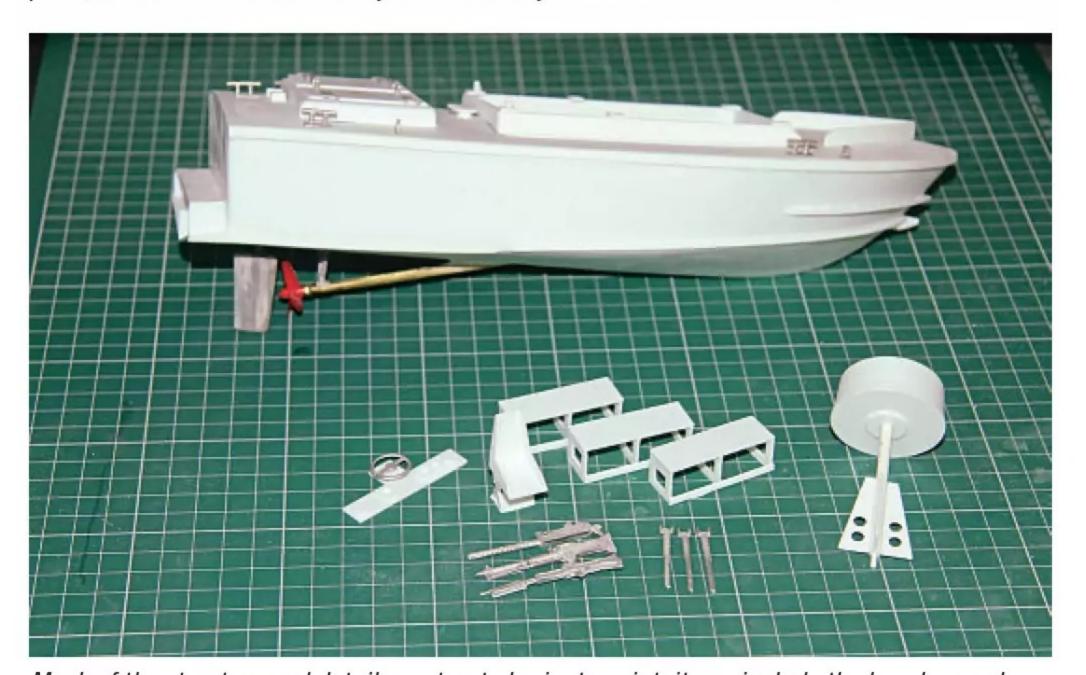
The cockpit made up from laser-cut plasicard items. Here Nick recommends you study the CD photo build guide (something he failed to do) so you can build it as per the original intention.



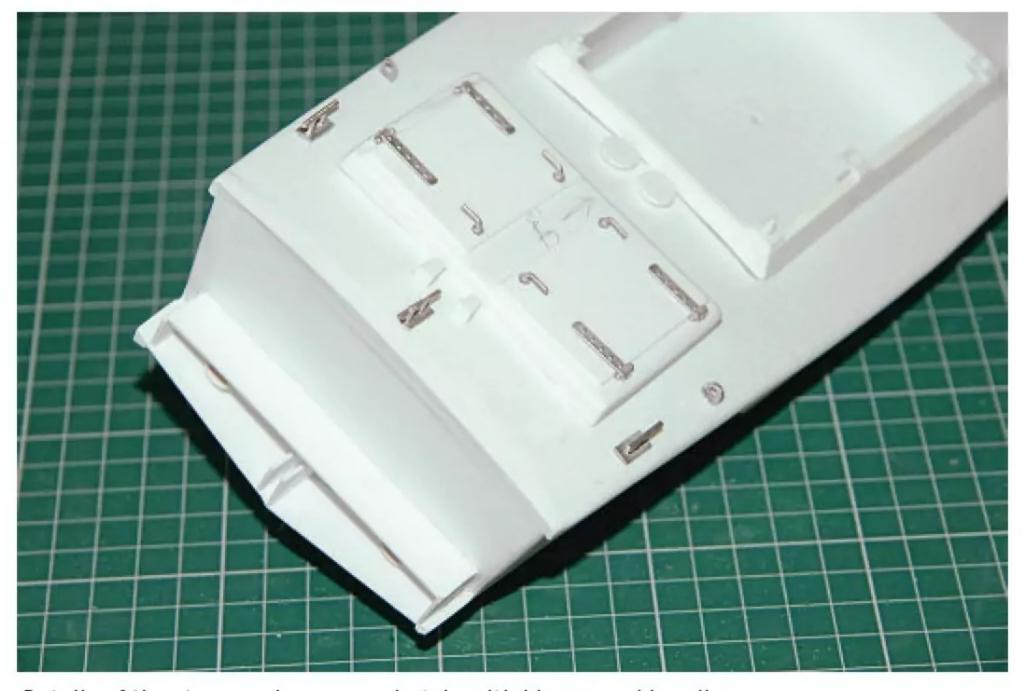
The 'fake' waterjets and associated steering equipment made from the laser cut plasticard parts, all non-functional but they add some very welcome detail to the stern.



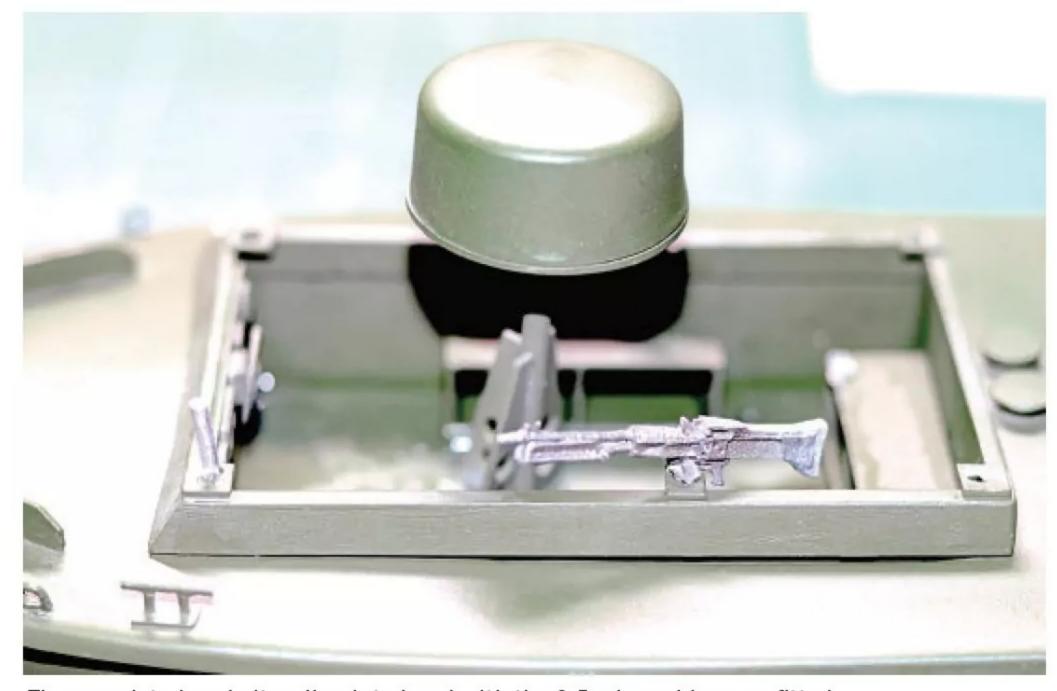
The instrument panel is a nice touch and offers plenty of scope to add further detail if you so wish.



Much of the structure and detail constructed prior to paint, items include the benches and radar radome.



Details of the stern engine access hatch, with hinges and handles.



The completed cockpit well painted and with the 0.5cal machine gun fitted.

would assemble cleanly at the conclusion of construction.

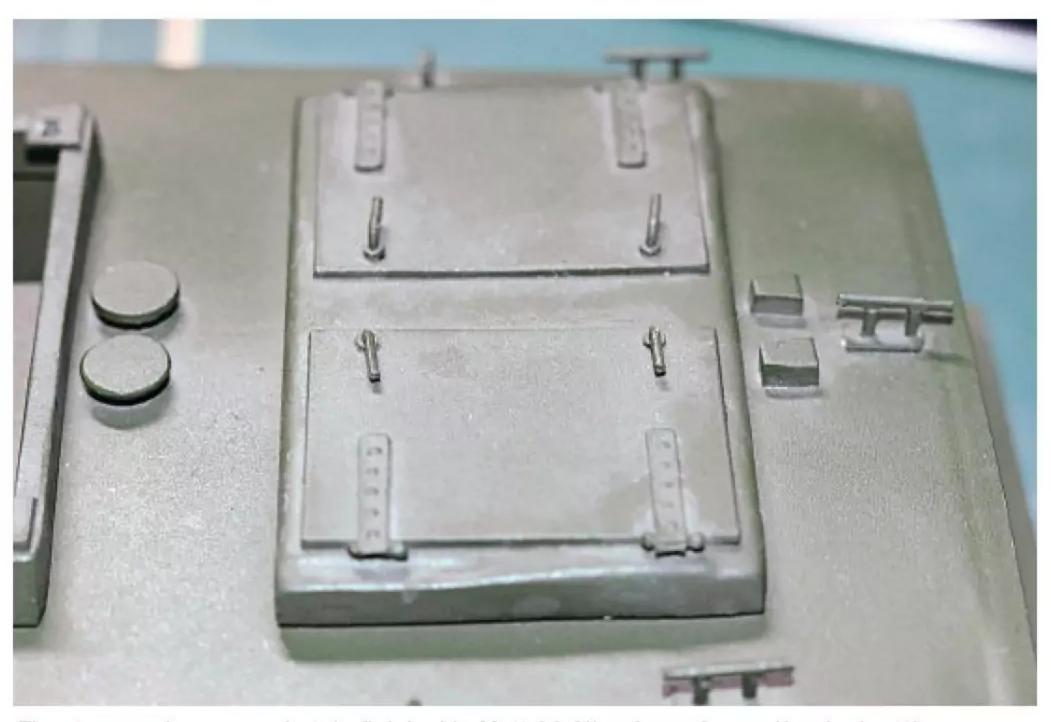
The manual recommends using a Deans' Marine motor, which I interpreted as being equivalent to an MFA 285. While this motor did fit the supplied engine mount, I was wrong – more on this later.

Although the original LSSC was powered by water jets, replicating this mechanism at such a small scale is challenging, so Dean's Marine opted for a standard 2mm diameter propeller shaft with a 15mm diameter propeller.

"The manual recommends using a Dean's Marine motor, which I interpreted as being equivalent to an MFA 285. While this motor did fit the supplied engine mount, I was wrong – more on this later"

Dummy water jet outlets are installed on the transom for visual accuracy, and a small rudder is included to perform the steering function normally handled by the water jets. It should be noted that most of these features remain concealed when the model is in operation on the water.

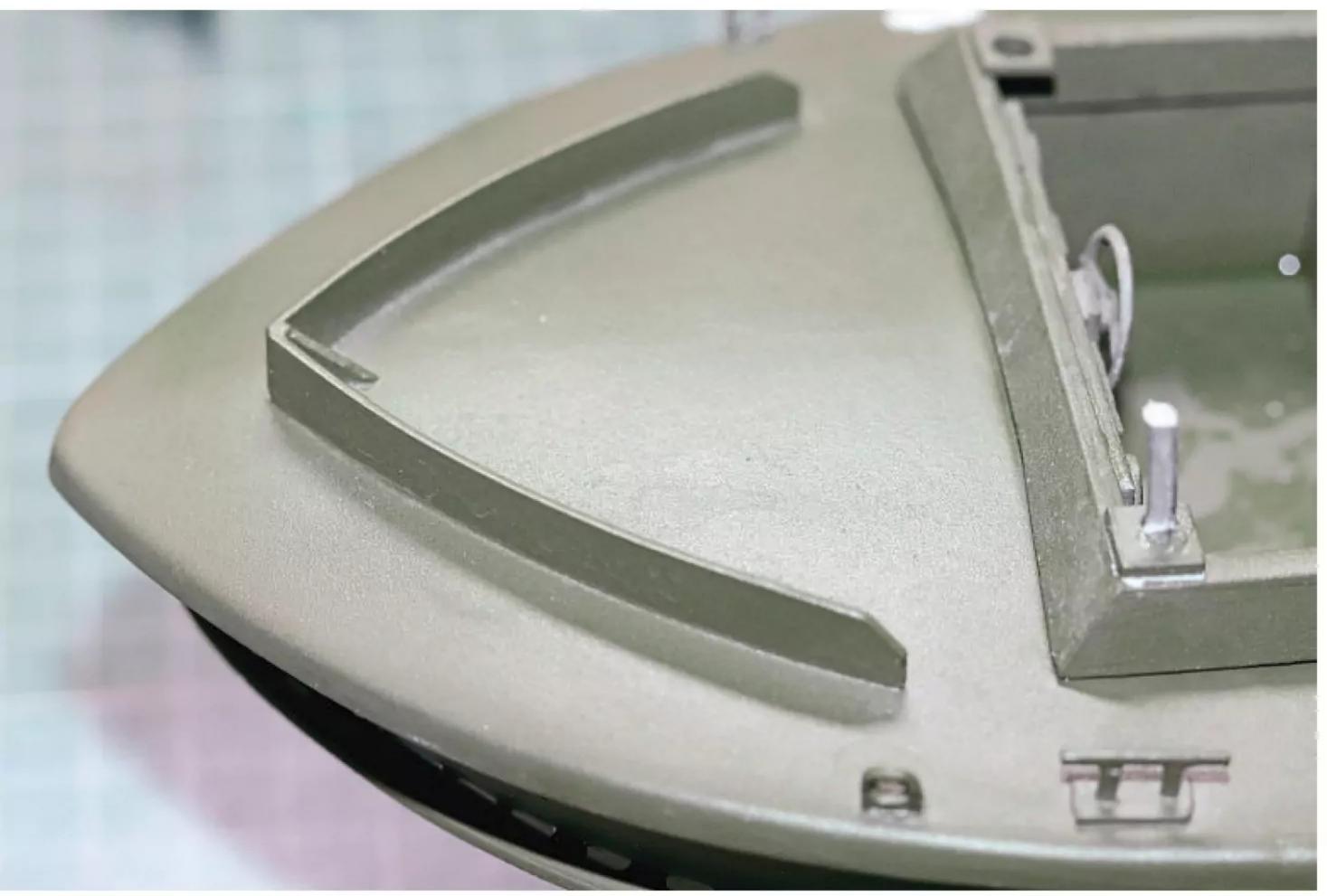
The vac-form hull has moulded marked out areas to indicate where to drill out the propshaft, A-frame, and rudderpost. Once drilled and filed to fit the aforementioned items the engine mount will need to be cut out and trial fitted with the motor in place. I had to remove about 15mm of prop shaft to allow alignment of the shaft and motor to be inline.



The stern engine access hatch, finished in Matt 86 Olive Green from a Humbrol rattle can.



The chine was moulded to shape with heat from Nick's hands and glued in sections with superglue.



The final detail on the deck of the model is the bow wave deflector, which guides water away from the cockpit well.

As suggested in the instructions, it's wise to fit all the radio and running equipment before the deck is added, as afterwards there's only enough access to fit the battery. The kit also, by the way, provides a servo holder, to which I fitted a standard micro servo, and a battery tray.

Once everything was in situ and I'd added the deck, I used some slow setting superglue followed by some fine filler to smooth the joints.

A point to note, which is mentioned several times in the instructions, is to ensure that the trim tab on the starboard side is angled down, compared to its port counterpart. This aids in reducing torque issues from the propeller.

The most daunting prospect for me was adding the chine strips, as I'd anticipated these would prove difficult to fit. However, using heat from my hand to shape the laser cut plasticard parts, I carefully attached 2cm sections at time, and not only did they fit together well but to date they have remained secure.

"It ain't me, it ain't me!" (Actually, it was!)

The cockpit well is a very simple box, with angled fairings that sit on the deck creating the coaming. I suggest you refer to the CD photos for this section of the build. I managed to mess up the construction sequence here. If I'd studied the CD I would have instantly realised my error. Fortunately, though, I was still able to make things work.

The seats are all identical except for the helmsman position. They look like benches, which matches the vessel's basic and rudimentary look. I decided to add a scissor-lift seat raiser to the helmsman seat, making sure the crew figure fitted inside the

"The weapon layout/fit was left to the SEAL crew to decide so, there's plenty of choices to be had"

cockpit well and below the radome. This was constructed using pieces of left-over plasticard.

The kit is supplied with an instrument panel, which supports the attachment of the boat's wheel. For those interested in customisation, additional detailing, such as the installation of dials, offers a straightforward way to further enhance to the model.

While studying pictures of some surviving STABs, I realised that there were many options open to me. The easiest were the gun mounts; I modified them, making them square in shape, and changed the rear two corner mounts into radio aerial supports to match the period photographs.

The engine hatch is another vacform item, which I cut out and filed to match the deck camber. I added the laser cut plastic card hatches, detailing them with the white metal hinges and handles supplied in the fittings pack.

The remaining deck fittings are mainly tie-down points and rings all from white metal with two plastic card mushroom vents. The final feature on the deck is the breakwater, also from plasticard.

Paint it... well, green, of course

Time, then, for the iconic paint schemes of the US Vietnam era vessels – green or green! I opted for my usual type of paint, Humbrol acrylic spray cans. Luckily, Humbrol produce the two colours I needed for the LSSC: Matt 86 Olive Green for the upper hull, deck and hatches, and Matt 73 Wine for the anti-fouling paint below the waterline. The paint was sealed in with a lacquer, giving a satin finish.







Originally Nick purchased three figures, but only two were in fact utilised. Using Vallejo paint, Nick detailed his driver and gunner to represent typical SEAL team members.



The white metal 0.5cal and 0.762mm machine guns come in a gun metal finish. Nick highlighted the casting detail with a dark wash from a Model Armour weathering set.

Hardware and crew

Not all STABs had radomes or radar. The weapon layout/fit was left to the SEAL crew to decide so, there's plenty of choices to be had. The kit provides two 7.62mm machine guns and one 0.5 Cal, which are nicely cast items painted in gunmetal. I applied a dark model wash used in Model Armour builds to highlight the detail. The radome is the final vac-form item and sits on top of the supplied piece of plastic rod and several plastic discs to create the base of the radar scanner. As previously mentioned,

some radomes were not fitted due to RPG attacks, so with a bit of scratch building another modeller could represent the rotating mechanism and scanner, which would look very different.

As mentioned in many of previous articles, I have a preference to have figures on my models to give a sense of scale. Here, I bought these from Dean's Marine at the same time as the kit, settling on two seated figures. They are resin bodied with white metal arms and heads that required a bit of cleaning up with a sanding file, but I









Nick's finished LSSC on the water, demonstrating the small and low silhouette of this fast attack boat.

"The manoeuvrability of this little boat is stunning and, in what I call 'hooligan mode', its speed is very exciting!"

trial fitted the arms before committing the glue to make sure they could reach the wheel or guns naturally. They were painted with a mixture of Humbrol and Vallejo acrylics to give them that hot, sweaty look they would have had when operating in the heat of Mekong Delta.

"Come on the rising wind! And wishing for perpetual motion!"

Finally, it was time to test my model out....

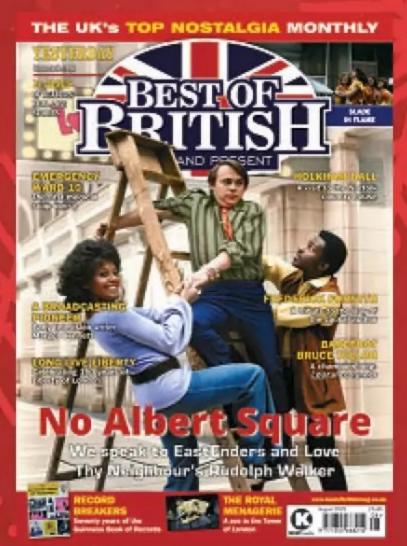
As previously mentioned, fitting an MFA 285 motor proved a mistake. It was totally inadequate. On initial trial the model simply chugged around the lake, performing nothing like the prototype I had witnessed at the Open Day. After speaking to Ron Dean at Dean's Marine I soon realised my mistake. Ron has some specialised high-revving motors he recommends for use with the LSSC, so a quick pitstop to Farcet Fen (Dean's Marine home location) saw me carrying out a Formula 1 style engine change ready for the next day of sailing. Combined with a 7.4v 5C 1000mAh Li-Po battery and a small piece of ballasting lead fitted by the servo mount, whoosh! The model went screaming across the lake just as Ron's test model had.

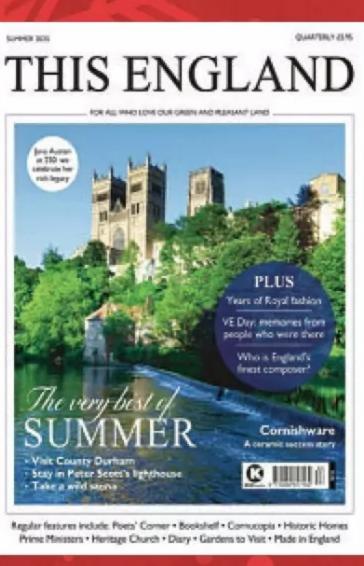
The manoeuvrability of this little boat is stunning and, in what I call 'hooligan mode', its speed is very exciting! Going for a scale speed you begin to see how these boats were used during the Vietnam War; their low silhouette and high performance must have saved numerous crew's skins on many occasions.

I've had so much fun both building and sailing the LSSC. Highly recommended!

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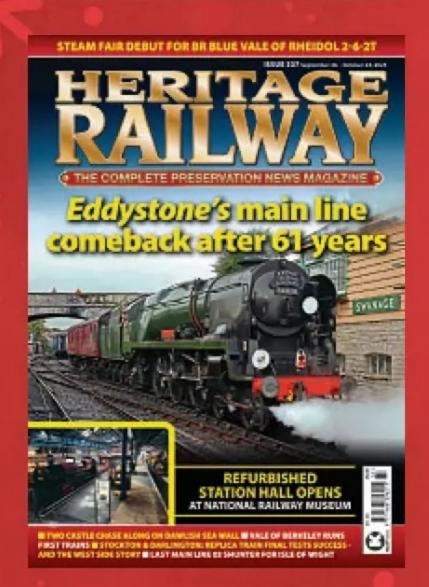


















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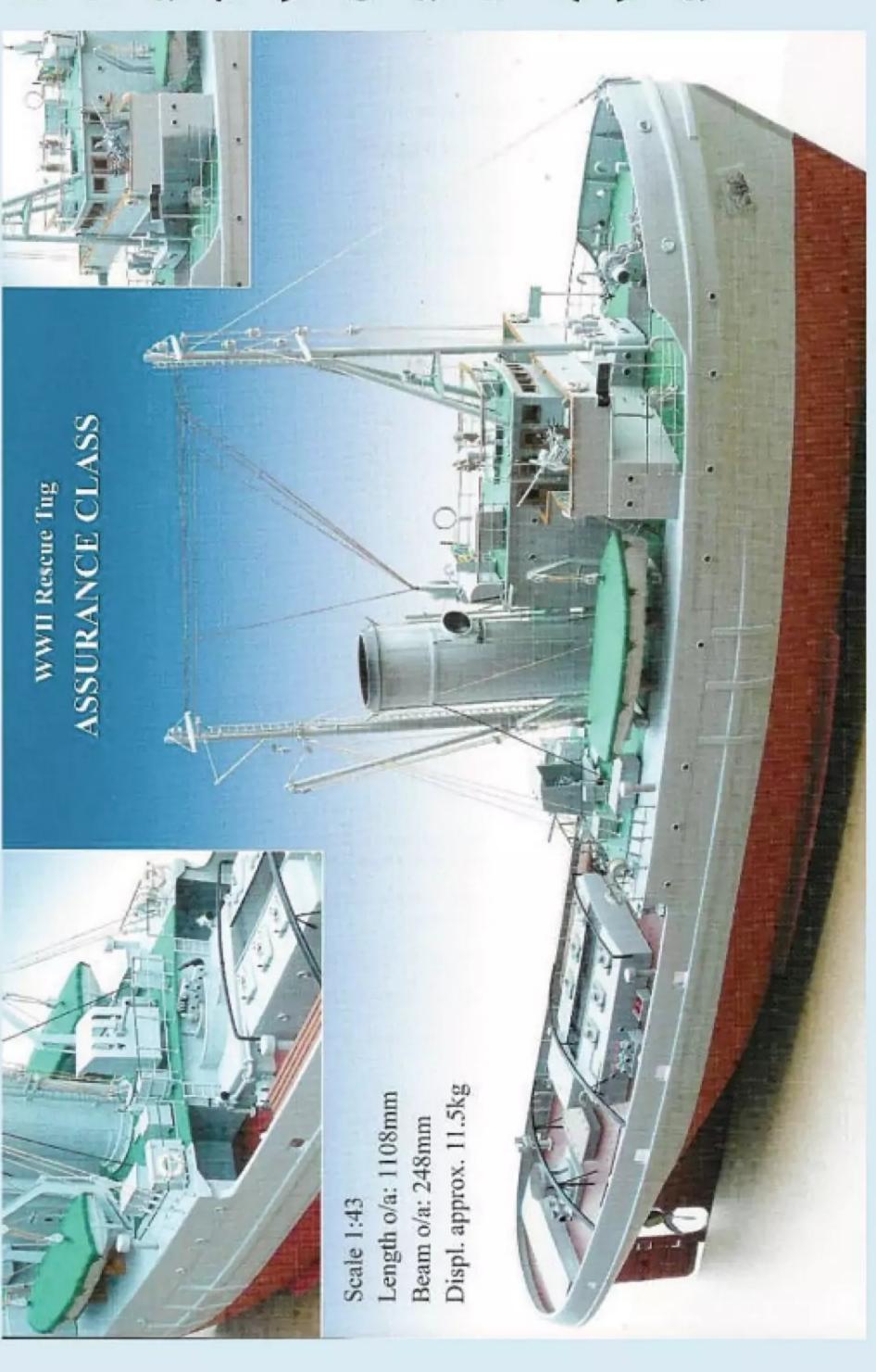
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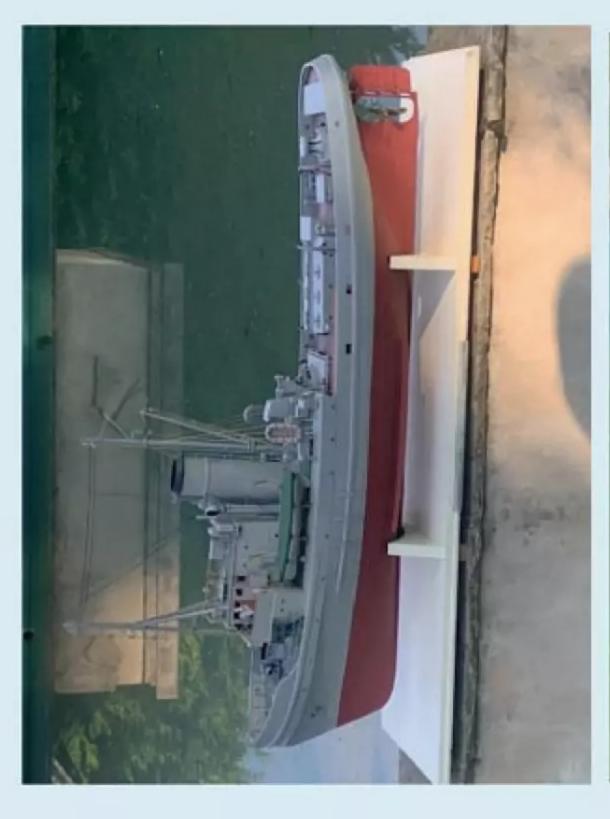


Class II Rescue Tug Assur



Built in 1940/3 by
Cochrane & Sons
shipbuilders Ltd (Selby. UK)
the 21 tugs in the class
were designed for
escort / rescue work and
sported a variety of unique
names.

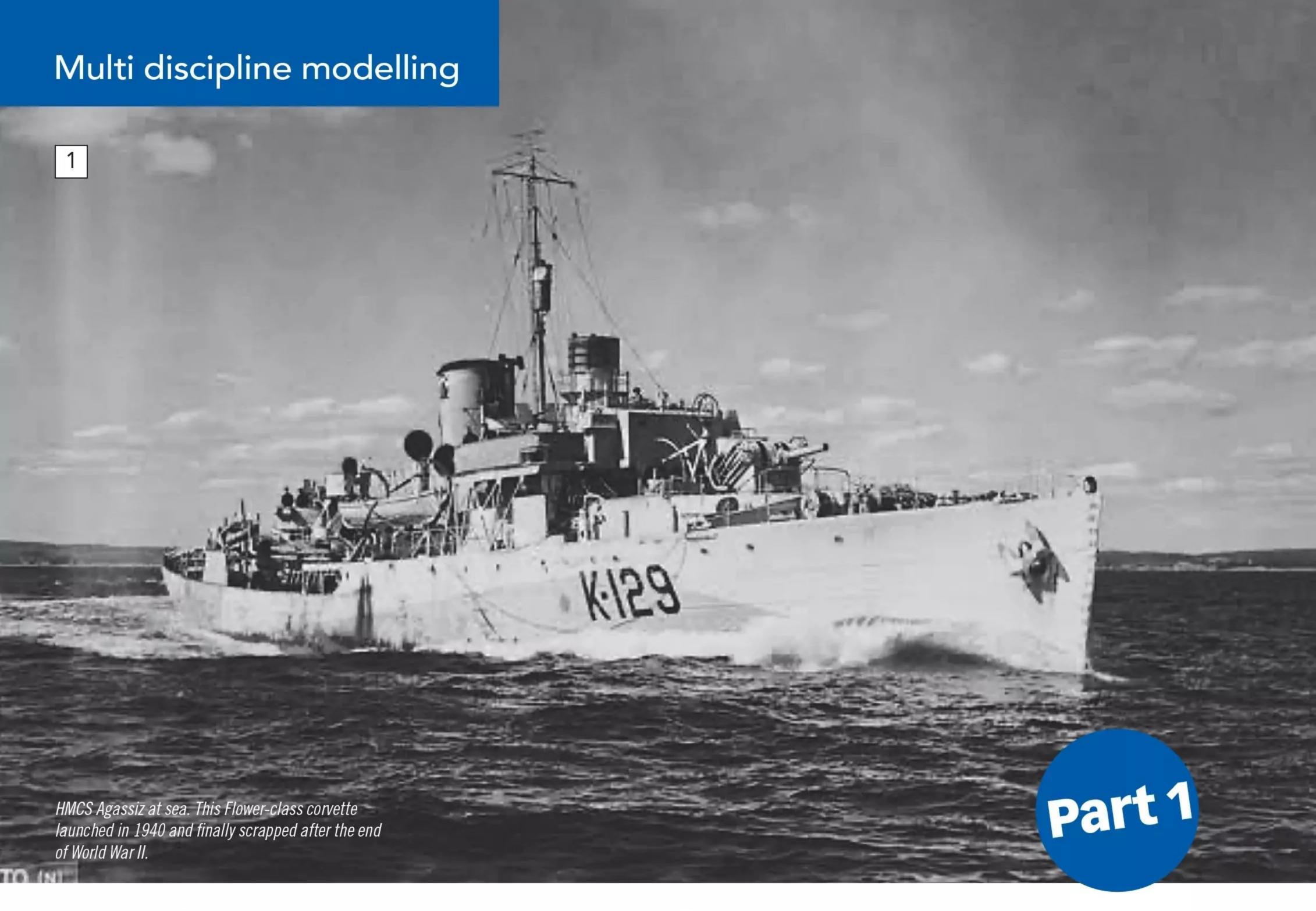
After the war the vessels were sold out of navy service.





The kit is to the usual high standards and includes building manual, GRP hull, GRP funnel, other materials; CNC cut styrene decks and superstructure, full size plan, resin, and white metal fittings.





The Learning Curve

Stuart Deacon chronicles his progression through the various disciplines that make up our hobby, starting, this month, with card kit building...

began my working life as an engineer in the Merchant Navy and have owned, sailed and worked on various craft over the years – from beach catamarans to restoring a 1956 timber cruiser – so I've always had an interest in anything that floats. Since retiring about three years ago, I've also built a handful of models. I'm still very much learning to master the various skill sets this requires, but I am hoping that by sharing my early mistakes and small successes this will encourage others who are also new to the hobby.

Getting started with HMCS Agassiz

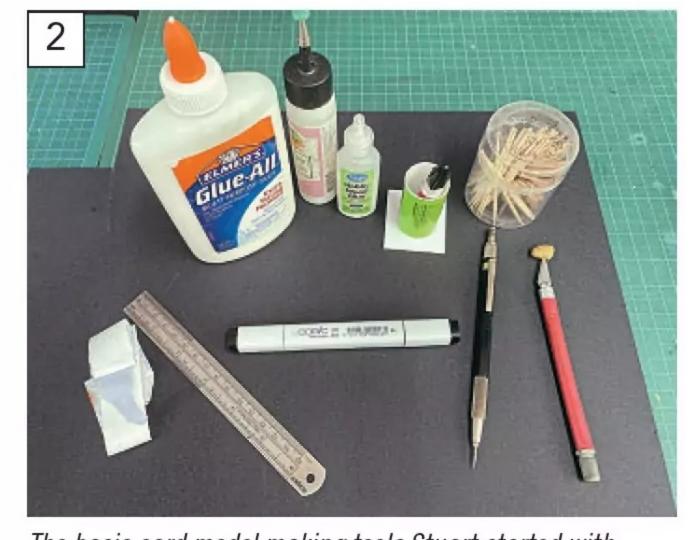
My wife creates all sorts of celebration cards for birthdays and other occasions, and she often asks me to cut out some of the delicate shapes. It was this that first sparked my interest in the model boat kits available in card – and I was amazed to discover just how many are out there once you start looking.

I'd just finished reading The Cruel Sea, a novel by Nicholas Monsarrat about the North Atlantic convoys of World War II. Inspired by this, an online search soon led me to a card kit for

HMCS Agassiz.

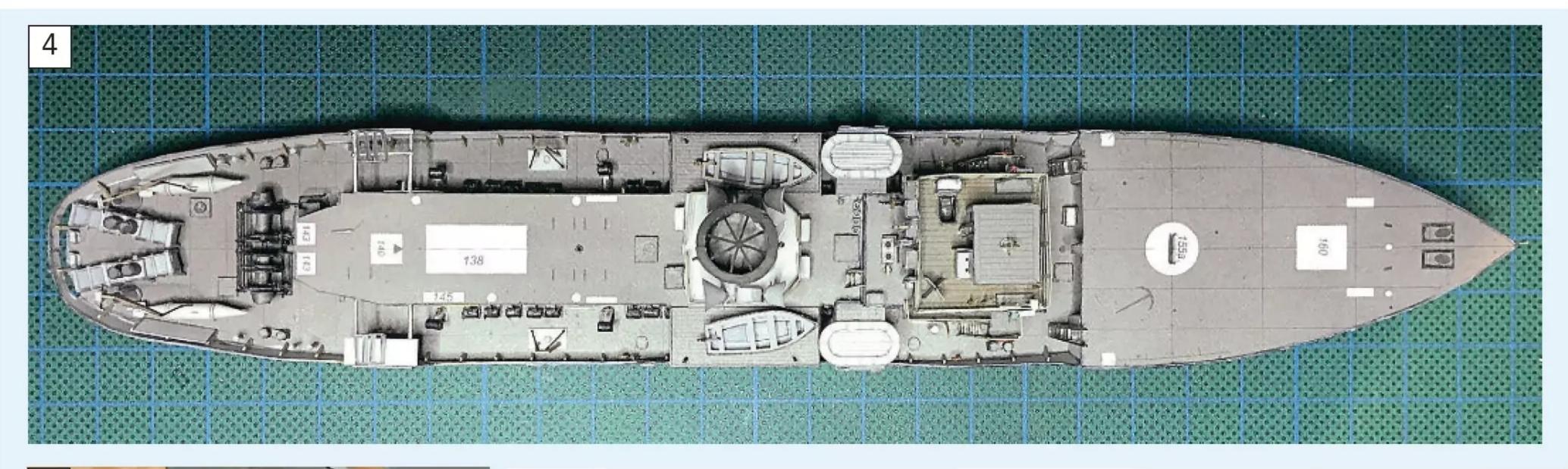
Another quick search online provided some historical background on this ship. HMCS Agassiz was a Flower-class corvette of the Royal Canadian Navy and named after the community of Agassiz, British Columbia. Built in Vancouver, British Columbia, she was launched on August 15, 1940, and commissioned on January 23, 1941, in Vancouver. Due to the demands of the Battle of the Atlantic, *Agassiz* was used primarily as an escort for convoys crossing the Atlantic Ocean, protecting them from, and where necessary engaging with, German submarines (see **Photo 1**).

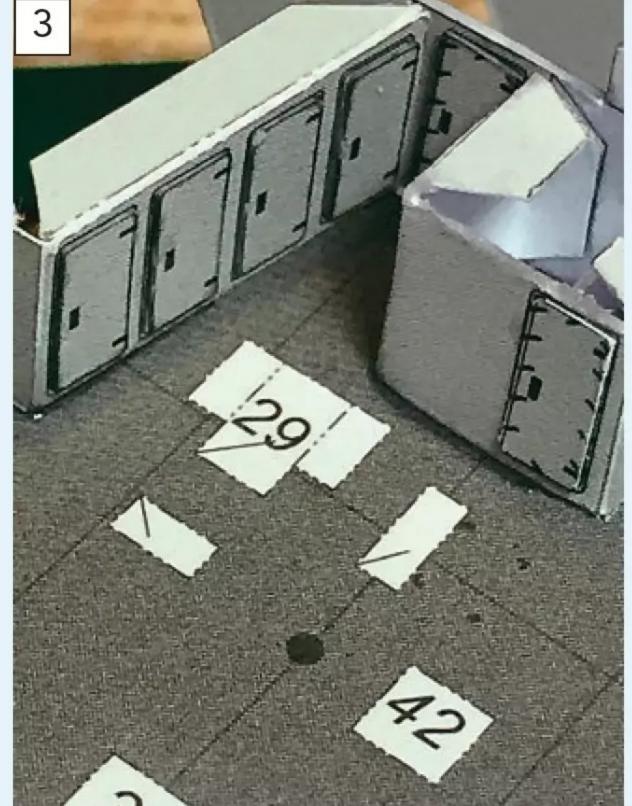
The kit is from HMV of Germany and comes in the form of multiple flat sheets of card printed in colour.



The basic card model making tools Stuart started with.

Without a dedicated modelling space, the dining table became my first 'workshop'. The tools were simple: a sharp craft knife with plenty of No. 11 blades, a 6-inch stainless steel ruler, fine-point tweezers, PVA and superglue, a cutting mat, and a good lamp with magnifier. A bit of Blu Tack, toothpicks, and a pair of manicure files I found in the bathroom





The printed parts clearly marked where the next component is to be set.

"Card Modelling, Basic and Advanced Techniques by Alvar Hansen provided some useful tips to get me started"

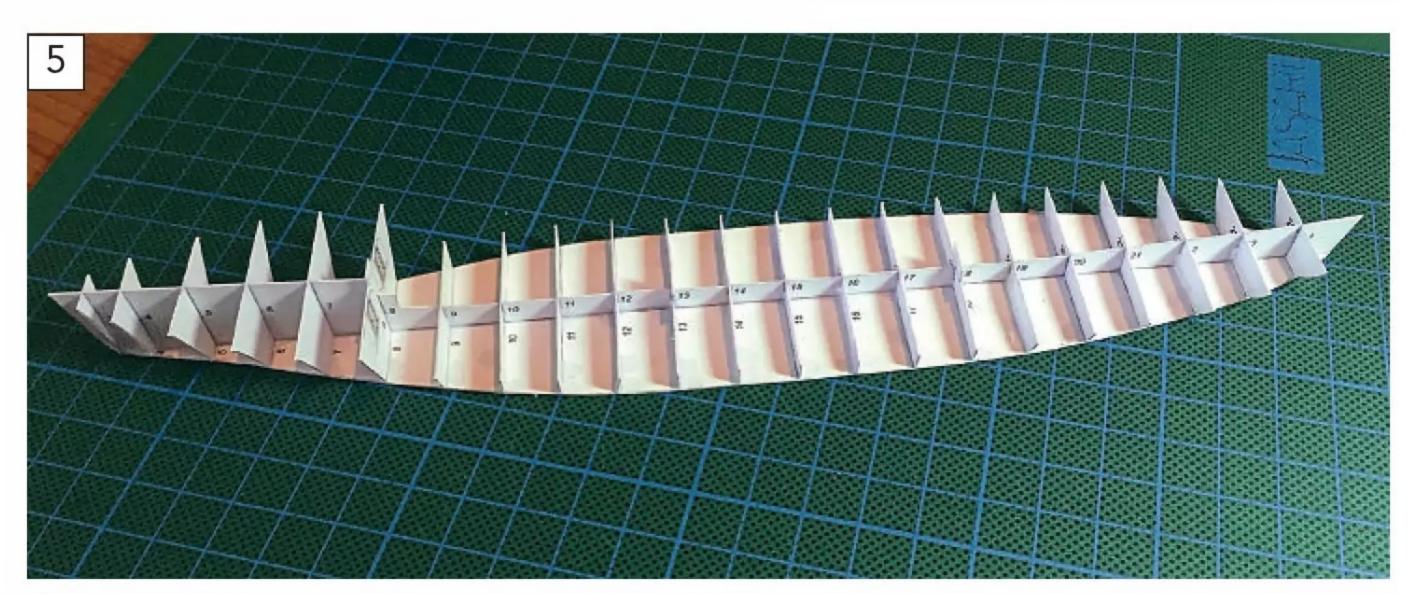
completed my beginner's toolkit (see **Photo 2**).

Card Modelling, Basic and Advanced Techniques by Alvar Hansen provided some useful tips to get me started.

HMV's kit

When the HMV card kit arrived, I was amazed by the detail and print quality. Starting with a simple card kit was the best decision I could have made. For very little cost and with almost no specialist tools, I learned the basics of precision modelling and simple hull construction – and was rewarded by the quiet satisfaction of ultimately achieving a very nicely detailed model.

The kit came with clear instructions, including photographs, with each part's location printed on adjoining pieces of the model itself (see **Photos 3 and 4**). I also bought the optional laser-cut detail set, which make it much easier to add



The waterline model's bulkheads set in place on the base and keel.



The hull is sheeted in pre-printed card, one piece per side.

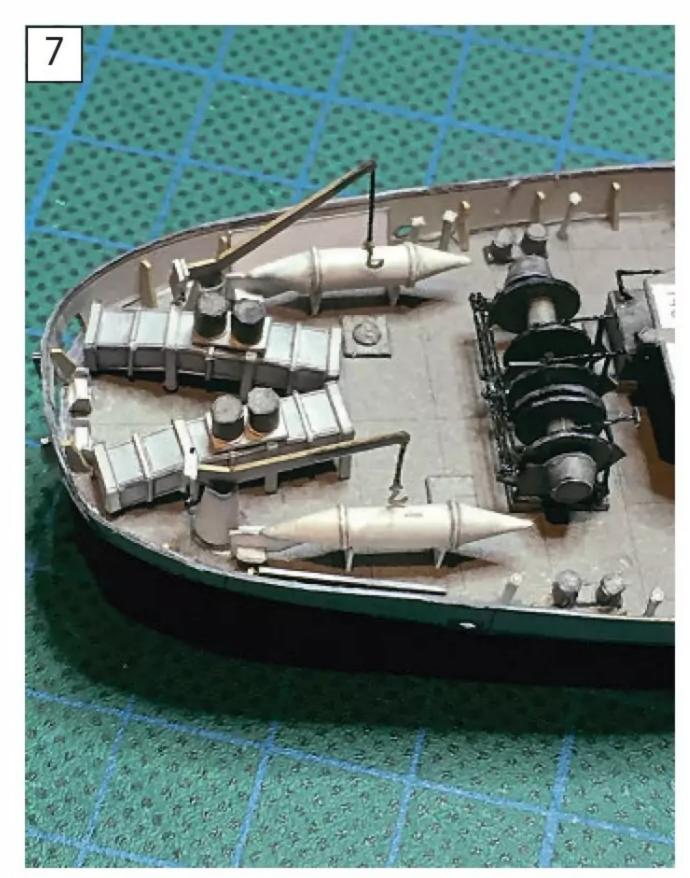
some very fine extras, such as handrails, ladders and anchor chains – things I didn't fancy cutting by hand at a scale of 1:250.

The build

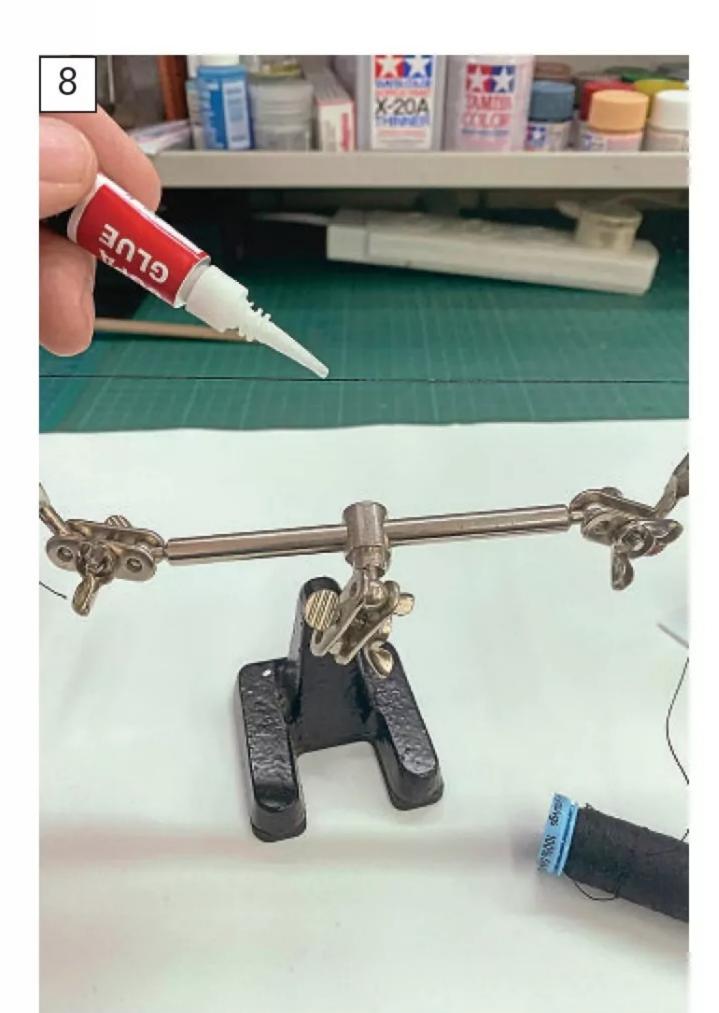
The build was straightforward but required patience and a steady hand. The resulting vessel is a waterline model, and the hull is formed up of a series of bulkheads, much like the wooden model kits available but sheeted in thin card panels rather than timber planks (see **Photos 5 and 6).** Each of the printed parts is cut from a master sheet. For tiny, curved parts, I found it easiest to roll them around a toothpick, using the narrow end to

shape tight curves and conical shapes while pressing the card gently against my fingers or a small foam block. Tiny circles about 1 mm across were tricky, but multiple small cuts around the circle got the job done (see **Photo 7**). The cut edges of the card are, of course, white, so I borrowed some suitably coloured Copic Markers from my wife's craft stash. These allow the cut edges to be blended with the printed surface; however, care needs to be taken to reduce the amount of bleed from the ink into the card, as well as matching the colour to the printed section.

Particularly challenging was the very fine rigging of the radio antennas,



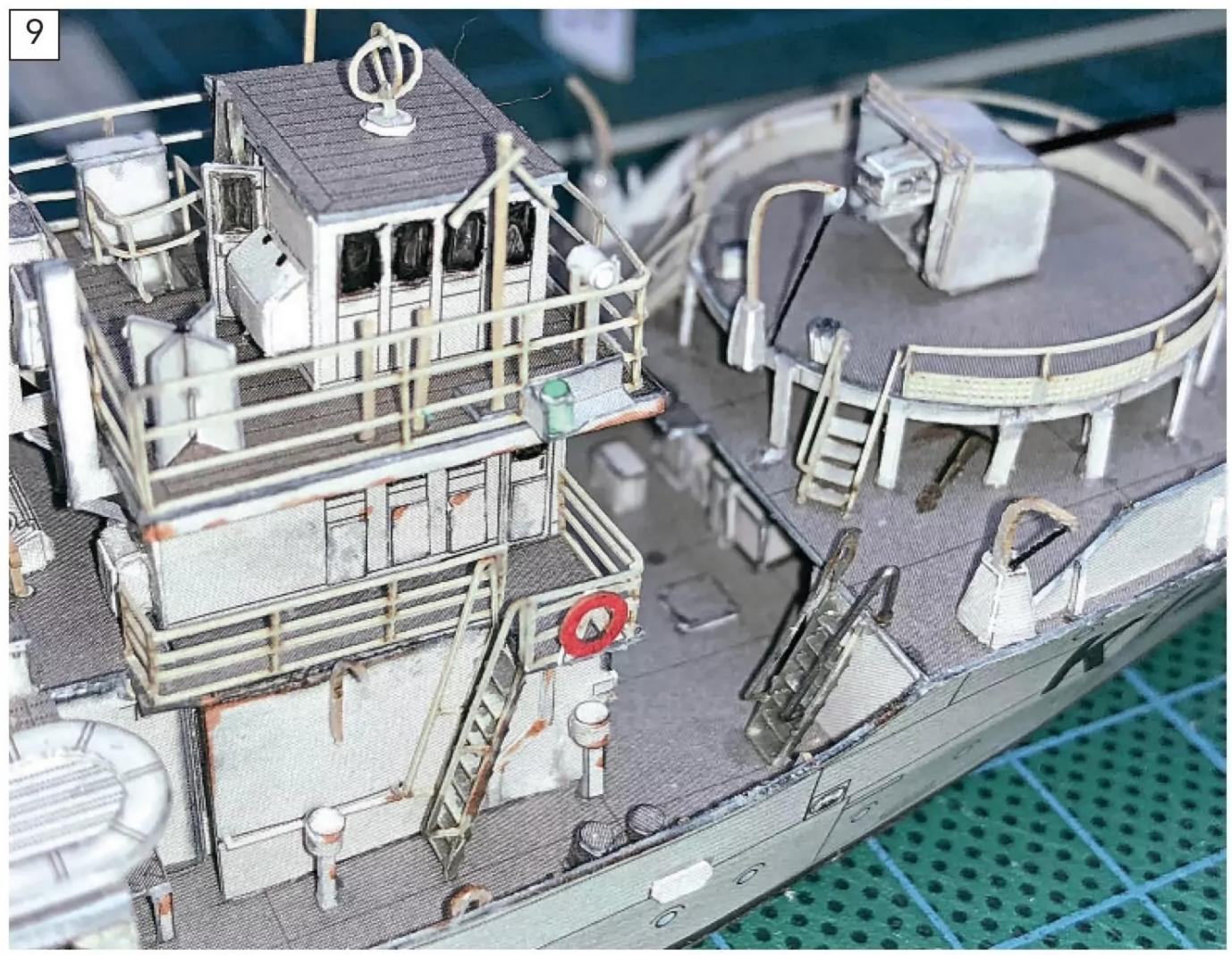
The stern of the model, showing the tiny tubes, cone shapes and circles used to make up torpedoes and winch components. The black steel spindles of the winch were made from silk thread stiffened with superglue.



Stuart's method of making stiff rigging lines for the model.



The bridge fit-out underway. The windows are about 1mm wide.



Weathering of the card was done with Copic ink markers.

"Particularly challenging was the very fine rigging of the radio antennas, etc"

etc. After some experiments, I settled on silk thread. I stretched this thread between two crocodile clips on a 'third hand' stand and ran a small amount of superglue along it. This left it straight and stiff enough to cut to length and fix in place (see **Photo 8**).

It's easy to knock a tiny part out of shape while adding another, especially

at such a small scale and with big fingers. Over-cutting was another trap – easily solved by slowing down and frequently swapping blades, as cutting card will dull a blade's edges fast. For fragile parts like ladders and handrails, a dab of superglue helped stiffen them once they had been formed into the correct shape.

Once the build was done, I then added a bit of weathering with the same Copic markers (see **Photo 9**).

For the display stand, I mounted the waterline model on an aerial photo of a ship at sea, printed to size in black



The bridge superstructure nearing completion, with the laser cut handrails and ladders in place.

and white (see **Photo 10**). Cotton wool added a wisp of funnel smoke and a hint of bow wave and wake — a simple finish for my first display model.

On referencing the HMV site, it was evident I still had a way to go to achieve the standard set by this manufacturer's beautifully built card prototypes, but, even so, I was very happy with my first attempt (see **Photos 11, 12, 13, 14 and 15**).

HMV's Agassiz kit results in a very small but beautifully detailed model. The build is straightforward, but it makes for a really enjoyable project, and the outlay is probably the lowest of any form of modelling that I can think of. The cost at time of writing is \$32AU for the card model and \$27AU if you opt for the laser cut set to match.



The foredeck nearing completion, with the tiny laser cut anchor chains and netting around the main gun now in place.



The display base Stuart made from scrap corrugated card and a printed internet aerial image of a ship, which was scaled so that the model hides the ship in the photo.



The finished model 'underway at sea'



Next on the cards: HMS Wolf

Completing the *Agassiz* then gave me the confidence to tackle something a bit more ambitious. When I look at anything I intend to have a go at, I will nearly always pick the difficult over the easy. So, as at that time I was reading through Patrick O'Brian's excellent series about Jack Aubrey and his surgeon friend Stephen Maturin, the search was on for a square-rigged ship from the same era.

The Shipyard kit

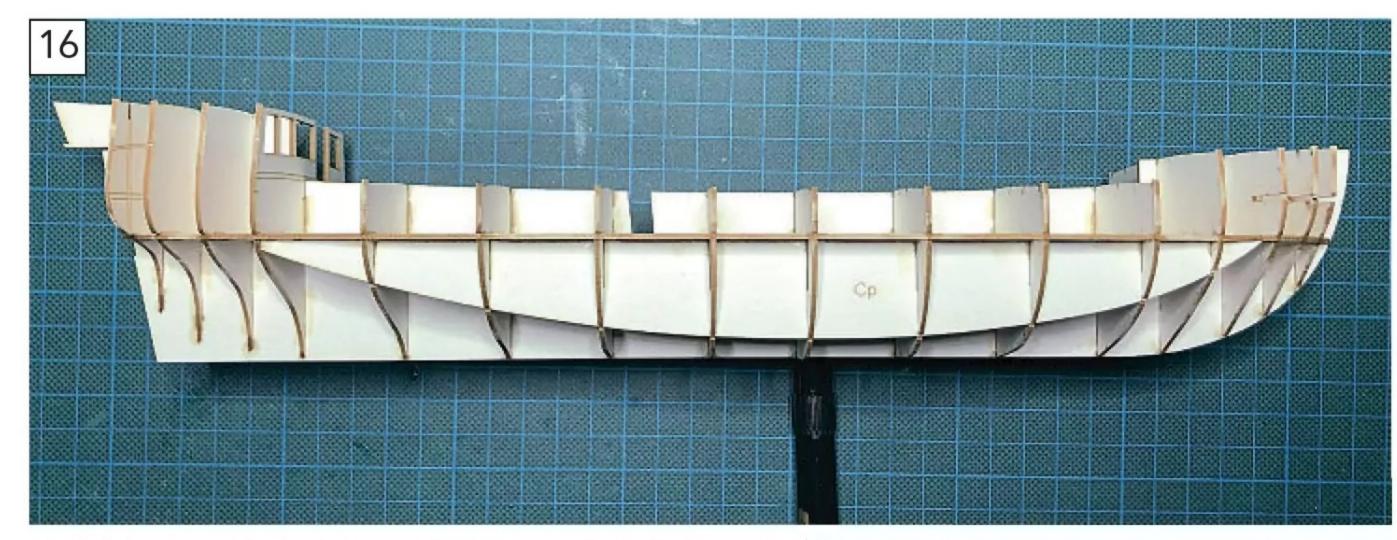
The Polish card model company Shipyard had just the thing: HMS Wolf (1752), a Snow rigged sloop, one of three Wolf class sloops built for the Royal Navy during this time, and at a larger 1:96 scale.

Unlike the *Agassiz*, *Wolf* comes with an uncoloured card set of printed sheets for the most part — but these are laser-cut sheets of parts, so the actual cutting out process was much easier.

The build

Construction started with a 'plank-on-bulkhead' style skeleton (see **Photo 16**). Thin card sheets formed the first layer of planking, followed by a layer of pre-shaped planks up to the main deck (see **Photos 17 and 18**).

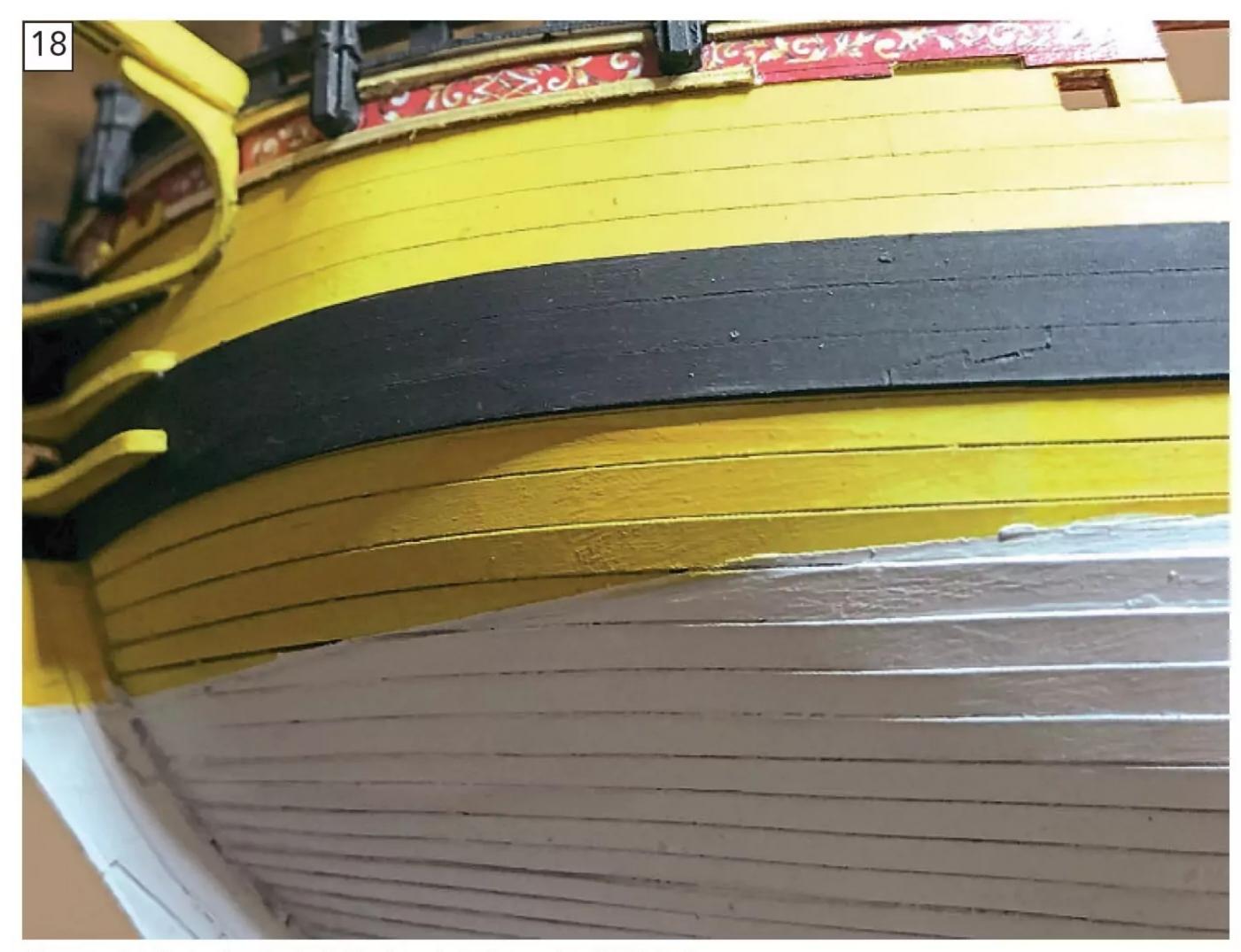
Once the hull took shape, I then painted it and tried my hand at simulating timber decking with a mix of yellow and brown paints. I added



The bulkheads and keel set up ready to commence the hull planking for Wolf.



The first layer for the hull consists of pre-shaped sheets of card.



Close up detail showing the individual card planks used on Wolf's hull.



The stern carved ornamentation and figurehead finished using craft shop gold leaf foil.



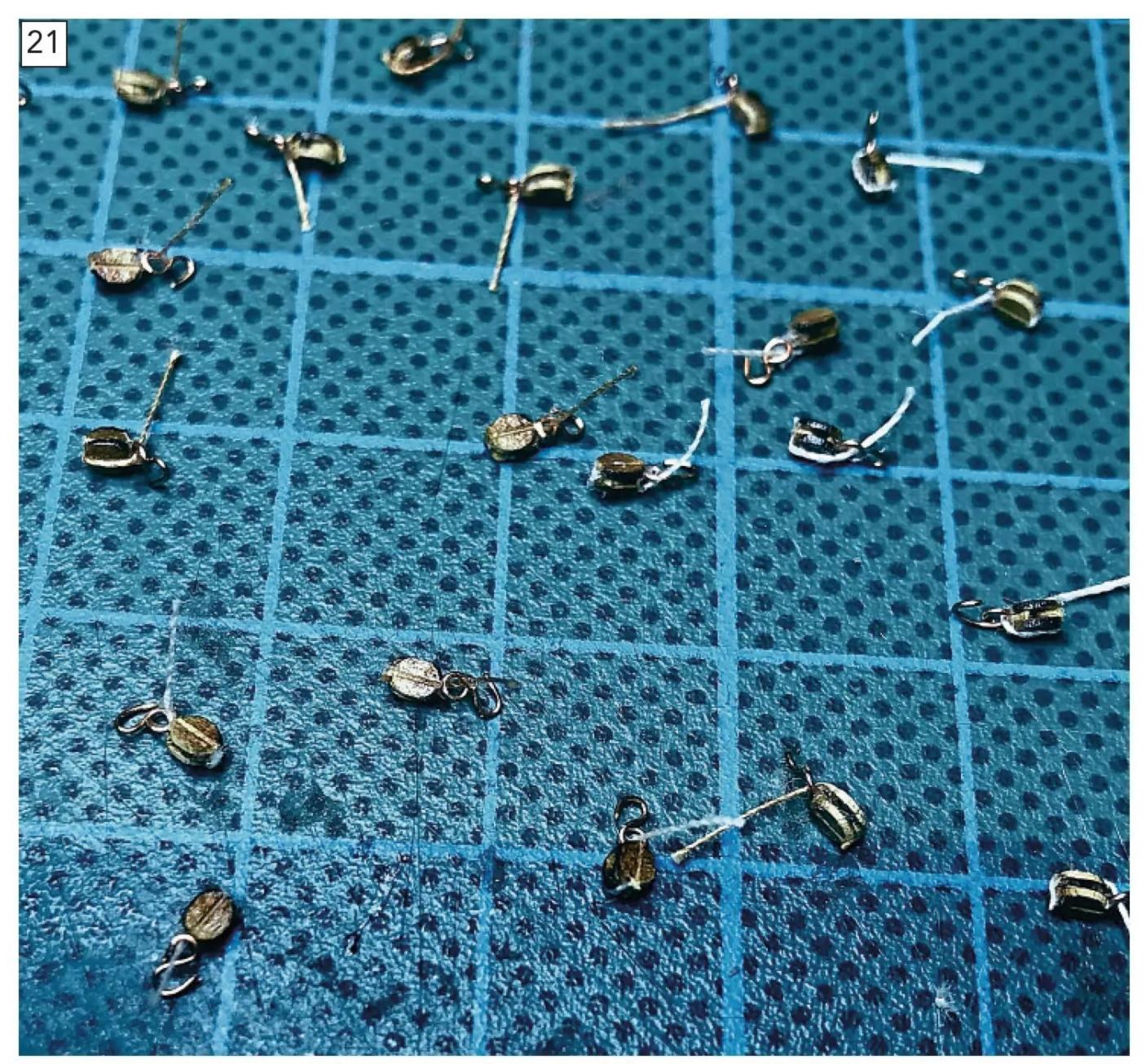
The hull painted and the deck timber simulated with a mix of paint colours.

tiny 'nail' impressions with the end of a pencil (see **Photo 19**). I decorated the stern carved ornamentation and figurehead with craft-store gold leaf; applying it wasn't nearly as tricky as I'd feared — you simply paint on a sizing solution first, then gently lift the leaf with a soft brush and dab it into place (see **Photo 20**).

I used acrylic paints and Copic markers (this time, my own — my wife made me get my own set!). The markers were especially handy for changing the colour of ropes. After running the rope over the wide end of the marker (there is a thin point and wide tip at opposing ends of these markers) to let the ink absorb into the rope, followed by a quick pass through a paper towel, they were ready to use.

Deck fittings, swivel gun mounts and cannons came next. Patience was key — many parts are tiny and very fiddly. Fine-point and self-closing tweezers became my best friends. The tiny tackle blocks for the rigging were made up from three layers of laser-cut card. My first attempt at assembling these blocks was a complete failure as the blocks tended to delaminate. I discovered the trick was to glue them together before cutting them free, then harden them with superglue and, finally, clean out any of the tiny holes required to thread the ropes through with a set of micro drills (see Photo 21). With the superglue treatment, they could take tension without deforming or splitting apart (see Photos 22 and 23).

Some of the rope rigging is also very fine, so it was back to the superglue to assist in threading these lines through the blocks. A small dab of glue on the



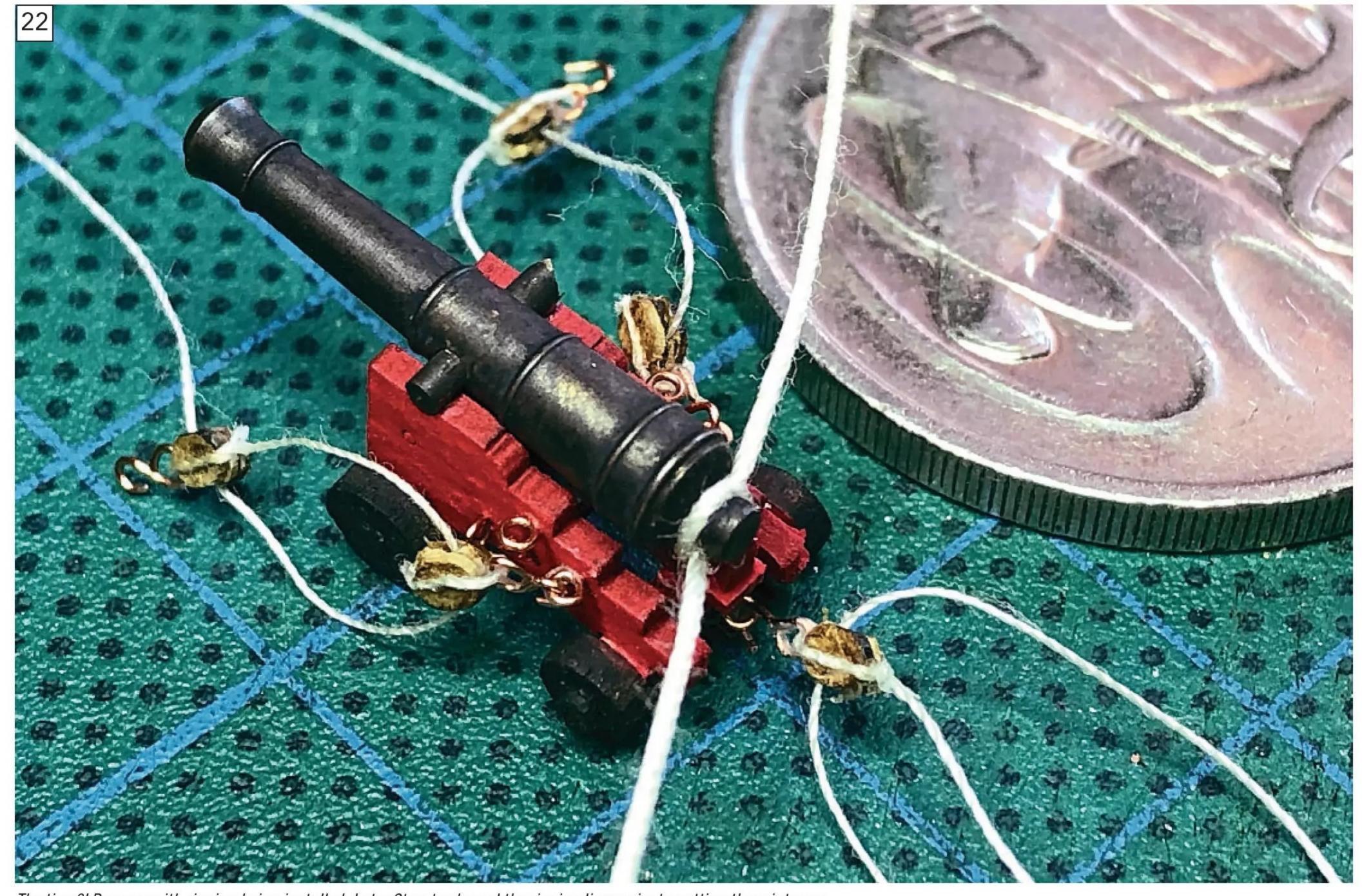
The many rigging blocks are made from three or four layers of card. Here, the gun tackle blocks are under construction.

"It was here my patience was really tested"

end of the rope, wiped with a paper towel and then trimmed to a point made it easy to thread the rope through the tiny holes in the rigging blocks.

The kit includes brass cannons and copper wire to make up the multitude of rigging hardware required. Instead of painting the brass, I used Jax Pewter Black solution to get an authentic finish. Dipping the metal into the solution, then rinsing in water and drying on a cloth produces a nice dark finish, although two or three treatments were sometimes required to achieve the desired effect. I should point out this solution is caustic, so care is required to keep it off the skin and away from eyes, and hence PPE is recommended.

Shipyard's instructions were clear but did need careful study. Guides on the correct method of tying knots to use, wire bending templates for the formation of the multitude of metal fittings for the rigging, and plenty of photos kept me on track. The standing and running rigging are shown on several sheets of plans, and, to honest, it was here my patience was really tested. Tying the ratlines involved



The tiny 6LB canon with rigging being installed. Later Stuart coloured the rigging lines prior to putting them into use.



Deadeyes made up, with the iron (copper wire) hardware attached.

The deck fit-out complete, prior to commencing the masts and standing rigging.

"On reflection, starting with card kits was the best introduction I could have had to this hobby"

making over 450 knots and forced me to set the model aside for a few months before making the final push to get it finished.

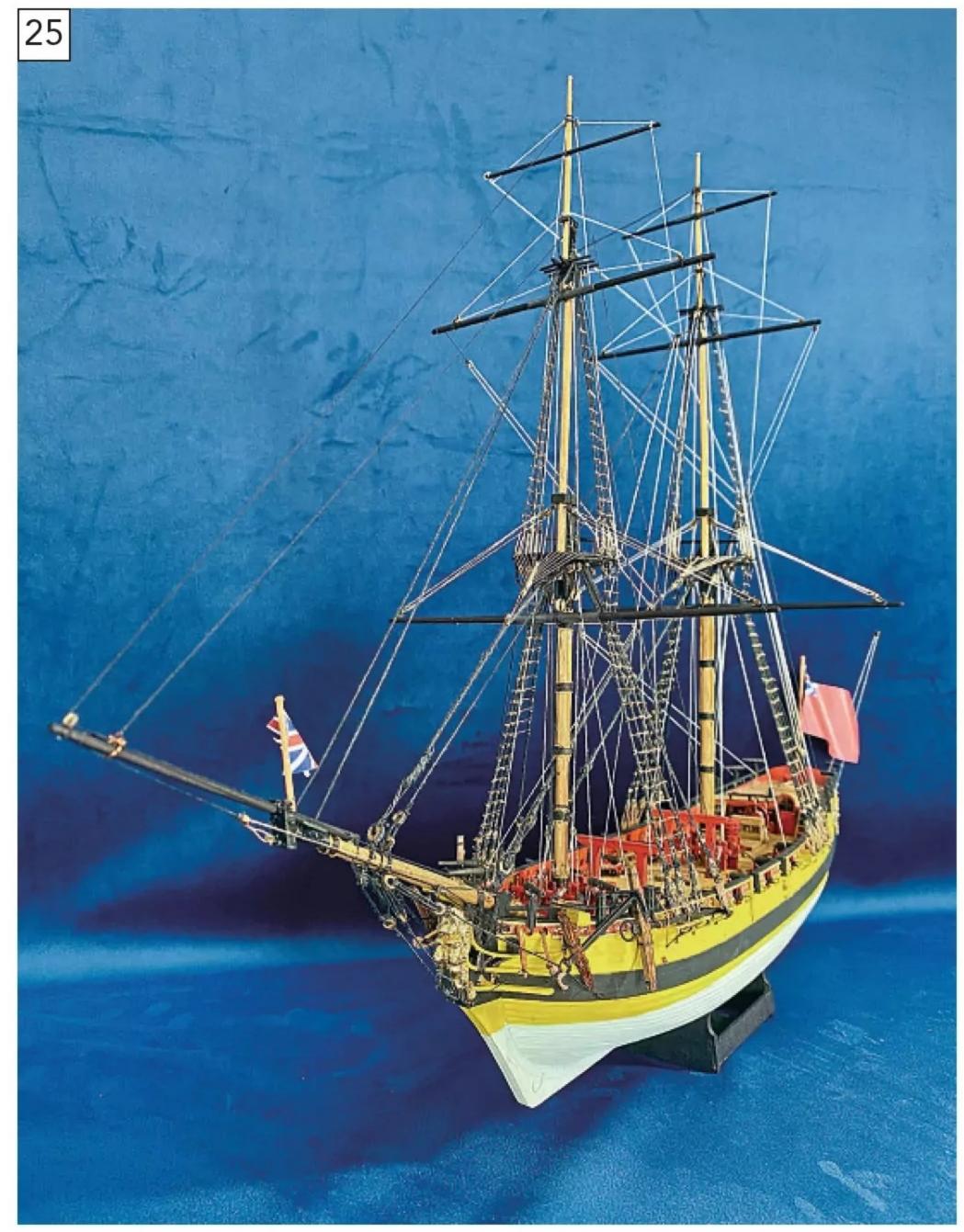
I stopped at the standing rigging, deciding not to add sails or running rigging as I was building this model for static display, and I felt it looked best with bare masts.

HMS Wolf was a rewarding model to build (see **Photos 24 and 25**); it taught me new skills and gave me the confidence to move on to bigger builds and other disciplines.

Looking back and moving on...

On reflection, starting with card kits was the best introduction I could have had to this hobby. It taught me precision, patience, and resourcefulness, skills that have carried me into wooden kits, restorations, and even scratch building – all of which will be covered as this series unfolds.

I will at some stage return to the card model genre as there are some superb card models available with HMS *Hood* and *Bismarck* both available at 1:200 scale.



Stuart's finished mode of Wolf, excluding the running rigging and sails.

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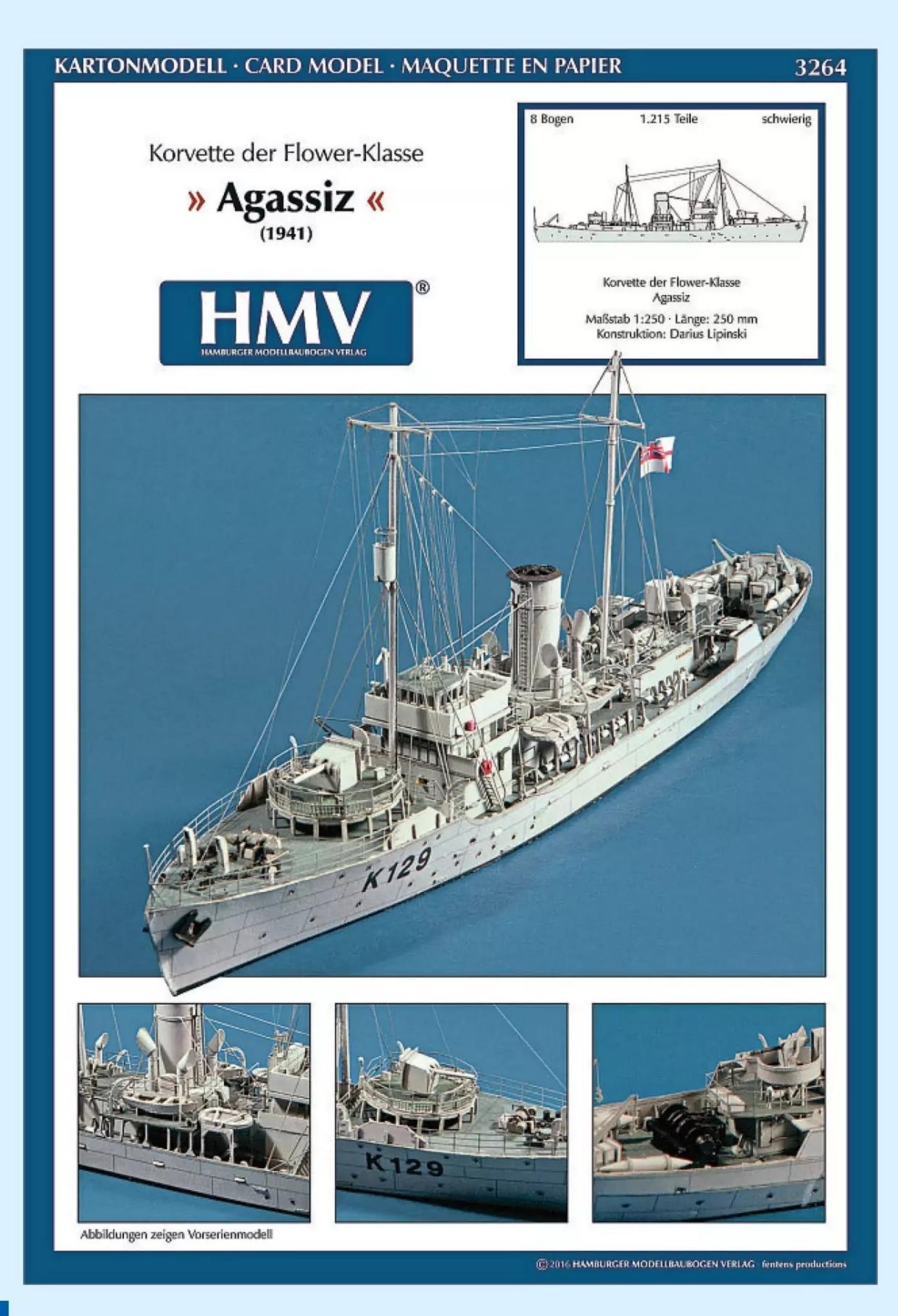
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ONE OF FIVE HMCS AGASSIZ CARD KIT & LASER-CUT SET PRIZE PACKAGES!





to offer you the chance to win, the HMV (Hamburger Modellbaubogen Verlag) card kit for the Flower Class corvette HMCS Agassiz (as featured in the first instalment of Stuart Deacon's new series The Learning Curve, starting on page 18). The 1:250 scale model resulting from this

The 1:250 scale model resulting from this kit build features an astonishing wealth of detail, including bridge interior, a depth charge launcher with rails, detailed cannons, a scupper which can be modelled opened, and a whole lot more.

As a bonus, though, you will also receive the specially designed, but usually only available to purchase separately, laser-cut set for the *Agassiz*. While not essential to the build, not only will this make construction so much easier (as you can swap out standard kit parts for pre-cut ones), but it will also allow you to incorporate even more intricacy and fine filigree detail to the railings, anchor chains, stairways, antennas, bulwark stays, davits and thwarts for the dinghies.

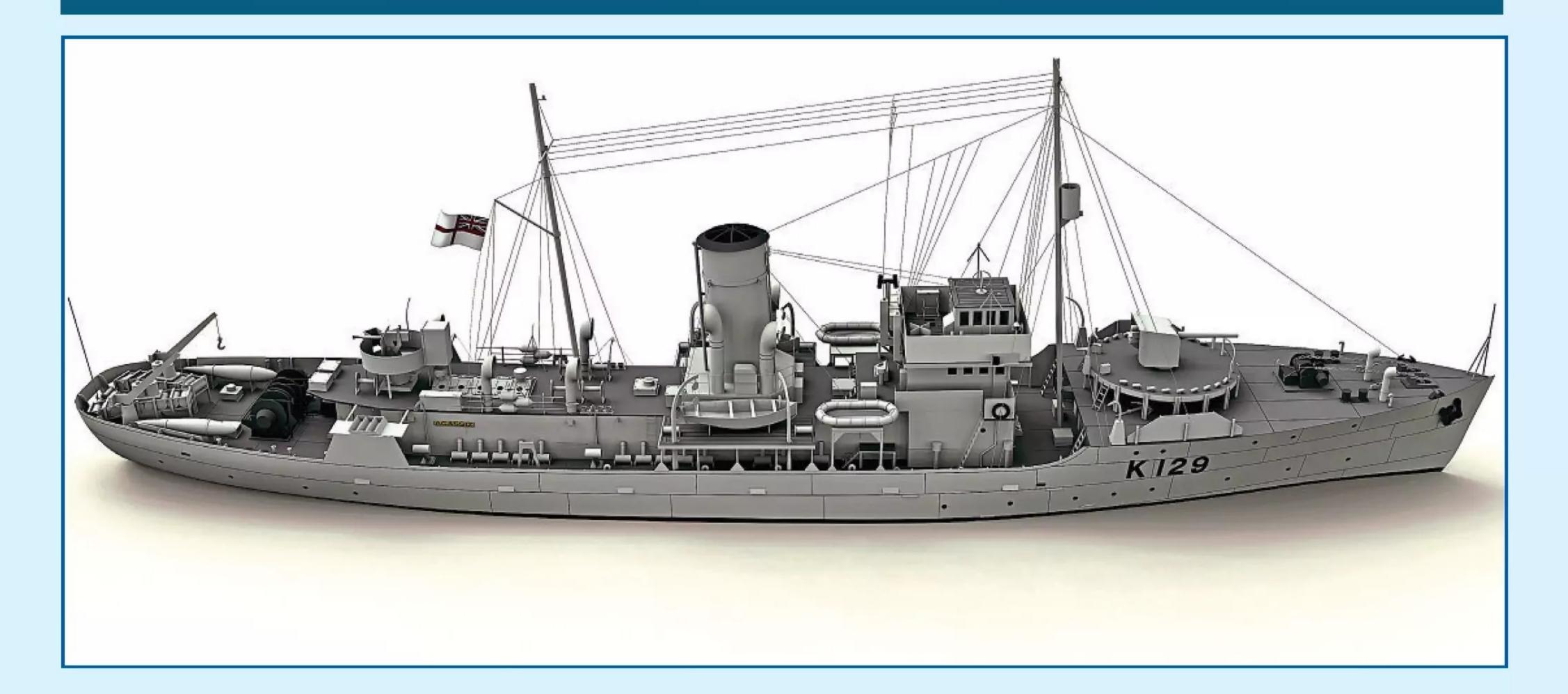
What's more, the kit can be finished to represent either the *Agassiz* or one of her three sister ships, *Wetaskiwin*, *Battleford* and *Levis* (as all four vessels were practically identical).

And last, but not least, thanks to the generosity of Fentens Productions (parent company to the HMV brand) we've got not just one but FIVE of these fabulous prize packages, worth €33 each, to give away!



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To be included in the draw, all you need to do is complete the entry form included on this page, cut it out (photocopies of the form will be accepted from those of you not wishing to deface your magazine) and mail it back to us at:

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Most kit manufacturers tend to supply adhesive vinyl markings, and some can be very thin and adhere superbly to a model surface, such as these supplied by Mountfleet Models in its Ben Ain kit.

Waterslide transfer workshop

Richard Simpson shows the fantastic effects that can be achieved when you apply yourself!

espite conversations frequently bemoaning the fact that there seem to be fewer and fewer newcomers coming into the hobby of model boating, I still remain positive when I come across questions or enquiries regarding some of the more basic techniques we might find ourselves using in our model boat construction and operation. One such question that came up only recently concerned the application of waterslide transfers. Now, I know it's much trendier nowadays to refer to them as decals, but I come from a time when my modelling teeth

were cut on Airfix Series One plastic injection moulded kits in polythene bags at 2s 6d per kit! Back then, my pocket money was 2s 6d per week, so I could afford a kit a week, while paints and glues had to be purchased out of birthday and Christmas money. In those days they were called transfers, and no-one had ever heard of the expression 'decal'.

Again, thinking back to those days, the transfers were applied to the painted kit and would dry out with the inevitable silvering visible throughout the backing film, until such times as they would split, crack and fall off! Today,

of course, as with so many things, we have a wealth of new products to assist us with achieving a lovely 'painted on' look, but, as always, that then comes with a degree of confusion. I sometimes wonder whether the internet genuinely does help, as there seems to be as many techniques for applying waterslide transfers as there are modellers, which somewhat muddies the water. There is also a sound argument for the use of adhesive vinyl lettering, which some may prefer. However, while some manufacturers supply very thin adhesive vinyl lettering that settles beautifully with careful use of a



Sometimes, however, vinyl lettering can come on quite a heavy carrier film, and no amount of paintwork is going to hide the thick edge.



Sets of tweezers can be picked up cheaply and easily, although, as with most things, the best quality cost more. Richard has always preferred the angled end type tweezers, but his trusty old straight ones still get used occasionally.

hairdryer (see **Photo 1**), some adhesive vinyl lettering is on the thick side and proves extremely difficult to blend in with the surrounding surface (see **Photo 2**). Waterslide transfers do offer the convenience of being adjustable when applied but can prove challenging when they are very thin.

So, as we say, let's get back to the basics and see if I can offer just a few hints and tips that may help you achieve successful application and longer lasting waterslide transfers. As with everything I write about in a back-to-basics article, I'm certainly not claiming the methods and techniques I'm about to share are the best or only way of doing things, I am simply explaining what I've learnt over the years and what's helped me to achieve the results I get now.

What is a waterslide transfer?

It's probably worth starting off with a word about the transfers themselves, just to help us to understand what they are and therefore where any problems may arise. Very basically, these transfers consist of waterproof ink printed onto a very fine clear carrier film, which in turn is attached to a waterproof paper backing sheet. The prints can come in the form of lettering, pictures, symbols, etc, in as many differently coloured inks as required.

Most transfers found in kits will have the carrier film only just exceeding the area of the printed transfer. You can also, however, have bespoke transfer sheets printed by specialist companies, and these invariably have a carrier film that covers the entire sheet; this needs to be

"This needs to be taken into consideration when cutting out your transfer"

taken into consideration when cutting out your transfer. What is also frequently missed is the fact that between the clear carrier film and the paper backing sheet is an adhesive, which is activated by water. Again, this is very important when we come to apply the transfer, as we shall see. It is also worth noting that modern transfer carrier film is frequently much thinner than older transfer sheets; this helps greatly in concealing the carrier film once the transfer is on the model but also requires that bit more care to be taken when handling.

Tools of the trade

One of the most important considerations to bear in mind when applying waterslide transfers is to prepare your workbench; think through the process and have everything to hand. There needs to be as little delay in applying the transfer as possible, so you don't want to be wandering around the workshop with a wet transfer in one hand as you try to find an elusive tool, tissue, paintbrush, tweezers, etc. Those with untidy worktops take note! The following, though, will be your essentials:

Tweezers

I like to use angled end tweezers for transfers, and a lot of other modelling tasks – no real reason, they're just something I've got used to over the years and I find them very handy, particularly when accurate placement is important. Any type of tweezers that you are comfortable with will do, even old straight types (see **Photo 3**)

• A dish of tepid water

This dish will need to be large enough to float your biggest transfer. As for the water, too cold the transfer will take longer to loosen, too hot and it can damage the transfer and cause it to loosen too quickly. Just above room temperature is usually fine but, if you're unsure, keep it cooler rather than hotter.

- A soft, clean paintbrush
- The size of brush required is really determined by the size of the transfer, so a range of clean, soft brushes are worth having (see **Photo 4**).
- Setting solution
 There are numerous brands out there but, basically, they all do the same

thing. More about this in a minute!

A clean worktop



RIchard much prefers to use brushes to position a transfer before teasing the excess liquid out from behind it. He uses clean, soft brushes of a size to suit the transfer. Frequently, flat brushes work very well, but they must be soft and, most importantly, perfectly clean.



There seems to be a lot of confusion, particularly online, as regards the two products from Microscale Industries, Microset and Microsol. The bottom line is that they both do the same thing, namely soften the carrier film, but Microsol is much stronger.

"This seems to be the product that causes the most confusion and, looking at various sources of advice, mainly online, it's easy to see why"

Did I mention this? Get dust or fibres underneath your transfer and nothing you can do will hide it. Consequently, work on a clean and tidy worktop to minimise airborne matter.

- A pair of sharp scissors or a sharp craft knife and steel rule.
- Kitchen roll.
- Good lighting.

Setting solutions

This seems to be the product that causes the most confusion and, looking at various sources of advice, mainly online, it's easy to see why. Most product manufacturers produce their own version of a transfer setting solution, e.g., Tamiya,

Humbrol and many others, but probably amongst the first and still most commonly used products are the two produced by Microscale Industries, namely Microset and Microsol (see **Photo 5**).

All these products do basically the same thing: they soften the backing film that the transfer is printed on. This assists the transfer to conform to more complex curved surfaces, and likewise to detail such as rivets or panel joints. The thing to remember, of course, is that we are starting off with an incredibly thin backing film that is already easy to damage when handling, and then we are going to apply a solution that makes it even softer and more delicate. This is precisely why a good understanding of what is going on helps hugely to achieve a successful finish.

While there are many different ideas on how to use Microset and Microsol, the understanding has to come from the fact that they are basically the same product and both do the same job, *i.e.*, soften the transfer, but Microsol is the stronger version of the two. In many cases Microset is more than enough to



Get the tools you need laid out, and a water dish large enough for the transfer you're going to be are applying ready with tepid water in it. If you prefer cotton buds, then use them, but Richard much prefers using a soft paintbrush.

achieve a well settled transfer; we might only need to consider Microsol where sharp compound curves or fine detail is involved.

Preparation

Before you start to apply a transfer, you must first consider the surface you're going to be putting it on. As you're trying to apply a very fine carrier film to a surface, if that surface is rough then the transfer simply won't be able to conform to it, and you'll end up with air between the carrier film and the painted surface.

Matt surfaces are notoriously difficult to apply transfers to without getting the dreaded silvering effect when the transfer dries out. The best solution is to paint the area where the transfer is to be put with a clear gloss varnish. Many plastic modellers give the entire model a coat with an acrylic gloss varnish before adding the transfers, but just glossing the areas where the transfers are to be applied should be enough. This allows the carrier film to settle to the entire area, greatly reducing the chances of getting air trapped behind it.

Sometimes on a very matt finish you may need to apply a few coats of a gloss clear varnish to give a smooth finish.

"Now for a big word of caution..."

Application

Well, now armed with a better understanding of what's going on, and having a clean and tidy workbench, which is well-lit, with all the tools to hand (see **Photo 6**), let's have a go at applying a transfer...

The first thing you're going to do is cut the transfer out of the main sheet. If it's a manufactured transfer, the carrier film will be only slightly larger than the transfer, so all you'll need to do is cut outside that. If it's a bespoke transfer and the carrier film covers the entire sheet, then you'll need to cut as close to the print as you're comfortable with, leaving just a small overlap of carrier film.

Next, the area that the transfer is going to be applied to should be painted with your softening solution. The softening solution also contains an adhesive agent, so it's well worth using to help the transfer settle and adhere to the surface. Once the area is wet with setting solution, the transfer can be placed in the water.

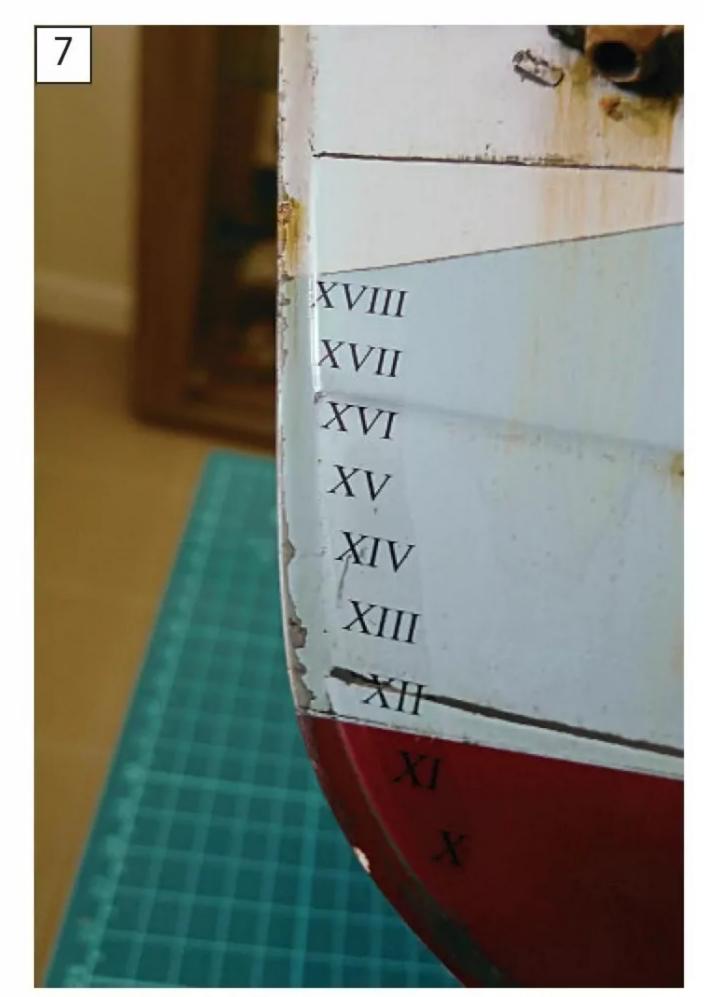
One of the more common mistakes that modellers make is when loosening the transfer in water. Some say that the transfer should be left until the transfer floats off the paper but that

makes handling much more difficult, and it washes away the adhesive that is behind the carrier film. I put my transfer into the water, then place it on the side of the dish while the transfer loosens.

Now for a big word of caution... If the transfer is of a manufactured type with the carrier film only just slightly larger than the printed ink you can pick it up with tweezers and the transfer will slide on the backing paper. If working with a bespoke transfer where the backing film covers the entire sheet, however, picking it up with tweezers will mean that you are actually holding the backing film and you will be unable to apply the transfer. In this case you must pick the transfer up by hand, holding only the edges of the paper so the transfer can still slide.

Once the transfer is loose, move it to the model and lay the paper on the far edge of where the transfer is going to be applied. Then, in one smooth movement, hold the far edge of the transfer with either a finger or with the soft brush and pull the paper away. This will leave the transfer roughly in place on the surface of the model. Because you have slid the transfer directly from the paper to the model you have the maximum amount of adhesive behind the transfer, and it should be fairly freely floating on a film of setting solution.

Back-to-basics



Once the transfer is in place and the excess moisture removed from behind the carrier film, it should be nicely settled into all the surface detail. The only reason the carrier film is still visible here is because it has a slightly different surface texture to the surface it's sat on.



The carrier film, now almost Imperceivable.

Now, using a soft brush gently, push the transfer into its perfect place. The setting solution should allow fairly free movement but try as much as possible to pull rather than push, as pushing can lead to a crease forming.

With the transfer in place you can start to gently paint the surface of the transfer from the centre to the edges with your soft brush. This will squeeze the setting solution and water out from behind the transfer and the brush will soak it up at the edge. After each stroke wipe the



An all-over clear coat, in this case matt, of varnish will ensure that the carrier film and the transfer are of exactly the same texture as the surface they're sat on, and the carrier film should almost disappear.



The aft draft marks, too, now look like they've been painted onto the surface. This sort of finish is helped along by following the correct procedures and taking care at every step of the process.

"Before you start to apply a transfer, you must first consider the surface you're going to be putting it on"

brush on a piece of kitchen paper to remove the excess moisture. Once all excess moisture been absorbed, your transfer should be sat nicely in place.

If the transfer is on a complex and/ or detailed surface you can now paint on a liberal coating of more setting solution, or, in the case of Microscale Industries products, it's time to change to Microsol. When using Microsol the transfer frequently becomes so soft that it wrinkles on the surface, and you think your transfer is ruined. Once it's dry, though, the transfer settles completely cleanly to surprisingly fine detail – although at this point the carrier film can still be noticed, mainly as a result of the differing surface textures (see **Photo 7**).

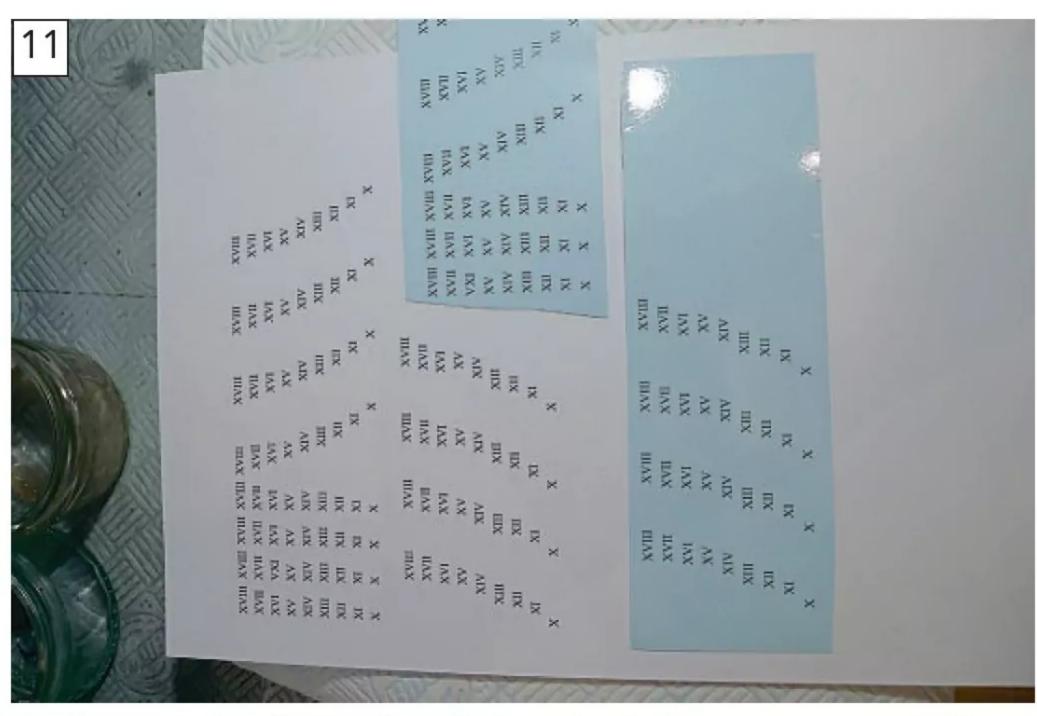
Finishing

Once your transfer has been allowed to thoroughly dry out, certainly for a few days, a coat of clear varnish will help blend it in with the surrounding area and protect it from scratches. Again, some manufacturers produce clear acrylic varnishes which can simply be sprayed or painted over the top of the transfer, but be aware, there are clear varnishes out there that carry warnings on the can or packaging specifying they should not be applied over transfers.

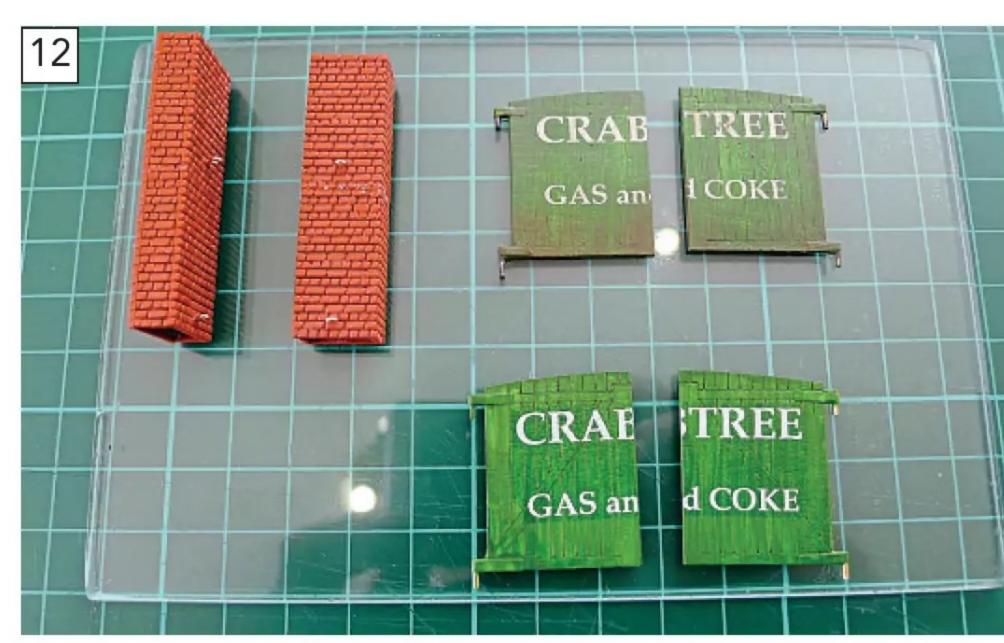
I frequently use a Humbrol gloss clear enamel varnish and while it's described as a transfer sealer, I sometimes see a little crinkling of the surface. This, however, usually disappears as the varnish dries out. A light dusting as a first coat followed by heavier coats helps reduce this.

If you want a transfer to blend in with a matt surface, then a coat of a clear *matt* varnish will help achieve that painted on look.

In the case of my draft marks, the entire side of the hull was given a coat of a clear matt varnish (see **Photo 8**). This helped to hide the carrier film as well as protect the transfers from occasional handling and scuffing (see **Photo 9**). The aft draft marks show the painted on look we are striving for (see **Photo 10**).



Creating your own transfers to suit a particular need really does open up new opportunities. This sheet was first created in Microsoft Word before converting to a .pdf file for printing onto transfer paper.



Careful use of transfer softening solutions can result in a transfer looking just as good on even the most matt of surfaces or indeed where the surface it's applied to features significant levels of detail. This transfer has been applied to a yard gate built from a card kit. The lower example has been applied to a glossed surface, while the upper example has then been given a matt and weathered finish.

"If you want a transfer to blend in with a matt surface, then a coat of a clear matt varnish will help achieve that painted on look"

Transformational transfers

While there is no doubt that modern transfers and associated products

can help you achieve a paintedon appearance for lettering and markings, their application can prove tricky to master. As pointed out earlier though, understanding exactly what's going on and having a well-prepared working area helps you to achieve the best possible result.

With the help of such companies as Precision Labels and Fox Transfers

you can design and create your own transfer sheet from scratch and print this out, as I did with my draft marks (see **Photo 11**). The possibilities are then endless and allow you to create painted on lettering for projects such as the model railway yard gates shown in **Photo 12** and the very large and complex bespoke transfer for the 1:12 scale steam lorry shown in **Photo 13**.



In this case, the transfers were applied to a gloss paint, so an additional clear coat was not necessary. The large curved upper lettering is all one large transfer and being printed from Richard's own design in three colours, ended up being very expensive. It is now sealed in with a coat of clear gloss enamel varnish.



Figuring things out

While you may want to avoid your working models suffering from the *Marie Celeste* effect, it is, **Glynn Guest** points out, always prudent to keep things in perspective...

ot every working model to which the term 'scale' can be applied needs to have visible figures onboard to enhance its appearance. I did once see a submarine model that featured a gun crew on the deck as well as some crew on the conning tower; they were still there when the model dived under the water. This did not seem to create the right image!

The other extreme could be a model based upon an open launch. No matter how beautifully it has been built, sailing it around with no one onboard looks at least a little odd, if not downright peculiar.

Scale matters

The first thing to consider is whether you'll actually be able to see any figures aboard a working model out on the water. Take something like a model of a liner at 1:300 scale. If we use the example of a figure some 6 feet (1.8 m)

tall, at this scale they'd have be about 0.24 inches (6mm) high. Yes, visible when viewed at close quarters, but sailing some distance away? This really becomes a personal choice; for me, adding figures to such a model would be a borderline decision.

Table 1 shows the effect of common scales on figure height – admittedly I've used Imperial measurements, but, hopefully, it won't be too much of a challenge to convert these to Metric.

Model appropriate

Having decided that figures of a sensible size could be fitted on your model, you still need to consider whether they are really necessary. I started this article with the example of a submarine that could submerge as an example of a model on which visible crew would not look right. Thinking about it, maybe they could be used if you were able to make them disappear before submerging and then reappear

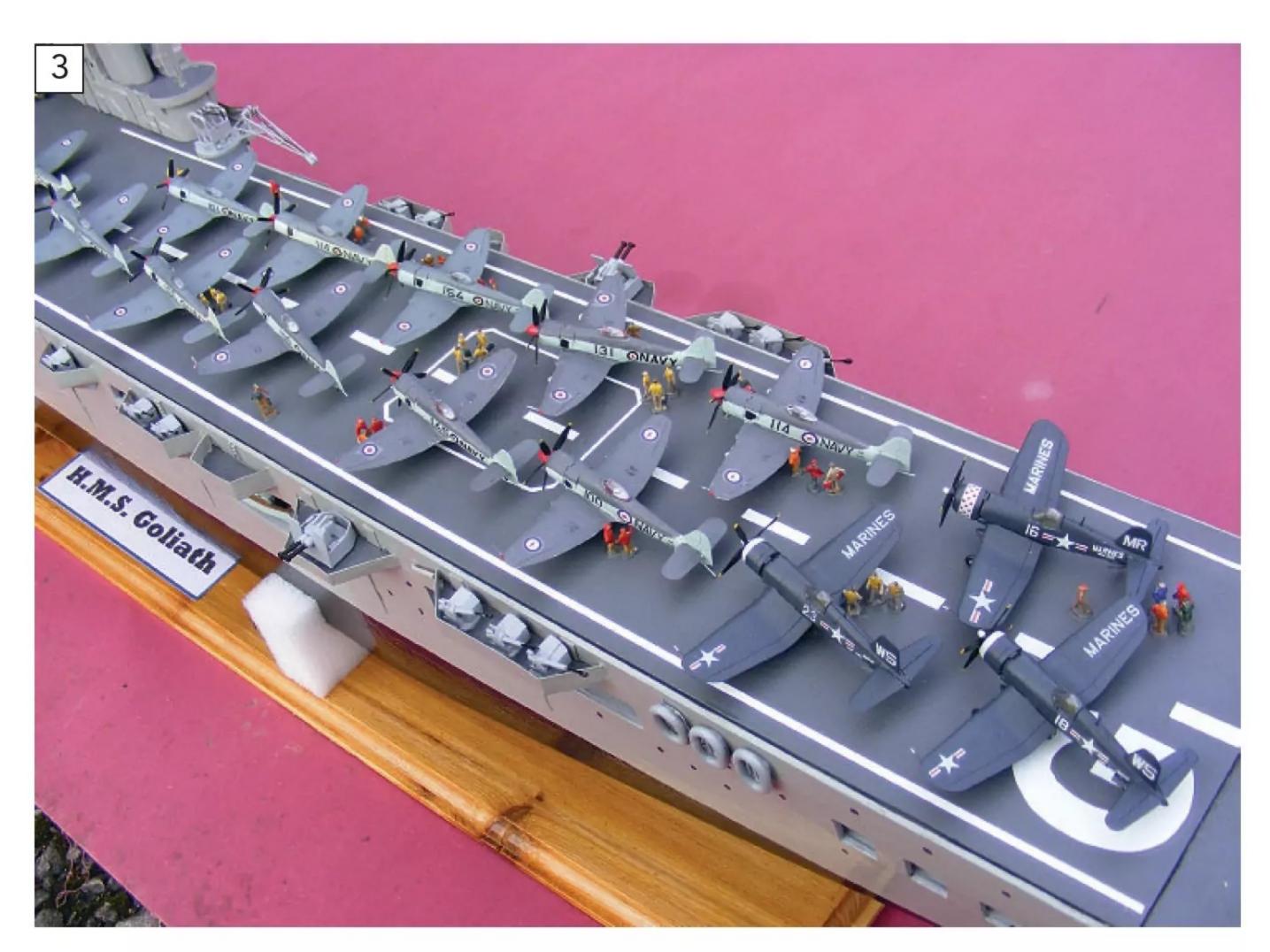
after surfacing, but that would be an interesting challenge to add to an already complex type of model.

Warships, especially modern types with enclosed bridges and weapons, can look OK with no visible crew (see **Photo 1** featuring a Type 23). Even older warships with a more open layout can still be realistically sailed

Scale	Inches	mm
1/12	6	152
1/24	3	76
1/36	2	51
1/48	1.5	38
1/72	1	25
1/96	0.75	19
1/120	0.60	15
1/144	0.50	13
1/192	0.37	9

Figures Table 1
Effect of a models scale on figure height







with no crew. I've built a few warships at 1:144 scale and have to say that a crew was never missed when sailing many of them (see **Photo 2** featuring HMS *Sheffield*). However, even at this scale there are some types of model that can benefit from the addition of visible figures. An aircraft carrier with its flight deck covered with aircraft but no crew can look 'empty' (see **Photo 3** featuring HMS *Goliath*).

A model such as a tug or other small vessel, especially older types with an open bridge, ought to feature at least a helmsman and maybe a few other crew members (see **Photos 4 and 5** of *Nogsund* and *Eccleshall*). Likewise, a river ferry with a complement of vehicles also needs many visible passengers and crew to look right (see **Photo 6** featuring *Ogdensberg*).

Another type of model that could be expected to feature plenty of people on deck is the small pleasure cruise type often enjoyed on holidays. Figures here can be the hardy types relishing the sun and wind on the open deck (see **Photo 7**) or those favouring food and drink under a canopy (see Photo 8 of *Earnshaw*).

Figure sources

On deciding a model really needs visible crew/passengers, some may rush off to order or make their own via 3D printing. Nothing wrong with this method if you have such items

Scale	Model Type		
1/24	G Gauge Railway		
1/32	Military + Plastic Kits		
1/35	Military + Plastic Kits		
1/48	O Gauge Railway + Plastic Kits		
1/64	Die Cast Cars		
1/72	Plastic Kits		
1/87	HO/OO Gauge Railway		
1/96	Ships		
1/144	Plastic Kits		
1/160	N Gauge Railway		
1/192	Ships		
1/220	Z Gauge Railway		

Figures Table 2
Popular scales used in modelling



Life lessons









"Creating an onboard diorama where the figures are clearly doing something yet are involved in a task or scenario where you wouldn't expect to see much movement will always look far more convincing"

lying idle or need some particularly demanding figures, but many will likely turn towards purchasing commercial items. Luckily, we can often raid other branches of the modelling world.

Table 2 lists some possible sources of figures which you may find useful.

Model railways can often supply passenger, station staff and workers that can be used unchanged on some types of models. They can be bought pre-painted but, as you will usually need to paint them more appropriately, I usually buy the cheaper unpainted figures (see **Photo 9**).

It pays to keep your eyes open all the time, as potentially useful figures can appear anywhere. Two figures which were originally racing car drivers are now crew members on my pushtug (see **Photo 10** featuring *Jenny Sue* 2). Even humble cheap plastic toys, such as soldiers and cowboy type figures, can, with a little 'surgery' and a lick of paint, find employment afloat. In fact, you can soon find yourself with an accumulation of many different types of figures in various scales (see **Photo 11**).

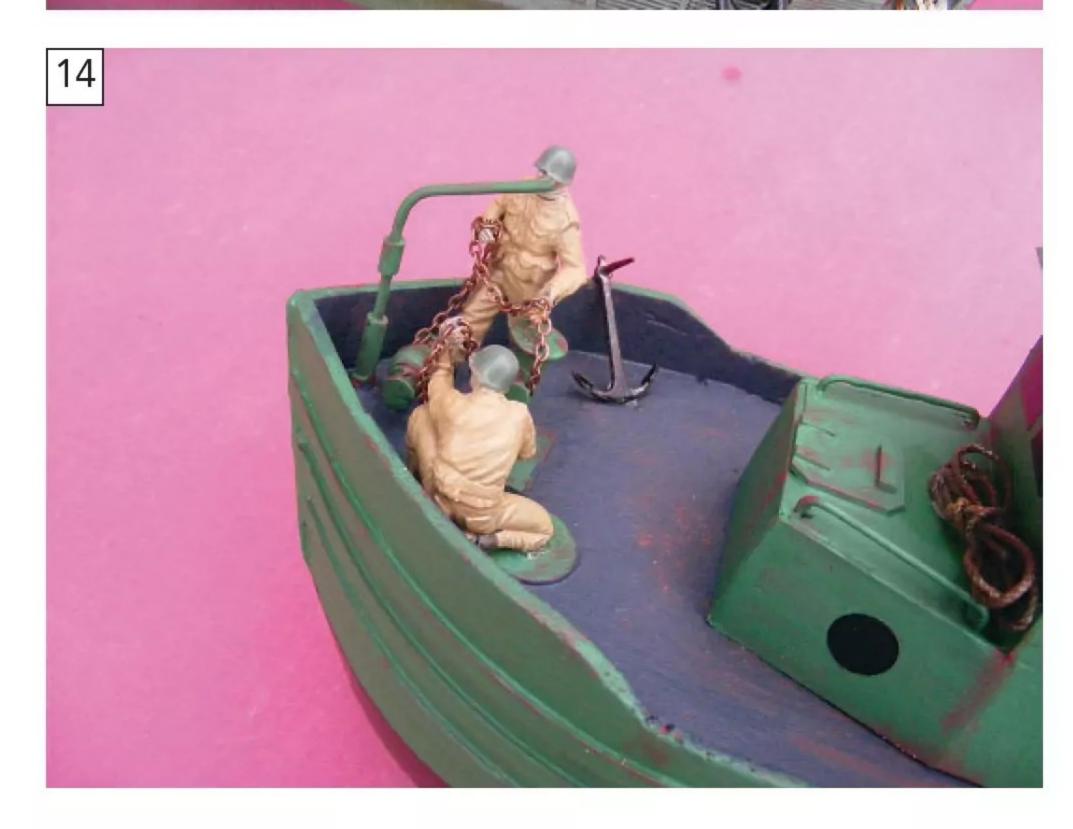
Supermarket toy shelves are well worth searching through. Charity

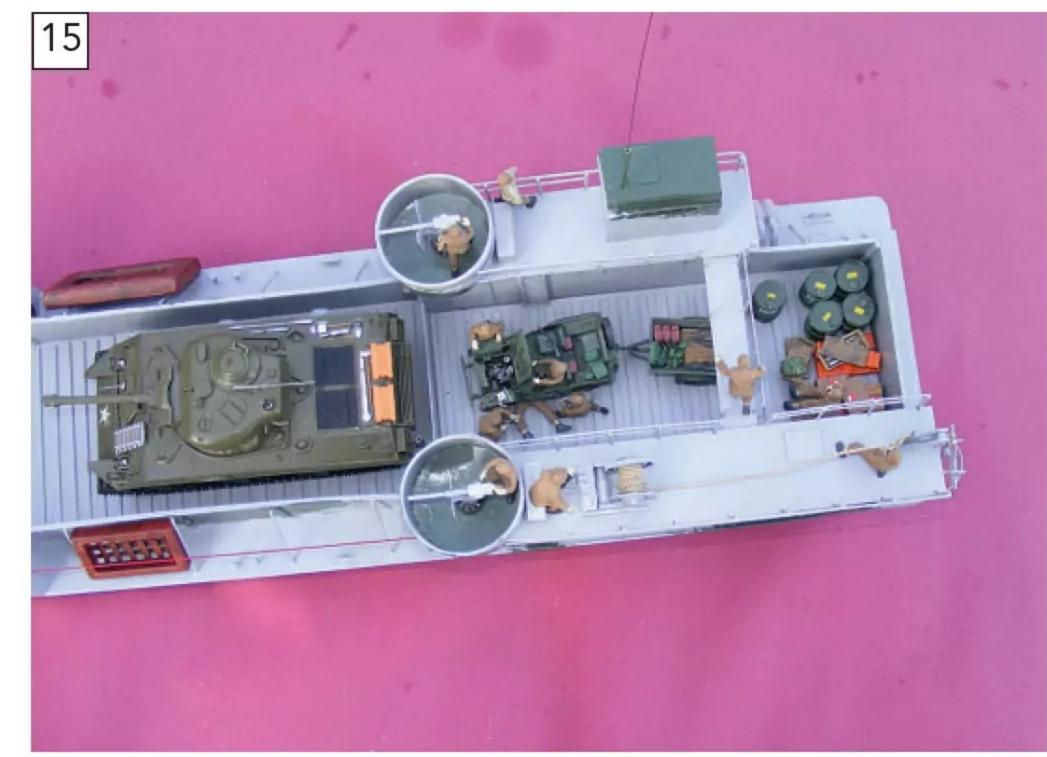












shops can also be a treasure trove, especially for larger scale figures – the Action Man and doll types spring to mind. To avoid getting odd looks while rummaging through items intended for children, you can claim you are searching for a grandchild's present! I once had a small fishing boat model that needed a crew and the toy counter in a department store came

to my rescue with three 'adventure' style figures. The helicopter pilot, with no modification, became the helmsman in the wheelhouse. The other two looked rugged enough for the job but were outfitted for some serious mission in space. Luckily, some homemade oilskins hid their weaponry and allowed them to work on a fishing boat!

Realistic posing

No matter how appropriate some figures are for a model, without some forethought they can create an uncomfortable feeling as the vessel sails past. One such instance I can remember involved a very nicely built high-speed military launch. This had some of the crew stood unsupported on the deck, which looked fine as

Life lessons







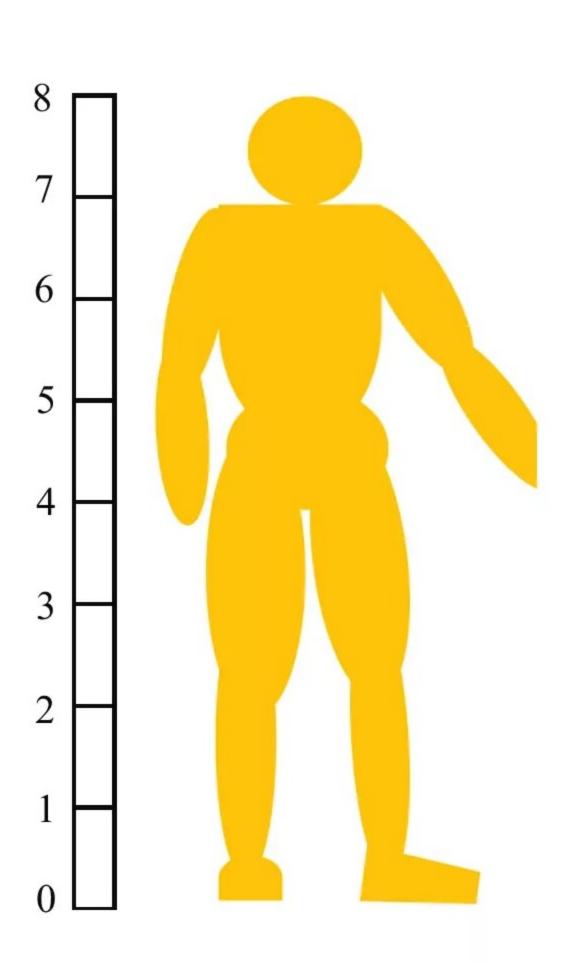


it slowly cruised along but far less convincing when it zipped past at full speed, and even worse when it was suddenly pulled into a violent turn, as in real life all those on deck would have been thrown overboard! Even more sedate vessels can 'freeze' a figure in some position where your mind expects to see some motion. A good example is someone caught in midstride, something I try to avoid.

Creating an onboard diorama where the figures are clearly doing something yet are involved in a task or scenario where you wouldn't expect to see much movement will always look far more convincing. The helicopter being refuelled and rearmed on my ATCH model is a good example of this (see **Photos 12 and 13**). The figures look busy and yet their static pose doesn't spoil the effect. Likewise, the two soldiers in the bows of my Army tug are patiently wrestling with a winch and anchor chain (see **Photo 14**). My tank landing craft model (LCM6) had to have some military bodies onboard

for the sake of realism, so, rather than just scatter them around, a group were arranged to give the impression that they were working on a recalcitrant Jeep (see **Photo 15**). Again, not much movement expected in this situation, although a realistic audio effect might have been interesting!

It can be fun to introduce a touch of humour into these dioramas. My push-tug model features two crewmen, one trying to repair a winch, the other standing idly by watching and likely offering some 'useful' verbal help (see **Photo 16**). A similar situation can be seen on the deck of my seaplane tender, where the maintenance crew were standing around probably wondering how to refit the latest piece that has fallen off the aircraft (see **Photo 17**). It always pays to think situations through first. For example, knowing that the model I built based on one of wartime PT boats would spend some time at a realistic top speed, the crew had to look secure. So, where not wedged firmly in place, crew



Figures Table 3
Basic Human Proportions







members have been posed hanging on for dear life (see **Photo 18**)!

Humanoid enough?

With some models, it might be good enough just too loosely suggest a human figure and create the desired idea of scale. Such figures may not pass muster for a scale type model but for freelance one they're usually good enough. Even so, they ought to be in roughly the right proportions unless sarcastic humour is the intent. I remember in school art classes we were taught to use idea of dividing a figure's height into eighths to get adult proportions more or less right (see my Body Proportions diagram).

One of my early attempts at making my own figures was for a small airboat type of model, which I named Skimmer. This was based upon the craft you might see in places like the Florida Everglades, so a suitable sized figure was therefore needed. A figure from the toy shelves would have been too heavy and impaired both performance and stability. Despite it being my first attempt at sculpture, an adequate shape was made by gluing and shaping pieces of expanded polystyrene together. Some balls of the same material were a lucky find in a craft shop and one of these made a better head than I could have carved. Some reinforcement of limbs and joints was needed, and glue coated toothpicks proved adequate. A light sanding to smooth off the corners, a lick of emulsion paint to seal the porous surfaces and then enamel paints to 'dress' the figure, and he was ready (see **Photo 19**).

A couple of my other models (Waddler and RowVer), which feature paddling and rowing actions also include figures, but only above the waist representation was needed (see Photos 20 and 21). In these models, because the arms had to move, more substantial bodies and limbs based on plywood had to be used, but the final shape was still made with expanded polystyrene. Perhaps this minimalist manning of models evolved from some of my fast electric models, where I halved an expanded polystyrene ball to suggest a driver's helmet (see **Photo 22** featuring *Kaon*).

To sum up...

I hope that this article will encourage more of you to consider adding figures to your scale models. Admittedly, it is not essential to the operation and enjoyment of a working model boat, but it can, nevertheless, add a little extra character and atmosphere to your creation.

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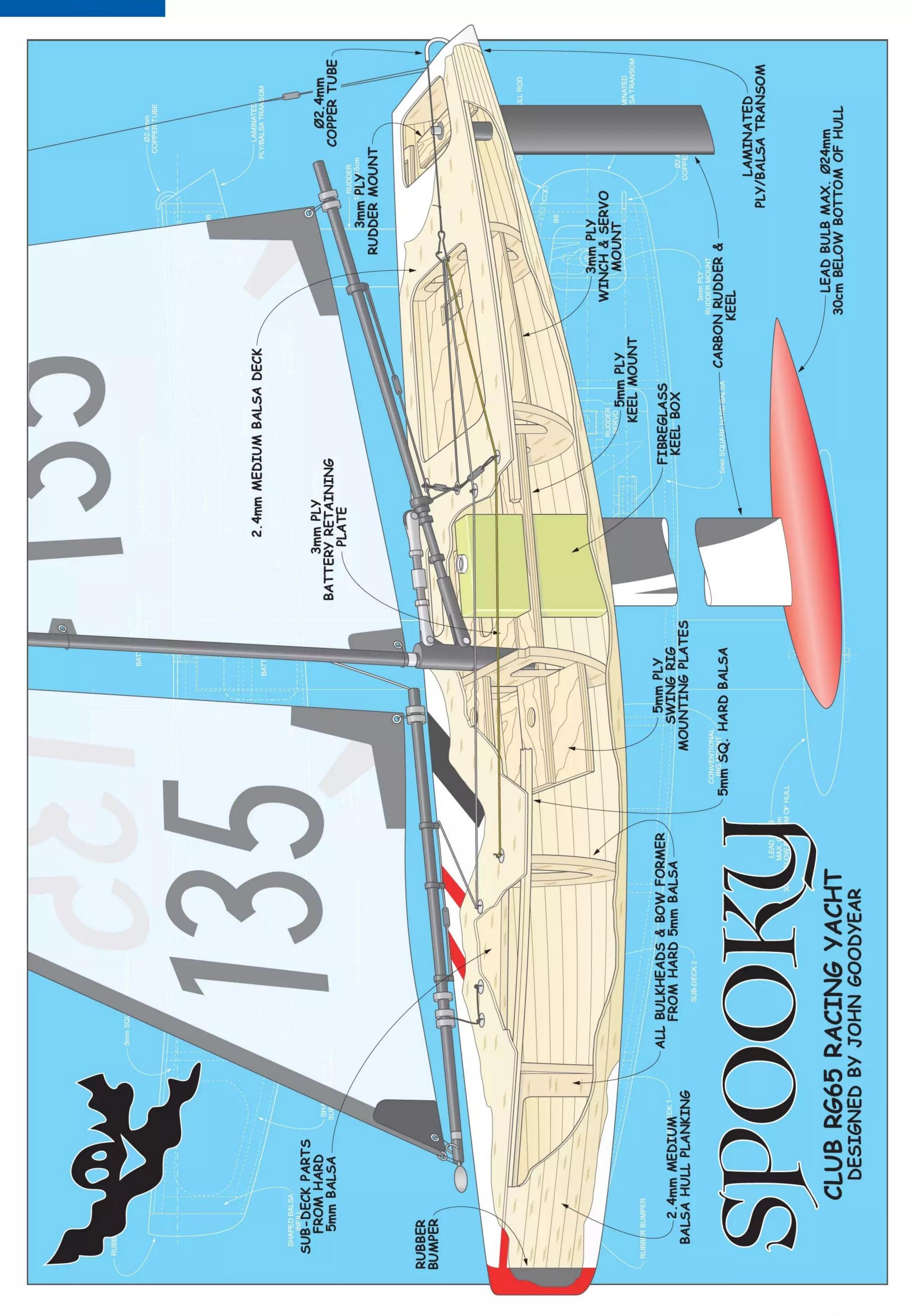
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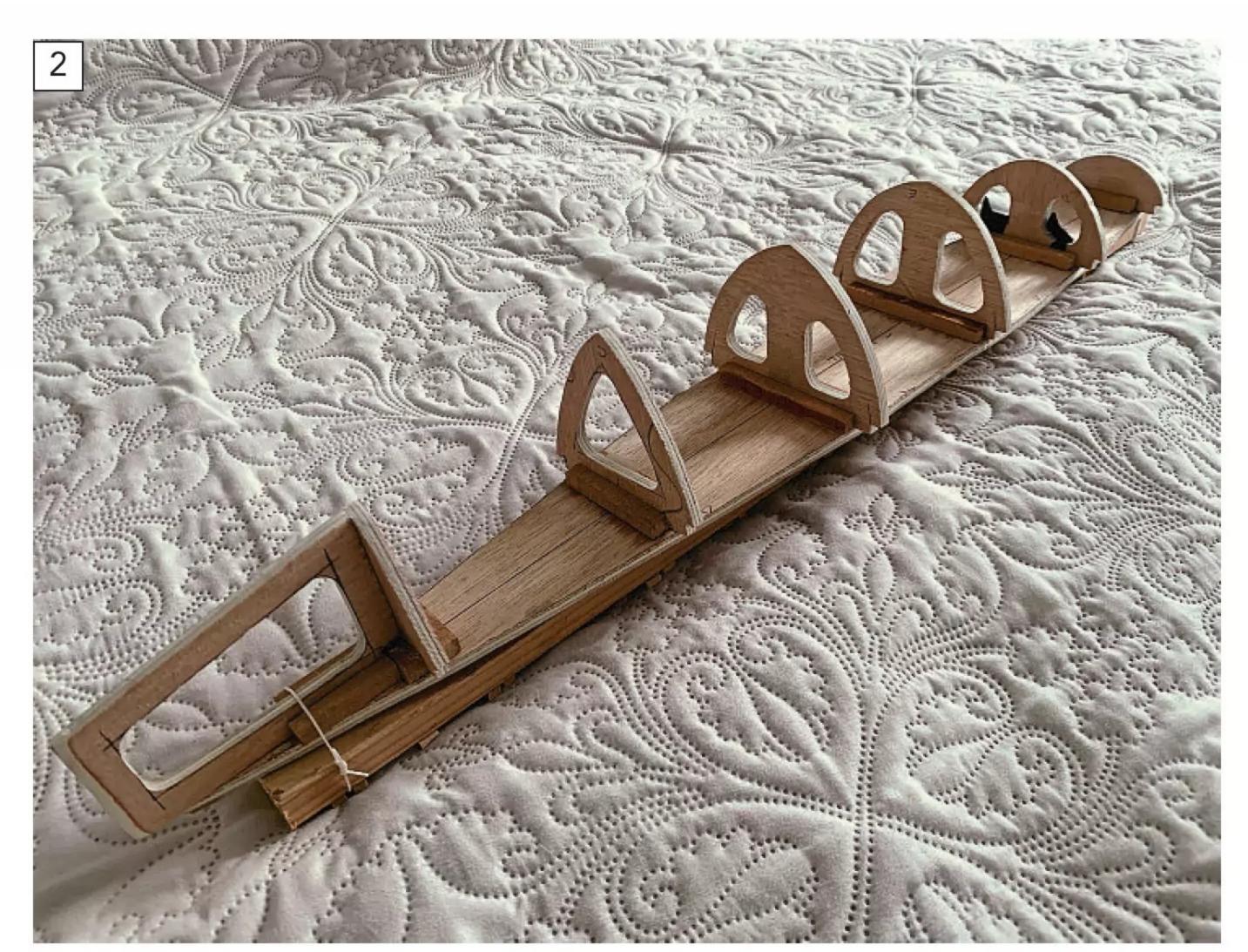
The main frames

et me be clear from the outset, the origins of this model can be laid at the doors of two very different people: my wife and Bryn Heveldt, the author of the excellent book Build Your Own R/C Yacht.

To explain; it was winter, gloomy and raining outside and having done all the necessary mods to my existing little fleet of yachts I was bored and miserable. "For goodness' sake," came the call from SWMBO [She Who Must Be Obeyed], "Go down to the model den and build another boat!" The die was cast!

As for Bryn, his book describes how to build his design of Racing Sparrow in great detail and is a 'must-read' publication for anyone new to the world of model yachts. The book, however, focuses on a yacht of 770mm in length, so not much good for racing in the RG65 class. Having said that, I have personally built three of the yachts as depicted in the book and they have all performed famously, both for myself and now in other hands after selling on. I also scaled down Bryn's drawings to 650mm length and built one for racing in our club's 650 class, where it gave a good account of itself but was subsequently considered a bit 'beamy'; this was sold on when I decided to concentrate my endeavours in racing DF65s at another club. It's worth pointing out that Bryn has now developed his own RG65 design. Check it out!

This, however, is a guide to constructing *Spooky*, my RG65 design, from this month's free plan, which I aimed to make (relatively) easy to build, inexpensive, and competitive at club level or maybe even a little higher. Regular readers of this magazine may be familiar with some of my previous offerings, including *Alpha*, *Kanoo*, *Varmint* and *Omega*, all to the RG65



John's jig in use.

specification. I think I can say that they all sailed well and, hopefully, served at least as an introduction to the fascinating world of R/C yacht racing. They all managed to put up some sterling performances against predominately commercially available 650mm long yachts and could, with a good hand on the tiller, even get well placed in club races.

For Spooky, though, I elected to go back to design basics while at the same time incorporating lessons learnt from my previous designs, and indeed others I've witnessed elsewhere. So, where to start?

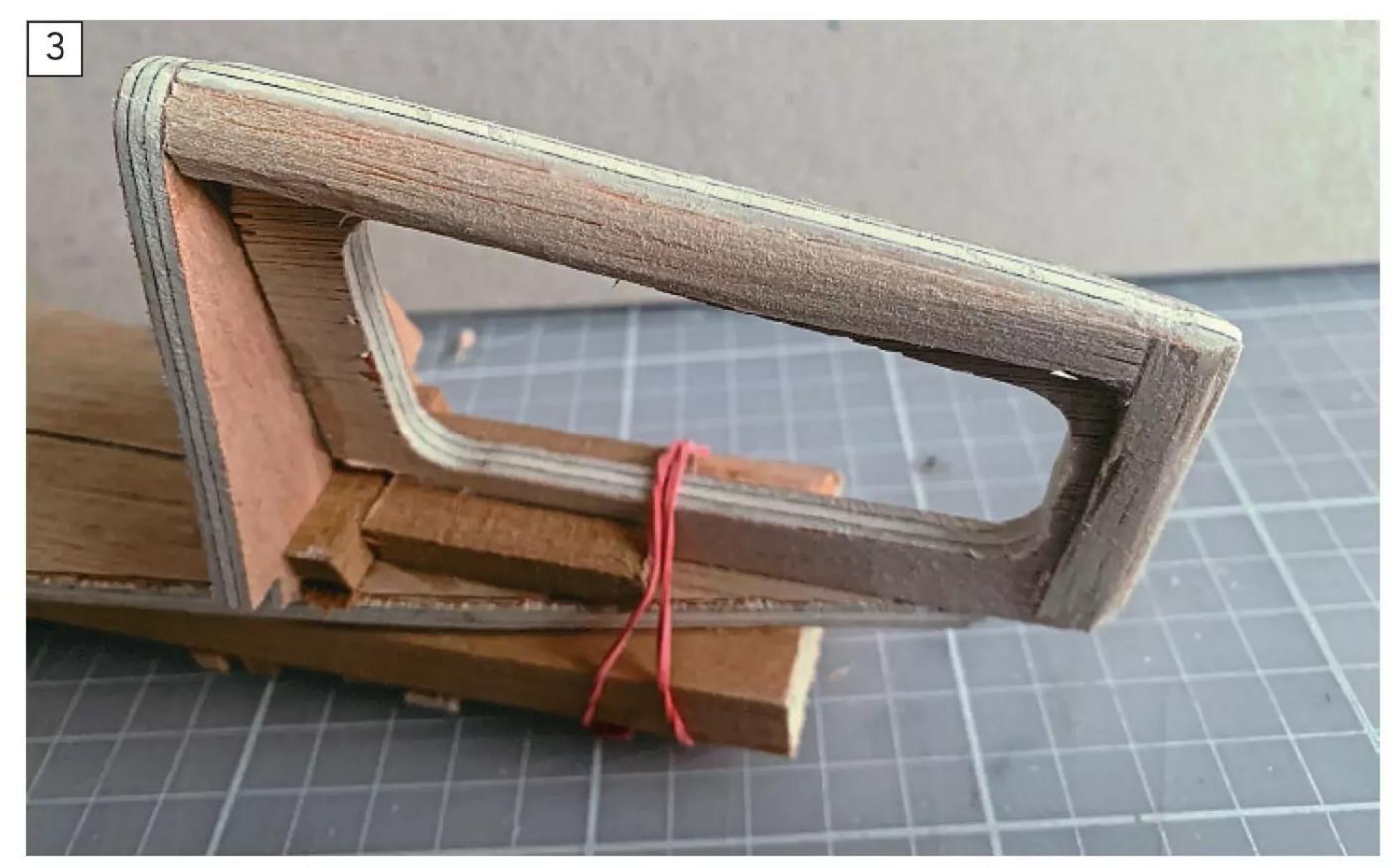
Decisions, decisions...

The first issue I thought long and hard about was the type of rig I'd use. Now the huge majority of most RG65 thoroughbred designs all tend to race with swing-rigs. We have experimented only very slightly with them at one of the clubs I've been fortunate to sail with and can confirm that they work well – very well, in fact, under certain conditions. There are drawbacks though, the main one being pointing ability. No doubt many will give me an argument, but the general consensus appears to be that all other things being equal, a conventional rig will outpoint a swing-rig in most conditions. It's also believed, though, that a swing-rig will outperform a conventional rig in light airs and (perhaps) run better downwind. Our initial findings, many moons ago, tended to support all the above thoughts, but, of course, who are we to judge? You pays your money, etc.

"For Spooky, I elected to go back to design basics while at the same time incorporating lessons learnt from my previous designs..."

What to do, then? After much burning of the midnight oil and sketching out ideas, an obvious, albeit ambitious, solution came to me, a yacht built to RG65 spec that was capable of flying both types of rig. Yes, it would involve a more complicated build and, yes, there would be weight issues, but the result would be a very flexible arrangement which incorporated the best of all worlds and be capable of handling all manner of sailing conditions – well, hopefully! The finished article would also serve as an ideal introduction to RG65 sailing and racing, and permit experimentation with rigs. Talking of which, Dragon Force 65 rigs are freely available, reasonably priced and a great many model yachtsmen will probably have at least one of the four rigs currently in use in their quiver. On this basis, and to avoid complications, I elected to use these rigs on *Spooky* to test the 'conventional' side of things.

With problem one out of the way, my attention then turned to hull shape. I decided rather quickly that a hull with a beam not exceeding 110mm at the widest point would be (just about) adequate to get all the R/C gear in, while carrying enough weigh downstairs to offer good performance. (See my other designs but ignore *Alpha*, which was built to different criteria.)



The bow former balsa doublers.



Early planking.

"The first issue I thought long and hard about was the type of rig I'd use... After much burning of the midnight oil and sketching out ideas, an obvious, albeit ambitious, solution came to me, a yacht built to RG65 spec that was capable of flying both types of rig"

Next, I had to work out how to prevent or at least minimise submarining when running downwind in strong gusts. The solution? Build in some flare in the first 25% of the hull length and tilt the nose up.

Finally, I had to factor in weight – a constant headache for any yacht designer. The largest contributor to my dilemma here, apart from all the obvious ones, was the weight of commercially available keels. I did already have a spare extruded aluminium one weighing in at 120g. However, I discovered a friend of mine had a redundant carbon-fibre helicopter blade of almost identical dimensions that weighed in at a mere 57g going spare. It was soon in my

toolbox! It was at this point I became determined to build something very light, with a target weight ready to race at or around 1Kg. More anon.

Reverting to actual hull shape, which is about as complex a problem as anyone wishing to design either a model or full-sized yacht could wish for, I wanted a shape that would transition from something a wee bit pointy at the bow to a curve at the stern. In the end, I cheated. I simply laid all the sections from previous models down and did my best to integrate them in something that looked pleasing to the eye and not completely outrageous. I also made a point of incorporating a curved deck rising rather steeply at a flared bow

to, again, help with keeping the nose up in high winds.

I must confess that at this point I did spend an inordinate amount of time in sketching, rubbing out and redrawing the hull plans numerous times until, eventually, SWMBO mentioned quite challengingly, "You'll never know if you've got it right until you build it!" She was right, so it was off to the model shop for all the necessary supplies.

Materials

Experienced builders who fancy constructing this model will have their own ideas about what to buy. For the less experienced, however, I would suggest 5mm (hard) balsa for the frames and 2.4mm (3/32") medium balsa for the planking and deck. This being a prototype model, I elected to use 5mm heavily fretted-out ply for the frames, mainly because I had some lightweight stuff in stock (see **Photo** 1). You will need four sheets of 2.4mm x 4" wide balsa, this allowing for some errors in planking. Better safe than sorry, as you don't want to be making a return trip to the model shop part way through the build.

Getting started

Once you're ready to begin construction, first prepare a building jig roughly shaped to the plan of the hull and glue in place the necessary locating blocks to hold the frames upright and firmly in place. Make sure that the frames are centralised accurately, otherwise you'll finish up with a rather weird looking hull. Next, attach the jig to a solid piece of wood, with a 12mm square section of wood positioned under the central point of the jig. This will provide the sheer line of the hull (see **Photo 2**). Don't forget to add and shape the balsa doublers around the bow former to create a reinforced and durable base for the planks to attach to. It's also a good idea at this stage to rub glue into the edges of each former as an aid to adhesion later (see **Photo 3**).

Start the planking by cutting strips of the 2.4mm balsa about 4mm wide. A stripping tool is absolutely ideal for this, so beg, steal or borrow one if there isn't already one in your toolbox. Begin by pinning and gluing a single 2mm wide strip right down the centre of the hull, ensuring it runs straight and true from bow to stern. This will overhang the front formers, which are a wee bit 'pointed', but we are going to shape the strip once the glue has set to allow subsequent strips to butt up neatly. Don't forget to let it overhang the stern former as well, as noted on





The epoxy coated hull.

The rough finished hull.

the plan. Next, cut four pieces at 5mm x2.4mm and attach in pairs either side in the former cut-outs to effectively form hull edge beams. After that, glue a strip each side of the hull at around the mid-section to act as support and to offer a guide as to where the remaining planks should fit. Allow the strips to 'overhang' the stern former because we will need some wood there to attach the beaver-tail section to later on in the build (see **Photo 4**).

After this, planking becomes progressively more tedious and difficult, as many of the strips will need shaping to ensure a close fit. Just remember, perseverance does pay off, even though at times you have to grit your teeth and make numerous attempts (that's why you purchased a bit more wood than necessary!).

If your planking is anything like mine the finished article will not look awfully good, but gentle rubbing down with some medium grade sandpaper will help improve things. Give the whole hull a thorough inspection and fill in any obvious hollows or defects with either glue and micro balloons or car body filler. I prefer the latter, but only because it sets quicker and sands easily. You may have to do this numerous times to obtain a smooth finish but it's certainly worth it (see **Photo 5**).

Time now for the bit I dread, coating the hull with lightweight glass cloth and epoxy finishing resin. Now, I have a chum who is incredibly clever at doing this, and if I'd thought about it, I would have passed the necessary goodies over to him to do his stuff. Regrettably, I didn't think about it in time and subsequently did it all myself. To be fair, it didn't turn out too badly, but after curing there was certainly a need for some work with the wet 'n dry. I then elected to paint on another coat of resin and left the

whole lot to cure fully for 48 hours before, yes, you guessed it, getting the wet 'n dry to work once more. As an aside, I have always used Zap Z-Poxy finishing resin, which works a treat. If you buy the small 118ml pack you will have sufficient resin for three hulls, and it's priced competitively. It's also colourless, odour free and sets in about three hours, so plenty of time for fiddling about. It's available on at least one popular trading platform beginning with 'e'!

Once satisfied with all the rubbing down the hull can be removed from the jig and the top edges trimmed off before fitting the sloping transom. Be very careful at this stage to ensure that when the transom is fitted the total hull length complies with the RG65 specification. It's very easy to make a hull that's a couple of millimetres too long, which is not a good idea. I used a thin ply/balsa sandwich for the transom to achieve sufficient strength, since with a lot of backstay tension you don't want to rip the transom off, do you? Trim off all the excess rear planking next and then step back and admire your handiwork to date. Hopefully it will look really good (see **Photo 6**).

Installing the internals

Time now to think about the internals before moving back to the cutting board. As can be seen in the accompanying images, it is eminently feasible to install all the necessary radio components into the appropriate places, but it will depend on the types of servos and batteries you plan to use – so be warned, a bit of forethought here will prevent many tears later (see **Photos 7 & 8**).

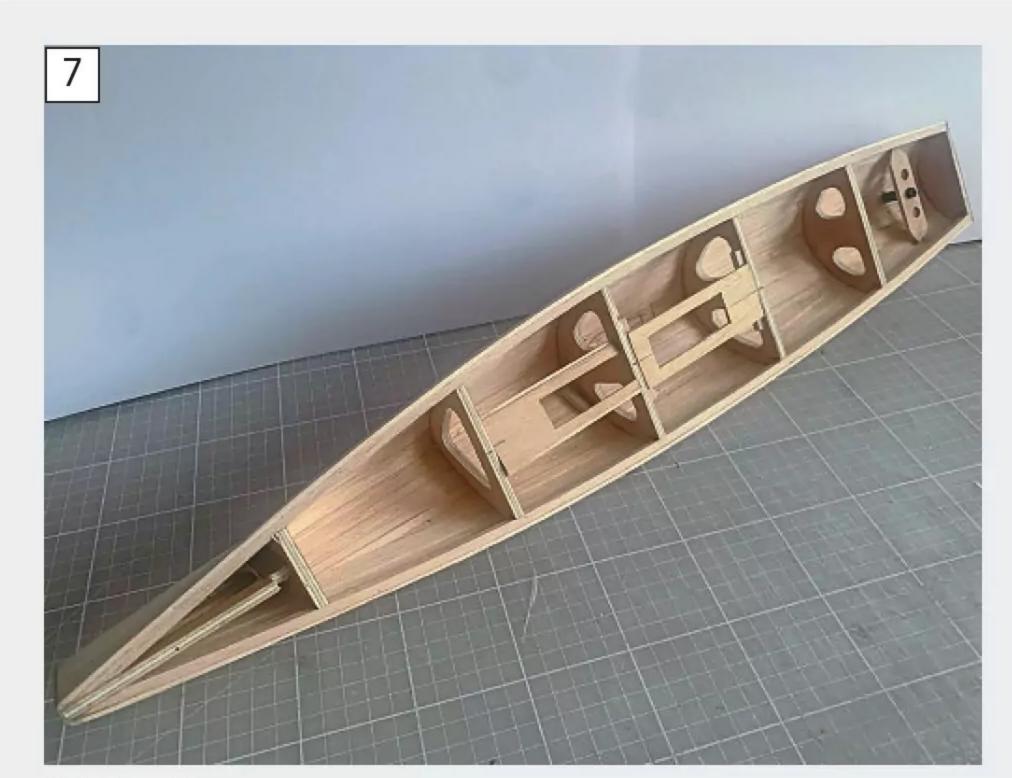
You will also have to make the necessary decisions concerning keels and rudders. In my obsession to save weight wherever I could, I elected to use carbon-fibre helicopter blades

"A stripping tool is absolutely ideal for this, so beg, steal or borrow one if there isn't already one in your toolbox"

for both items, and they function very well. If you don't have access to anything like this (your local model shop or flying club?), then the rudder can be shaped from laminated balsa/ very thin ply. For the keel there are several commercially available items out there associated with the DF65 class of racing yacht, so trawl around. Alternatively, you could laminate a keel from high tensile aluminium and ply, which is a technique some of our club members have used successfully over many years. It's amazing how much strength can be built in providing you use epoxy glue.

Once you've decided how best to arrange the internals you can crack on and install all the necessary bits and pieces. Everyone will have their own ideas on how best to do this, so no further comment is perhaps appropriate, except for the mast foot arrangement. Now, great care must be taken to get this right. The last thing you need is a mast tilted over 5 degrees to one side and/ or sloping backwards or forwards more than designed. If you plan to run your *Spooky* on both rigs, then you're going to have to build and fit the necessary mast mounts. If you're only going to run with one type of rig, however, things are a bit simpler. l suggest you arrange things such that the mast is inclined backwards by around 1 to 2 degrees when viewed from the leading edge of the keel, but others may have alternate ideas – more on this later. Again, you pays your money, etc. One thing for sure,

do make sure that the mast is vertical





Hull internals.

"These are not likely to rust or rot, and they're extremely robust.

I've never had a failure in over ten years"

when viewed from the bow and stern. Sideways sloping masts tend not to function as designed!

Now is a good time to confirm that all your radio gear does indeed fit and can be easily accessed once the lid goes on. The eagle-eyed will have noted that the on/off switch on my model lurks under the deck in a veryhard-to get-at location. I am praying it never fails! Maybe you can arrange things better.

On now with the lid, cut from our old friend the 2.4mm (medium/hard) balsa, and once more followed by a layer of glass cloth and epoxy we're almost there. At this stage a quick check on weights might be interesting, so here goes...

My prototype's complete painted hull, including all radio gear, rudder and battery, topped out at 431g. The keel, initially equipped with a standard DF65 bulb, weighed in at 610g, so there are some targets for prospective builders.

Back to the build...

Some thought now needs to be given to the deck 'furniture'. I used cut-down servo control arms with extended holes to allow free running of the sheets and return elastic, but other choices are available of course. All I can say is that using the servo arms does result in a very unobtrusive and clean looking finish, with nothing to foul any of the operating events that take place when sailing. As a bonus, these are not likely to rust or rot, and they're extremely robust. I've never had a failure in over ten years.

Personalise with your paint finish

Painting next, and here you can let your imagination run riot. This being a prototype model I opted for just white household enamel, with some Solarfilm trim. You can go a lot more exotic should the mood take you. Suffice to say that your model will probably look a lot neater than mine, and so it should. Just don't forget, you need a colour scheme that will permit easy identification of your yacht amongst a fleet of others if you elect to go racing. Over to you, dear reader!

Trial sails

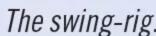
Now for the exciting bit, preliminary floatation testing. I have to be totally honest and say that the Centre of Lateral Resistance of the hull was much further back than I imagined it would be when drawing up the hull shape. Maybe the very narrow keel had something to do with this, but...? Anyway, this did reinforce the initial decision to make provision for several mast steps to allow the Centre of Effort of the sails to be in the correct place. Now, I had previously calculated the C. of E. of a standard set of DF65 'A' sails to be 30mm back from the luff of the main at a point 33cm up from the tack. Note, these are my calculations only; others may get different results.

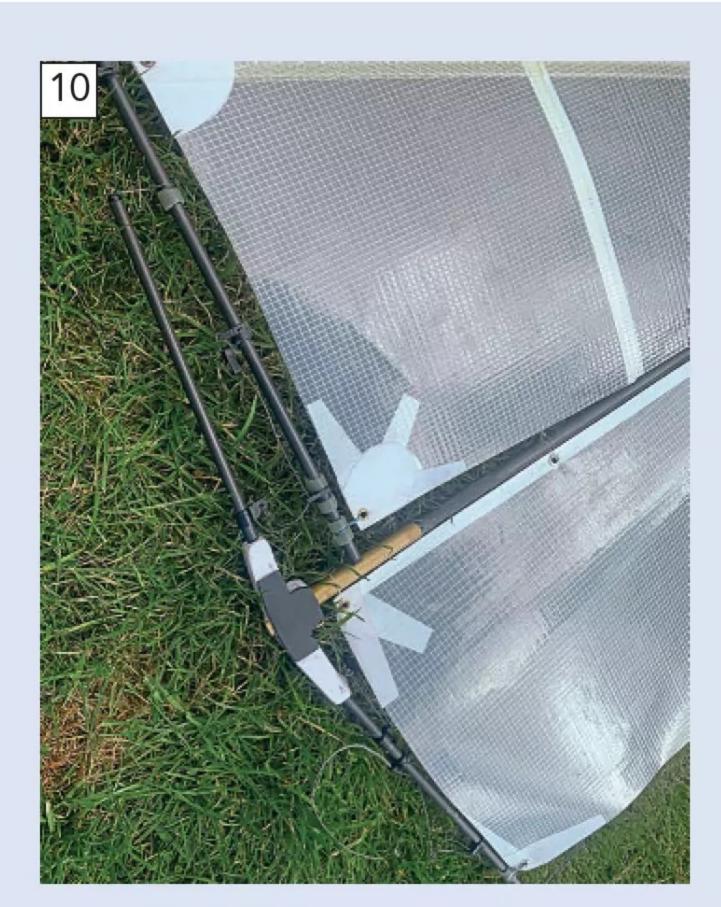
Given that for best performance, the C. of E. of any sail set needs to be slightly ahead of the C. of LR. of the hull, theory predicted that the rearmost mast step of the three built-in to the hull originally should be the best place to locate the mast when operating with a standard fore and aft rig. This proved to be the case (mercifully!), but the next step forward also provided for no noticeable difference in pointing ability or downwind running

– not with my clumsy thumbs on the sticks anyway! Talking of downwind running, the forward flare of the hull certainly proved to be advantageous in overpowering winds. Yes, the nose will go under, but unless you're grossly over-canvassed the hull will continue on course and soon pop up again, when others are finding their yachts pointing in a different direction when they surface. Very useful indeed, and especially where Spooky usually sails on a big open water, with high winds and waves being the routine order of the day.

Now most readers will be aware that the majority of RG65 designs invariably run with a swing-rig, so I simply had to have a go with *Spooky*. To comply with the relevant regulations, the maximum sail area is restricted to 2250sq.cm. It's also a fact that to allow a swing rig to function properly the maximum sail area in the jib must not exceed 30% of the total sail area. This in turn calls for a taller and/or wider main. Added to this is the fact that several design options are available to fit and operate a swing rig successfully, so, what to do? Not being really familiar with such equipment I elected to use the simplest design I've previously witnessed in use by others but to make a rig up from the scratch using scrap bits and pieces, simply as a precursor to acquiring something more elegant (see **Photos 9, 10 & 11**). This being a foray into the unknown, and to avoid expense, I also chopped some redundant sails down to dimensions l considered appropriate and fitted them to the rig - not pretty, as several of my fellow club-mates would no doubt have been delighted to point out, but they remained discrete! The next question, where to mount the rig with a C. of E. undoubtedly further aft than the standard rig? Again, some









"This is entirely straightforward, but there are dangers as you will be handling molten lead at high temperatures. Care and attention to H&S are therefore required"

calculations were undertaken and the mast mount located where shown on the plan, but with a view to modifying it should the need arise.

To the astonishment of all, the first time out with all things swinging proved to be a huge success, with *Spooky* storming away and handling the 10-12mph winds quite nicely. *Spooky* proved herself to be quite competitive sailing against a standard DF65. With an 'off-the-shelf' 'A' rig in light winds she was able to maintain pace with a Dragon running with an 'A+' rig, and she pointed perhaps marginally better. Very little early comparative testing was undertaken with the swing rig, but more of that later.

The keel bulb

These initial trials paved the way for some modifications, as noted next. Such is the lot of we amateur designers. Nothing is ever 100% initially; not unless you're extremely lucky! It was clear the DF65 keel bulb fitted was just a wee bit too heavy and not mounted in the correct place, giving a nose-up, tail down look on the water (although she still sailed remarkably well!). So, it was time to make a new, slightly lighter bulb from lead. Now, this process has been covered in numerous articles before and is entirely straightforward, but there are dangers as you will be handling molten lead at high temperatures. Care and

attention to H&S are therefore required. First thing to do is make a robust box to contain the casting sand. I made mine from our old friend the 5mm plywood. As for sand, you will need some fine grain stuff from any builders' merchants. I have no idea where mine came from or what consistency it is. Suffice to say that it works, as will most (all?) fine grain stuff.

Next you will need to carve a halfformer of your keel shape from balsa or cheat as follows. Use the standard DF65 keel bulb but when inserting it into the casting sand only push it in around 90% of the total half-depth. Now for the sand: you will need to add the minimum amount of water to permit the mixture to form a firm ball in your hand when lightly compressed. Pop this into the box till it is full and then roll the excess away with a good old-fashioned rolling pin. Then insert the carved mould, (or cheat!) to the correct depth, press down carefully, withdraw and, *voilà*, you will have a lovely shape to pour the molten lead into (see **Photos 12 & 13**).

As for working with the lead, do wear safety glasses, an apron and some robust gardening gloves at the very least. You can acquire lead from most builders' merchants but usually have to buy quite a quantity, most of it not needed. The alternative is to go along to any nearby scrap merchant and get about a kilo there. Much cheaper, although my local chap declined to supply, quote, "such a tiny amount due to the legal requirement to log all weights bought and sold." Such Political Correctness, but you can't blame him for following the rules. Mercifully, a fellow club member donated some from his stockpile, which was more than a bit helpful.

To melt the lead, you can use an old aluminium saucepan, since the melting

point of aluminium is 660 degree C while lead is at 328 degrees C. The melting can be done on any household gas ring, but the domestic authorities might complain! As an alternative, use a blowtorch or similar outside or in the garage to maintain domestic harmony. Either way, do wear a mask, even if it is simply an old handkerchief, as the fumes can be dangerous if inhaled in large quantities. Skim the top of the molten lead with a wooden spatula or similar before pouring into the mould and make the pour in one, rapid, even movement. Allow to cool and then repeat for the other half of the bulb. Note that you will need to create a new shape in the sand from recycled material to ensure a reasonable surface finish (see **Photo 14**).

To achieve the required weight of lead you can now drill out holes from the inside of each half. Target weight should be around 550g but, of course, this will depend on how light or heavy you have built the hull and what radio+ battery arrangement you are using. Just for info, I built really light and finished up with a bulb weight of 538gms.

When satisfied, glue the two halves together, file down, fill with car-body filler resin to get a rough shape and prepare for secondary flotation trials. You now need to temporarily attach the semi-finished bulb to your keel and pop the entire hull/keel/bulb arrangement in the water. Move the bulb around till the tip of the bow and the stern just touch the surface of the water and mark the position well. On returning home, file and sand down the bulb, paint, attach the bulb to the keel and you are almost there. Just for information, the total weight of my





The lead casting mould.

completed *Spooky* came in at 999gm against a target of 1000gm. How lucky can you get?

Other mods

As for other mods decided upon following the initial trials, I elected to move the mast foot position back around 8mm and also design things so that the mast could be tilted back as much as 5 degrees to determine the optimum settings for routine sailing. In the event this proved to be a good plan, since after much further experimentation, including racing against fellow skippers at our club, (ROFWAC – Retired Old Friends Wednesday Afternoon Club), I hit upon the settings now shown on the plan, which I heartily recommend to all builders if you want to achieve the fastest possible upwind speed, together with good pointing ability and fast downwind runs without too much 'dipping' in really heavy weather – and who doesn't?

Sailing Spooky

Time now for the really exciting bit, sailing, starting here with a standard jib/main rig. Unless you've made a complete pigs-ear of the build, your Spooky will sail away quite merrily providing the sails are set up very roughly in accordance with these settings on a standard DF65 'A' rig (but see my later comments about wind strengths!):

Mast foot as shown on plan – rear of top of rubber bumper to top of main – 950mm

- Main boom offset from centre line of hull when fully sheeted in – 12mm
- Jib boom offset from centre line of hull when fully sheeted in – 15mm
- Main sail twist at mid-point 55mm.
- Jib sail twist at mid-point 25mm **NB:** These are rough settings *only* but will get you going. If unsure, seek help from an experienced skipper. In fact, ask anyway, hopefully there will be somebody around who really does know how to trim the sails for optimum performance!

Use common sense, but don't forget that as the winds increase you will need to fit progressively smaller rigs. Don't laugh; I have lost count of the number of times I've witnessed beginners cursing because their yacht wouldn't perform with a big rig in storm-force winds. Conversely, it's also very sad to witness someone with a Mickey-Mouse set of sails looking forlornly at their yacht in a 2mph draught. As the experts in our club will confirm, sail choice can be, and invariably is, everything!

At our club we have sailed Spooky with everything from a standard DF65 'A' rig through to our in-house



The lead bulb.

"Sail choice can be, and invariably is, everything!"

developed 'D' rig, which we frequently need due the prevailing high winds and heavy chop we get on top of the Pennines. Suffice to say we have sailed some models in winds from 5mph up to around 40mph gusting to 52mph according to the anemometer mounted on the club house roof. We have a video, to prove it! Spooky so far has performed admirably in everything up to around 35mph, providing, of course, we elected to fit the correct rig! Some of the images accompanying this feature will, hopefully, demonstrate how well *Spooky* goes. She wasn't completed when that 52mph event occurred. Pity that!

For the swing-rig, I suggest the following settings, providing, of course, you adopt the sail dimensions shown on the plan, which are very probably non-optimum, so be warned:

- Jib offset at end of boom 25mm
- Main boom offset with the rig fully sheeted in – 15mm
- Jib twist measured at centre of sail – 25mm
- Main twist measured at centre of sail – 40mm

Again, these settings should be regarded as for guidance only but will certainly allow you to sail from the off.

To be honest, trials with the swingrig were undertaken with some trepidation, since none of us at our club had any real experience with rigging such a sail suit. Spooky's maiden voyage was thus very much a 'suck-it-and-see' affair. With the rig as per the plan (estimated at around an 'A') and with winds at 10-12mph,





Spooky with DF65 'A' rig.



Spooky on swing-rig.



'D' rig in 35mph winds.







Spooky and a standard DF65 for comparison purposes.



Spooky with 'B' rig fitted

The 'B' rig in use.



Spooky sailing with a specialist cut 'A' rig.

"Maybe someone building their own Spooky will report back on this?"

Spooky simply sailed away causing me a huge sigh of relief and not a little surprise. Numerous trials with the rig 'tweaked' for better performance were then undertaken over several weeks, in progressively stronger winds, up to about 18mph (remember, we only had the one swing rig!). Spooky generally performed very well, but we were clearly on the point of being very much over-canvassed at this point. Suffice to say that considerably more potential exists for further trials with smaller sails. Maybe someone building their own Spooky will report back on this?

Spooky conclusions

So, what did we learn from our experiences with a yacht capable of carrying two very different types of sail-

suit? It's all very subjective of course, but the majority of club members who had their hands on the sticks perhaps preferred the standard set of sails, although maybe because that's what we're all used to sailing and because we had five sets of sails to play with. Then again, there was a large school of members who thought that the swing-rig offered much potential, and everyone wished that a much smaller rig was available to see what would happen in a good blow. I am thus under pressure to make one and am busy sketching things out.

Over to you

That's about all there is left to say, except do enjoy the building and (especially) the sailing and please send a couple of images of your *Spooky* to the Ed. You never know, you might feature in an upcoming edition of Model Bats and have full bragging rights over other club members!









After Whitehead...

John Parker picks up from where he left off in the June 2025 issue as he continues to document the development of the torpedo



A Brennan torpedo replica.

t the dawn of the 20th century, development of the torpedo was passing from Robert Whitehead, its acknowledged inventor, to the many companies making copies of it, licensed or not. Incremental improvements transformed its speed, range and destructive power, yet not its basic form. There were also one or two competitors that enjoyed a brief period of popularity before falling by the wayside.

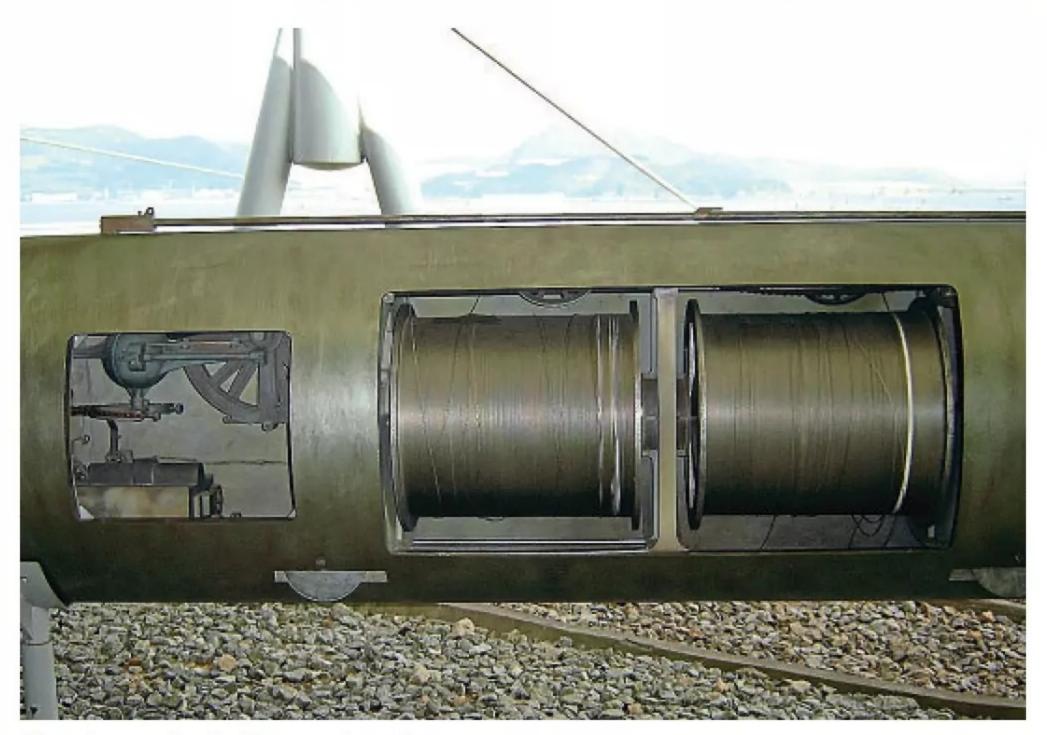
The Brennan torpedo

Louis Brennan, an Irish-born Australian working in Melbourne, patented a steerable torpedo

in 1877. This had contra-rotating propellers on concentric shafts, on each of which was mounted a reel with thousands of yards of fine steel wire. The two wires were led out at the stern and connected to shoremounted steam winches. A differential gear sensed any difference in speed between the two reels and steered the rudder of the torpedo accordingly. On firing, the winches rapidly pulled out the cables and the torpedo was driven forward by its propellers. By finely adjusting the relative speed of the winches, the operator was able to steer the torpedo to its target, aided by a sighting mast that just broke the surface.

"Although not practical for arming ships, it was well suited to harbour defence and was adopted by Britain in 1884 for use throughout its colonies"

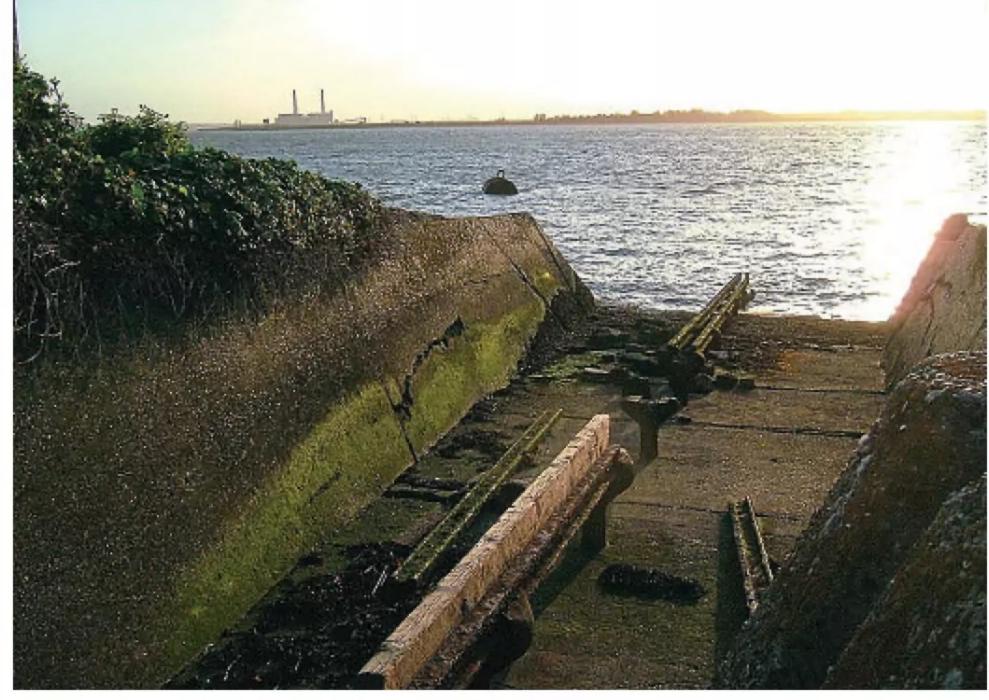
This torpedo had a maximum speed of 27 knots, a range of 1800 metres, a 90 kg warhead, and could be steered with considerable accuracy. Although not practical for arming ships, it was well suited to harbour defence and was adopted by Britain in 1884 for use throughout its colonies. By 1905, however, its use had been abandoned due to its short range, reliance on a



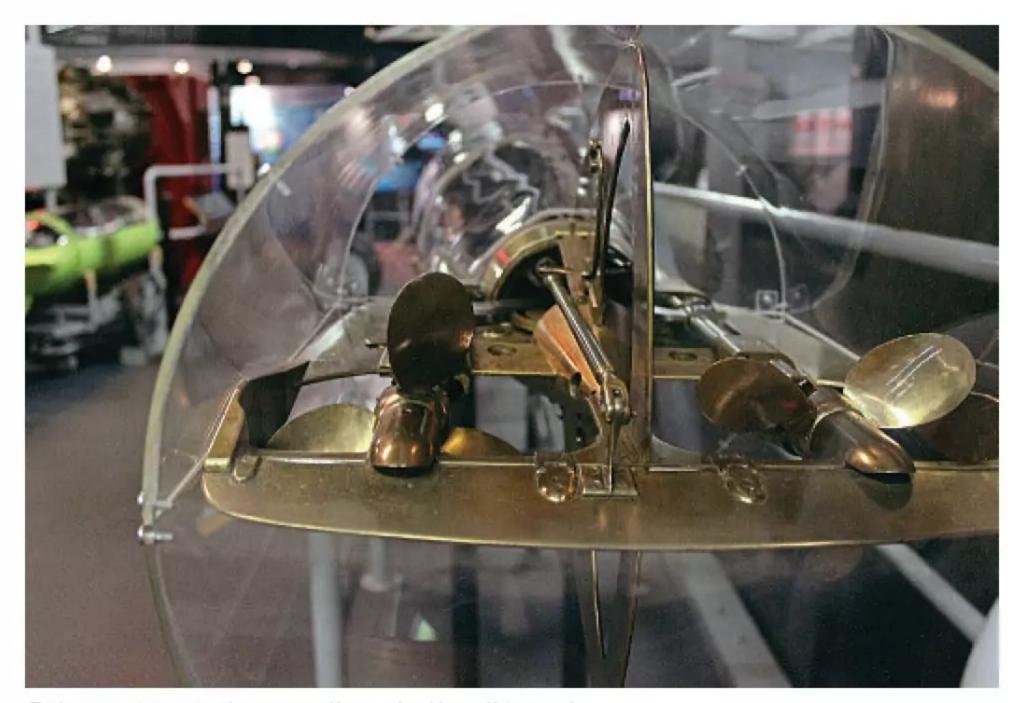
The wire spools of a Brennan torpedo.



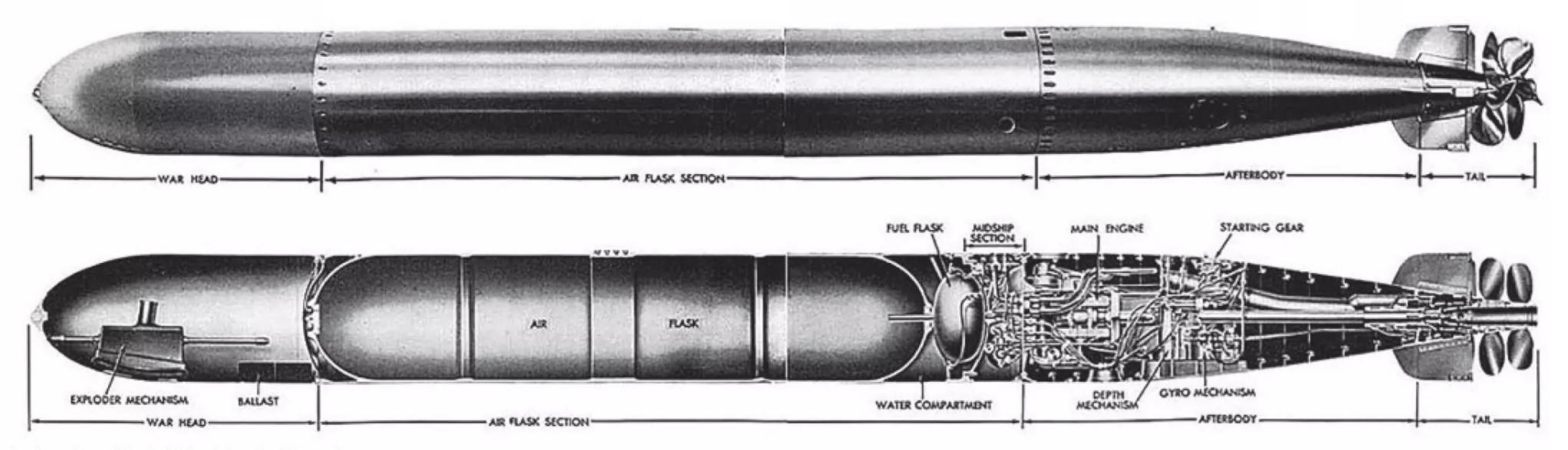
The flywheel of a Howell torpedo.



Brennan torpedo launching station at Cliffe Yorke in Kent.



Twin counter-rotating propellers of a Howell torpedo.



An American Mark 14 'wet heater' torpedo.

complicated shore installation and lack of quick response time due to its reliance on steam-powered winches. Remains of the shore installations may be seen at several locations worldwide, and notably at Cliffe York in Kent.

The Howell torpedo

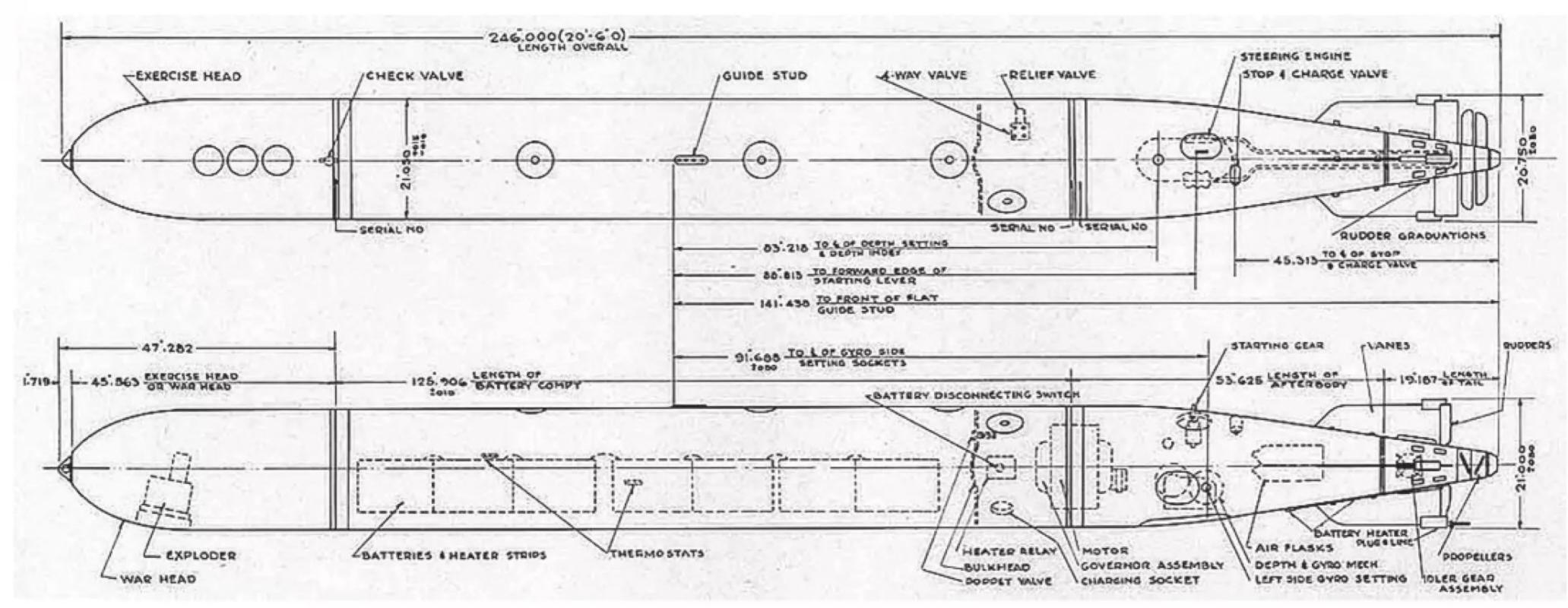
The self-propelled Howell torpedo was invented by Lieutenant Commander John Howell of the United States Navy in 1870. It had the advantage over the Whitehead torpedo in being much simpler and

therefore cheaper, because it was driven by the energy stored in a rapidly spinning flywheel. The flywheel also gave it great straight-running ability due to its gyroscopic action, and it left no visible wake of bubbles that would give away the position of the firing vessel. Just prior to firing, the flywheel had to be spun up to 10,000 rpm by an external steam turbine that engaged the flywheel shaft.

The effective firing range was 365 metres at a speed of 25 knots with a 45 kg warhead. It was adopted by the US

Navy but only used in small numbers due to its disadvantages of short range, noisiness and the need for an external power source.

Ultimately it was superseded by the rapidly improving Whitehead type, which the American Bliss company had attained the manufacturing rights to. See Flotsam and Jetsam, November 2024 issue, for a description of the steamship Stiletto's use as a torpedo test bed for the US Navy.



An American Mark 18 electric torpedo.





USS Wasp on fire after being hit by three Type 95 torpedoes on September 15, 1942.

A Japanese Type 95 torpedo.

Heater torpedoes

One factor that placed a limitation on the performance of the Whitehead torpedo was that the compressed air that powered it underwent adiabatic cooling as it expanded from its flask, causing a reduction in power and even an icing up of the engine. (The effect will be familiar to model steam enthusiasts, whose compressed gas bottles tend to ice up unless heat conducted from the engine is applied to them.) A clue to the solution came when the air supply pipe was allowed to come into contact with the seawater, which improved the temperature slightly and was worth half a knot extra in speed. This started a new phase of development known as the heated torpedo from about 1905.

The heating was produced by the burning of a liquid fuel in a special combustion chamber prior to its introduction to the engine of the torpedo – the so called 'dry heater'. When it was found that this caused

problems with overheating of the engine, the 'wet heater' was introduced. This injected a spray of water into the combustion chamber which flashed into steam, increasing the power of the engine through its expansion, solving the overheating problem and helping to flush combustion products through the engine so that it would not become sooted up. It provided a major boost to the range and speed of the torpedo, and was the prevailing type used in both world wars.

Oxygen enrichment

In any heat engine, such as the wet heater the torpedo now had, the amount of power that can be produced is limited by the amount of oxygen present in the compressed atmospheric air supply – only some 21%. To remove this limitation, compressed oxygen instead of compressed air could be used – but this introduced dangerous safety hazards. The engine would have to run

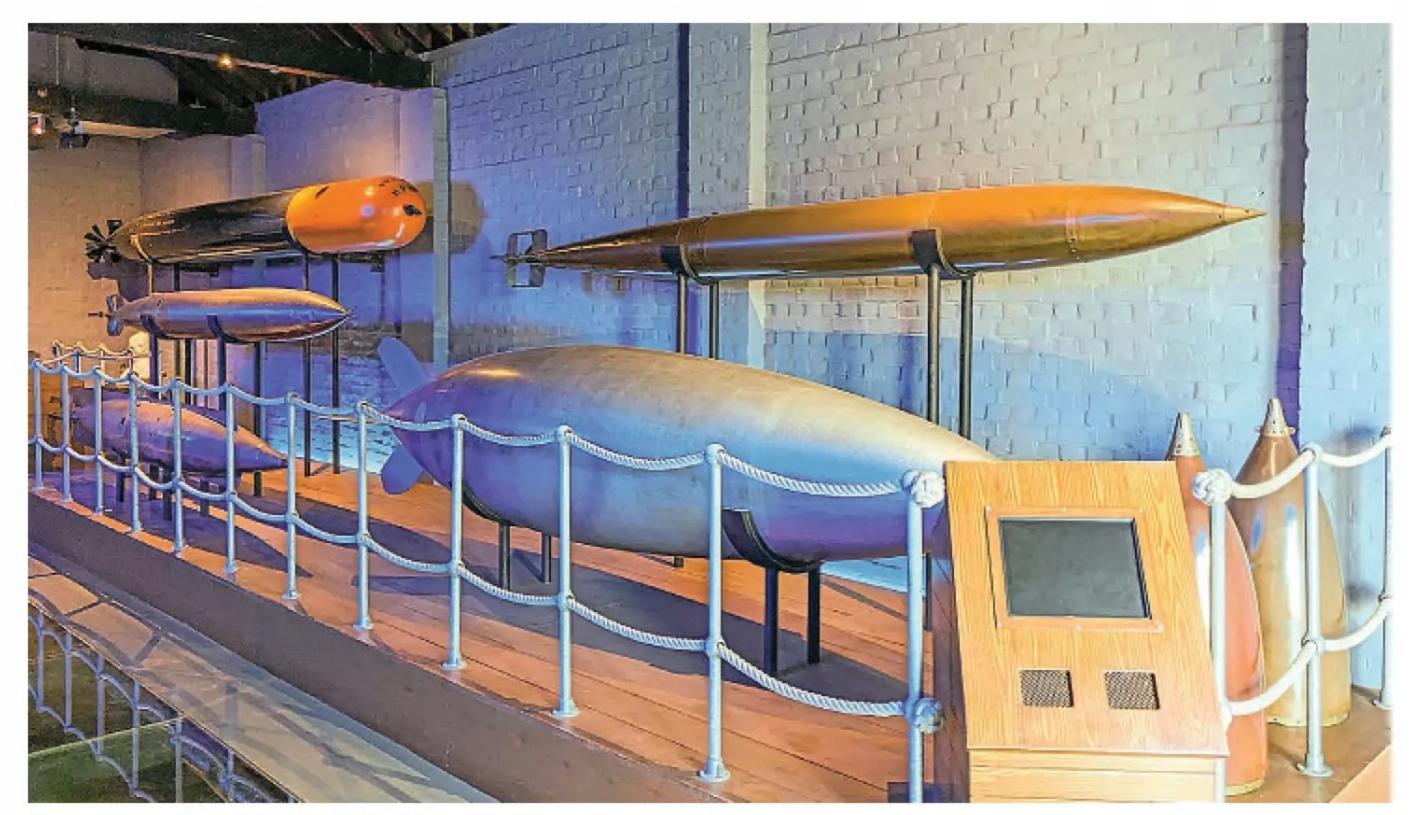
"It was the Japanese who most relentlessly pursued this avenue of development: their Type 93 and Type 95 oxygen torpedoes were unmatched in performance during World War II"

without lubrication, as the presence of oil or any other contaminant could lead to the torpedo spontaneously exploding, and the storage and refuelling of the torpedoes represented a real risk to any ship carrying them, especially when under attack. It was the Japanese who most relentlessly pursued this avenue of development: their Type 93 and Type 95 oxygen torpedoes were unmatched in performance during World War II.

One example serves to demonstrate the range and destructive power of the Japanese oxygen torpedo – it has been called the deadliest torpedo salvo of



A German Schwartzkopff torpedo display at the Museo Naval, Madrid.



A torpedo display at the Explosion Museum of Naval Firepower, Gosport.

World War II. On September 15, 1942, Commander Taikashi Kinashi in the submarine I19, having penetrated the screening vessels of a US carrier task force, fired a full salvo of six Type 95 torpedoes at the carrier USS Wasp. Three struck home, causing uncontrollable fires that ultimately led to the loss of the ship. The other three sped on at 51 knots to where, unknown to Kinashi, a second US carrier task force was operating, five miles away. One struck the battleship North Carolina, causing her to be later withdrawn from action for repairs, while another hit the destroyer O'Brien which later sank making her way back to America for repairs.

British experiments with the use of oxygen in torpedoes concentrated

on the use of oxygen enriched air rather than pure oxygen. Even so, safety concerns led to the adoption of the burner cycle engine by Peter Brotherhood, which used a modified diesel cycle that provided twice the power and obviated the need for oxygen enrichment.

Hydrogen peroxide

Another way of enhancing the performance of a torpedo was to use high test peroxide (HTP) or concentrated hydrogen peroxide as an oxidiser for the liquid fuel. HTP is highly unstable and liable to explosively decompose if it comes in contact with contaminants, which include the copper widely used in bronze ship fittings. For

"The German company of Schwartzkopff manufactured a bronze torpedo in the late 19th century that was based on plans stolen from the Whitehead works at Fiume – how appropriate then that the name Schwartzkopff translates as Blackhead!"

safety reasons, its use has long been abandoned in most navies, including Britain's, after a fatal accident during the loading of an HTP-powered Mark 12 torpedo in 1955. Despite this, its development continued elsewhere and is believed to be implicated in the loss of the Russian submarine Kursk in August 2000.

Electric torpedoes

The German company of Schwartzkopff manufactured a bronze torpedo in the late 19th century that was based on plans stolen from the Whitehead works at Fiume – how appropriate then that the name Schwartzkopff translates as Blackhead! The compliment was returned when Britain reverse-engineered the German G7e after capturing a sample in 1940.

The G7e was electrically powered, and the Germans fired 7,000 of them during World War II. The main attraction of electric propulsion in a torpedo was that it created no wake, but the electric torpedo was also cheaper to produce since it required fewer strategic materials and precision machining. On the other hand, it could not match the performance of a thermal torpedo and had the disadvantage of needing heating to maintain its lead acid battery at the optimum temperature of 30 degrees C. Its characteristic of low self-noise made it possible to develop a homing version, the GNAT, which zeroed in on the noise generated by a warship's propellers. This was the forerunner of the many such developments that have made the modern guided torpedo such a sophisticated weapon, yet one that would still be recognisable today by its inventor, Whitehead.

Image acknowledgement

All of the images that illustrate this article have been sourced via Wikipedia.



Plank-on-frame Lady Jane

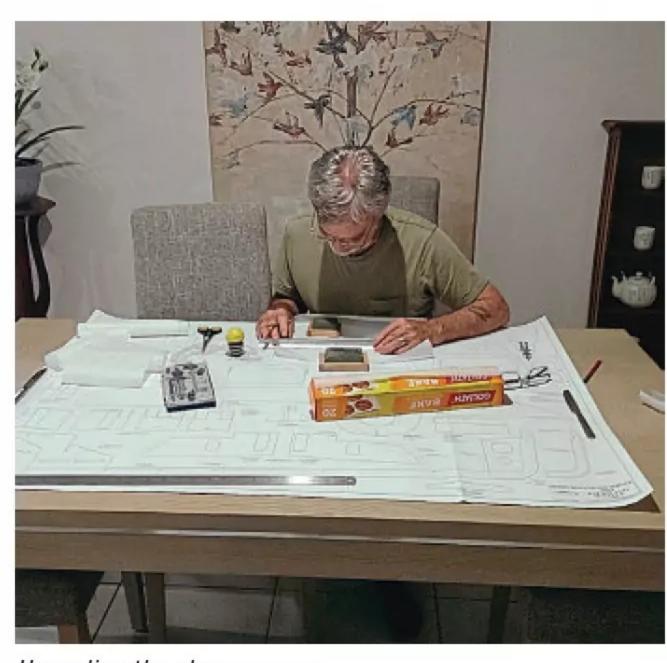
Mick East talks us through a build that saw him get to grips with a new skill...

his is a story not about the technical aspects of a build but rather the tale of a relative newcomer to the hobby (myself) and the mistakes and successes of a first attempt at using the plank-on-frame method of construction. At this stage, I wasn't a complete novice, as I had already built Ray Wood's excellent Osprey and Eventide models, both of which have hard chine hulls, but this was a quantum leap forward.

As a long-term hobbyist who had only just recently embraced the idea of marine modelling, the trigger here came in the form of the free plan for the motor trawler *Woodleigh* by

James A. Pottinger included in the November 2022 issue of Model Boats. The plan immediately intrigued me. Although the accompanying build guide did come with the *caveat* that this project would be better suited to the more experienced modeller, as my old apprenticeship master and mentor – the late, great Arthur Wooldridge – said to me as a 15-year-old snotty-

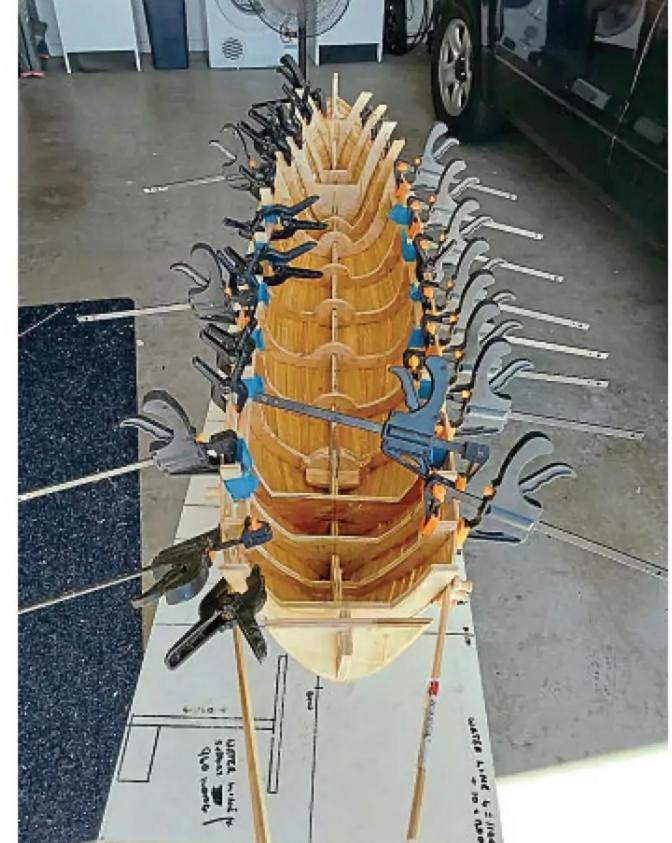
"Splashing about in the shallow end teaches you nothing; you need to jump into the deep end to learn to swim!"



Upscaling the plan.







You can never have too many clamps!

nosed boy on his first day at work "Boy (he would always called me boy), splashing about in the shallow end teaches you nothing; you need to jump into the deep end to learn to swim!". In for a penny, then...

Plan deviations and upscaling

I've always had a strong interest in, and thematic modelling preference for, pre-1960s' steam ships, so it occurred to me that perhaps I could follow the



Plotting and cutting out bulkheads and fixing to jig.



Hull planking.



Removed from the jig.



Tackling the deck and superstructure.

plan for the construction of the hull but then build the deck and superstructure to reflect how the steam trawler would have looked pre-World War II. After a lot of research via the internet, YouTube and the local library, it became apparent that this idea could work.

I decided from the outset that the scale James Pottinger had drawn Woodleigh up to (1:50) would result in a vessel too small for me (my club lake is quite large, meaning at distance I'd probably need super strength binoculars to keep an eye on the model), so I upscaled the plan to 1:32.

Proceeding with caution

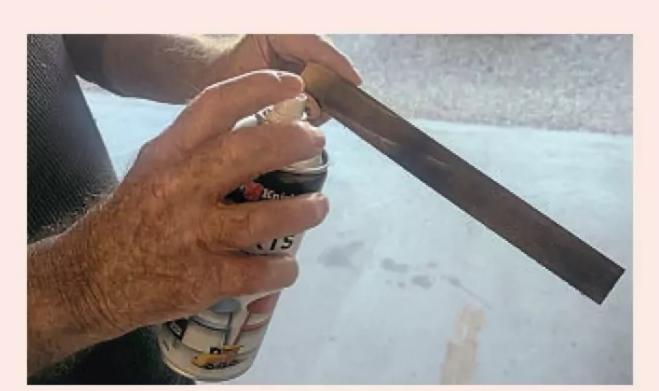
My usual practice is to plot and cut out the bulkheads in card, as this way any glaring errors become







Deck planking.



Cutting the planks for the deck.



"While I find narrower planks easier to bend without the fear of snapping, some of these did, of course, still needed steaming to get around the more acute curves – a word of advice, one can never have enough clamps!"

evident and can be corrected before committing them to expensive plywood. After satisfying myself that things looked 'right', I transferred all the card templates on to 6mm ply, cut them out on my trusty band saw and attached them to their predetermined positions on the jig. I now build all my plank-on-frame models upside down on a jig using a common data line as a mounting point (in this case, it was waterline 3). This ensures that the frames are in the right place and gives a solid base for planking.

I then proceeded to plank my hull with the 2mm thick, 8mm wide seasoned pine strips I'd cut out on my mini table saw. While I find narrower planks easier to bend without the fear of snapping, some of these did, of course, still needed steaming to get around the more acute curves – a word of advice, one can never have enough clamps! They also cut down on the amount of sanding a hull later requires (more on this to come).

Being in Australia, the more conventional woods for planking are either hard to come by or hideously expensive. I've found well-seasoned pine is fine and, given multiple coats of fiberglass resin, I've had no issues with it. However, a couple of years after building this model I was fortunate enough to source a Tasmanian Huen pine (a muchprized wood for full-sized model boat building) old school desktop, complete with ink stains on the top and a rather well carved "Suzi loves Macca" on the underside. I'm not sure whether Macca was a boy or whether Suzi just liked burgers – probably the former, as this have would have been done in the 1960s before the 'Golden Arches' had permeated the global scene. After machining, this gave me lots of great stock to work with.

One of the 'joys' of the plank-onframe construction method is fairing up the hull, because I've found that no matter how carefully you plank it, it's going to need sanding and filling,



Mick's much better organised workshop area following a house move.

and then sanding again, and again, to achieve a nice smooth finish. This creates lots and lots of fine wood dust, so my practice is to do this out in the open, thereby circumnavigating any problems with my better half!

Much to my astonishment (bearing in mind this was my first foray into plank-on-frame construction), the hull, once detached from the jig and put the right way up on its working stand, looked surprisingly good.

Greatly encouraged by this, the deck of 3mm ply was then cut out and sanded to fit before being temporarily placed in position.

Tackling the deck and superstructure

Various experimental configurations for the main superstructure were cut out of card and placed on this deck until I found the one that looked right and most closely conformed to archival footage and photos of the real thing.

I wanted to be able to remove the superstructure in one piece so I could easily access the motor and electronics. So, I fabricated the main body of this out of 3mm ply, placed it on the deck,







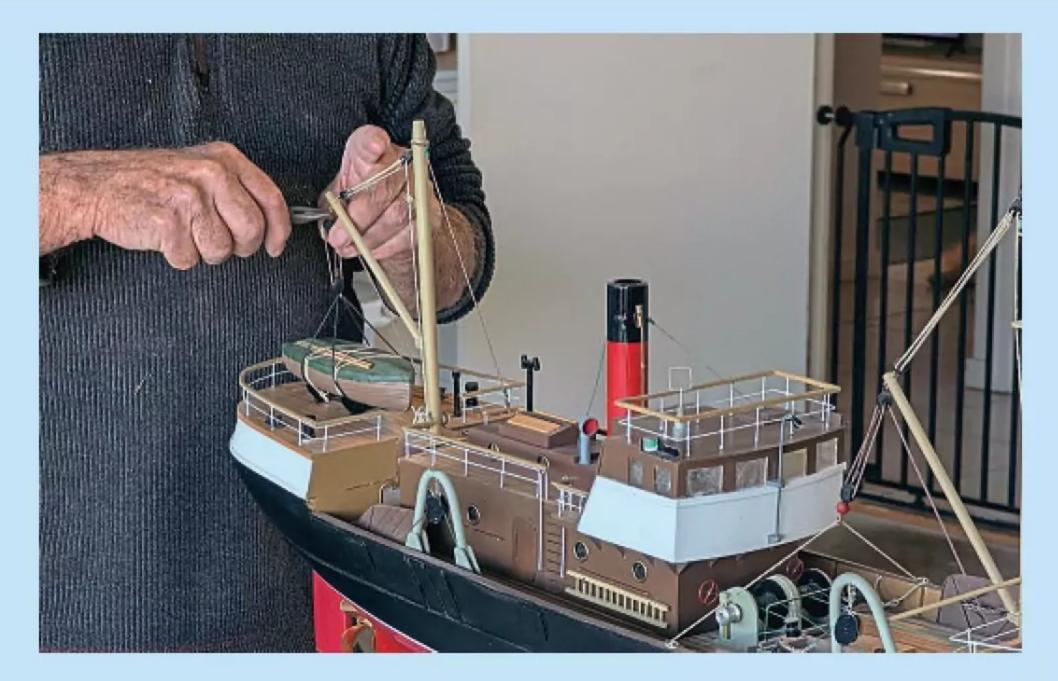
Dry mounting the basic superstructure.

marked around it, and cut out the deck underneath. Then, after permanently fixing the deck to the bulkhead frames and allowing for a slight beveling from the middle to the bulwarks as per the real thing (this looks so much more realistic on the finished model than a completely flat deck), I put the superstructure shell to one side.

than a completely flat deck), I put the superstructure shell to one side.

The next job was to plank the entire deck with 1.5mm thick, 8mm wide, pine planks cut out of 70mm x 8mm x 1000mm seasoned pine stock. Having already applied matt black acrylic to both sides of this pine, once cut, laid on the deck and matt varnished, it





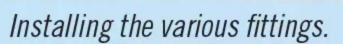














"Having already applied matt black acrylic to both sides of this pine, once cut, laid on the deck and matt varnished, it gave a very convincing representation of calked decking"

gave a very convincing representation of calked decking.

At this point we had a house move that interrupted the build but, on the upside, this allowed me to reorganise my new workshop area and ensure my power tools (i.e., metal lathe, minimill, band saw, table saw and power

sanding table) were located in more user-friendly positions, instead of the higgledy-piggledy arrangement of the old set up. So, after a forced hiatus of a month or so I set about finishing building the basic superstructure and dry mounting it on the deck.









Constructing and finishing the ship's boat.

"The ship's boat was a project all on its own and, quite frankly, the first effort was laughably horrible. It took a lot of advice from the members of the Model Boat Forum online, especially Richard Simpson, a regular contributor to this magazine, to get it right"

Fashioning the fittings

The fittings are a mixture of commercially available, repurposed and scratch-built items. Brass eyelets, for example, were used as portholes, these being too hard (with sausage fingers and a 75-year-old eyesight) for me to fabricate on a metal lathe. The funnel was formed from a piece of plastic conduit, with the cap being turned out of a scrap of brass I had in my 'might prove useful someday' box of bits and bobs. The window glazing was cut from 1mm clear acrylic sheet, while the winch, blocks and bollards were fashioned from a mixture of

wood, turned aluminum and brass and took a fair amount of time and imagination to make.

The ship's boat was a project all on its own and, quite frankly, the first effort was laughably horrible. It took a lot of advice from the members of the Model Boat Forum online, especially Richard Simpson, a regular contributor to this magazine, to get it right. Eventually, though, I managed an acceptable looking model by shaping a balsa plug and planking this with 1mm card.

I thorough recommend the Model Boats forum to anyone new to the hobby. Likewise, if you have a local model boat club, then join it. I am sure you'll find the support and guidance you receive from fellow members invaluable.

Finishing school

One of the parts of a build I never look forward to is painting, as this can make or break a model. Even now – with three or four models completed since this build – I still dread the process, but, as say (or at least, claim!), "practice makes perfect".

Making it all work

The electronics, motor, receiver, servos, prop shaft and ESC were fitted in the time-honoured manner, so I will not go into details, other than to say the 50mm prop is cast brass and the motor a brushed crawler type – which gives the model a good scale performance.

First attempt take-aways

To summarise the building of *Lady Jane* (named after my long-suffering better half):

The negatives

- It would probably have been better to have chosen a less ambitious plan to build from, as this one had virtually no modeling info on it.
- Some of the scale details I made are a bit crude compared to my later builds.

The positives

- 1. The model was a lot of fun to build.
- 2. The project served to exercise both my motor skills and intellect, which is very important when you are no longer a young sprog!
- 3.The skills and techniques acquired during the process have been of significant help in subsequent builds.
- 4. On completion, I experienced a real sense of achievement and pride in having turned a pile of wood and metal into a curvaceous operating R/C model.
- 5. And last, but by no means least, this introduced me to the wonderful art form of plank-on-frame model boat construction and I do mean art form. The compound curves of a wooden boat hull, be it full size or a scaled down version, are pure sculpture, in the truest sense of the word. ●



Lady Jane complete and looking fabulous!



Richard Simpson extols the virtues of getting back to basics...

Incouraging any potential newcomers to the hobby has I always been one of the things I've tried to achieve with my Boiler Room articles. We're all aware that numbers in many of craft-based hobbies are dwindling as the older generations pass on and, for various reasons, teens and 20-somethings simply don't seem to find them as interesting as we did when we were younger. Of course there are still those out there who enjoy making things, but most tend to look at steambased hobbies as complicated and expensive. This is perhaps not surprising as, looking through the Boiler Room back catalogue, it occurred to me that many instalments focus on very specific topics, so, collectively, newcomers may be daunted at the pondside by just how much there is to consider and, consequently, understand.

Long-term readers may remember my series on the build of a Krick Anna kit, fitted out with a very simple steam plant for the purpose of demonstrating that steam can be reasonably priced and relatively simple, but that ran from May to November of 2017, already eight years ago (see **Photo** 1). So, as since then we've focused on complexities such as the latest electronic boiler control system, the latest type of oil suitable for lubricating our engines, the advantages or disadvantages of a slide valve engine over an oscillator, etc, I feel it's time to revisit something newcomers will feel confident enough to consider having a go at themselves.

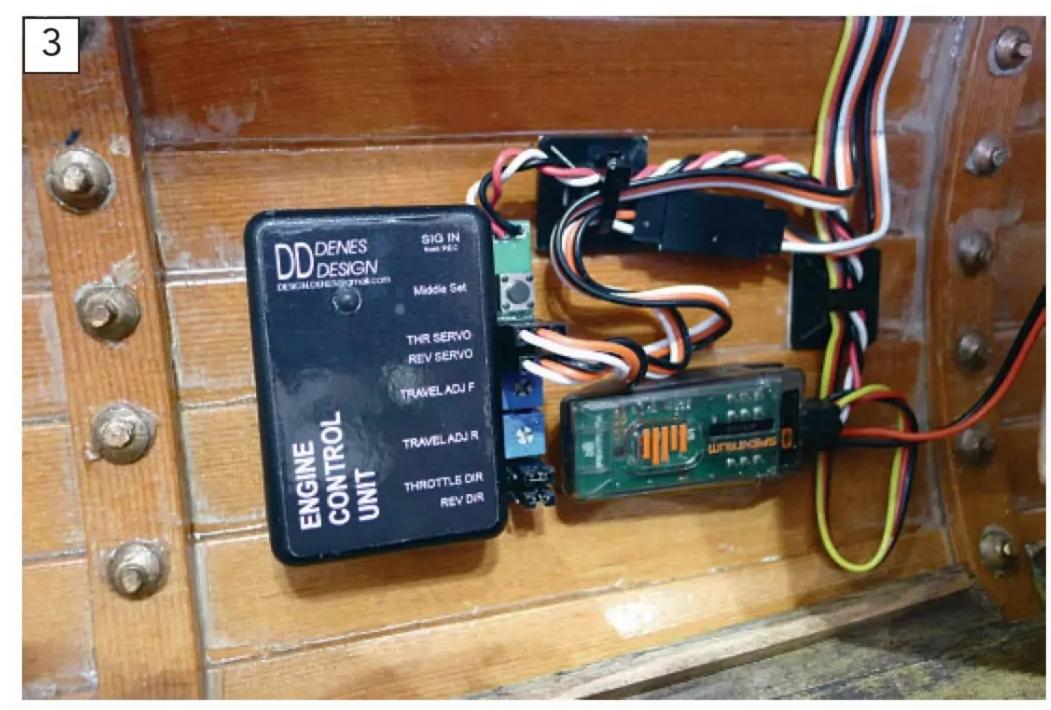
By coincidence, another build I described in the November and December 2021 instalments of Boiler Room was a quick and easy build of a German wartime workboat; this basically involved putting together bits and pieces I had laying around and then fitting them in a spare hull which was also sat around doing nothing (see **Photo 2**). Despite this being a very straightforward project to complete, the resulting model now attracts a lot of attention at pondside and has proven to be a very enjoyable and simple model



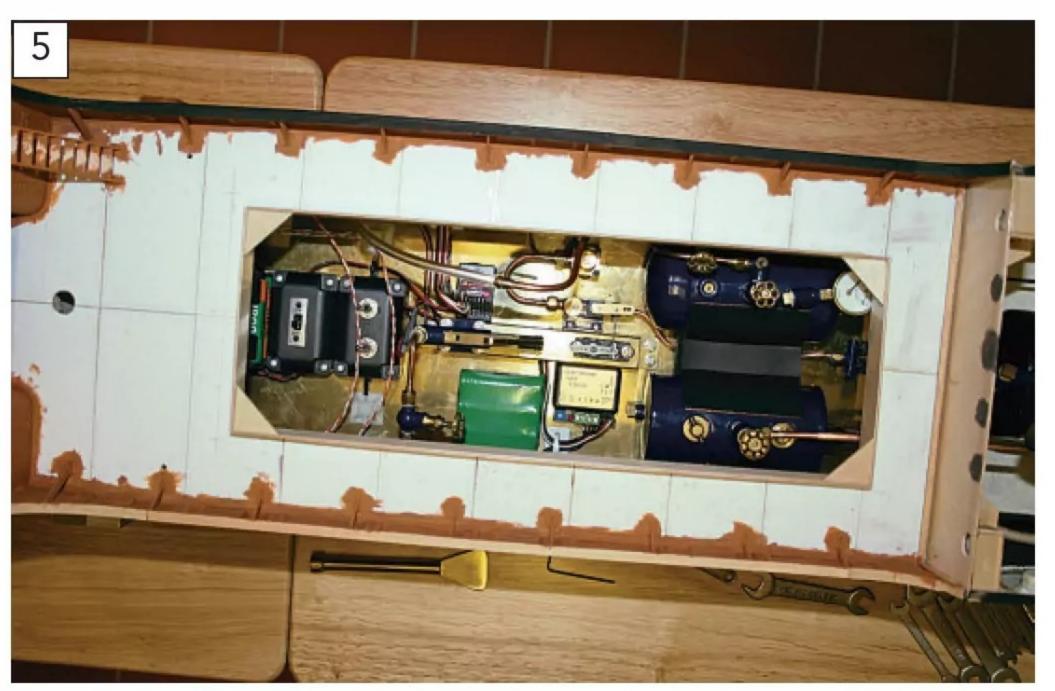
Back in 2017 this Krick Anna kit was assembled to demonstrate that a cheap and simple steam powered model could be put together. The total cost at the time was less than £400, which included the radio set and all electronics, yet the model is still a pleasure to run.



As shown in Nov and Dec '21 issues of the magazine, this model was a complete throw together: a repurposed hull with a review plant from MSM, an Action Man type figure and various details/accessories. It still attracts many positive comments at shows.



It's easy to get sophisticated, as this Engine Control Unit from Denes Designs, which combines the reversing and the throttle functions into a single proportional channel, shows. It's the sort of thing that a newcomer can find a bit daunting.



For the Ben Ain, as Richard had decided that the model was coming in every 20-30 minutes anyway, he wasn't sure of an automatic boiler feed system would be of any real value, so he instead opted for a simple manual feed pump, seen here nestled amongst the more complex gas control systems.



This Automatic Boiler Controller, again from Denes Designs, controls water level and boiler pressure, but the additional servos, valves and pipework make for quite a sophisticated and complex plant.



The first test of the Anna showed immediately the charm of a simple basic steam model; not a lot of performance and not a lot of duration, but definitely reminiscent of the more traditional steam toys of the 1950s and 1960s.

to operate. So, not only for the sake of the newcomers but also for those a little bit more experienced, this month we're going to get back to the basics.

Is more complicated necessarily better?

Over the years, as I've become more familiar with the various aspects of running steam powered models, I've invariably looked for ways of doing things better. This has led me to incorporate such sophisticated electronics as a system that combines the speed function and the reversing function of a valve type engine into a single proportional channel on the radio (see **Photo 3**), sophisticated boiler management systems that control water levels and pressure (see **Photo 4**), controllable pitch propeller systems, water feed systems, etc, etc. But while these systems all do their own job very well, the bottom line is that they make everything so much more complicated. It's easy to end up with a model that has more than one

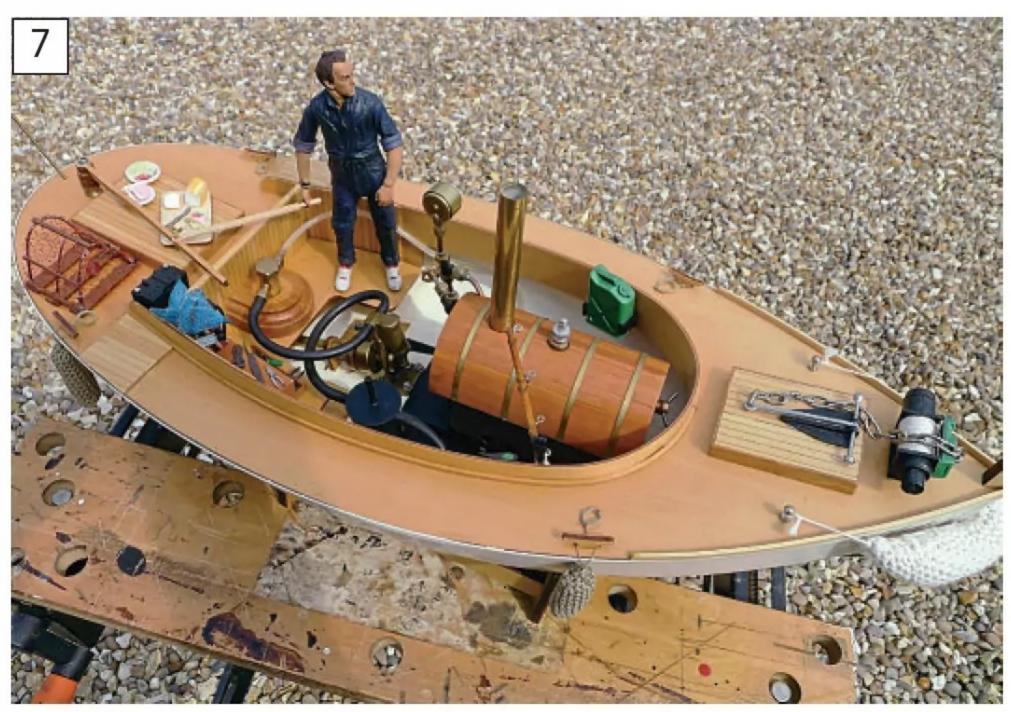
battery for its different functions, all adding to not just this complexity but basically a whole list of things that can potentially go wrong. I have a model that has two receiver type battery packs for two different functions, both of which were originally supposed to be fitted with rechargeable batteries. When, one day, I found one system wasn't working correctly I decided to change the rechargeable batteries with non-rechargeable ones to try a slight increase in voltage. Later, after being sat on the shelf for a couple for weeks, having forgotten I had done this I tried to recharge the non-rechargeable batteries. I was very lucky not to have caused a great deal of damage!

To avoid potential disaster, complexity requires a lot of careful tracking so that you remember not just what you've done but how you were planning on operating everything in the first place (sometimes I have to write notes to remind myself!). It's also beneficial to record very early planning thoughts; before I even started to build my *Ben Ain* model in around

2003, I made the conscious decision not to incorporate an automatic boiler feed system but to simply to use a manual boiler feed pump (see **Photo 5**). There's a lot to be said for keeping things simple, for many reasons, including initial cost and operational reliability. I think we sometimes fall into the trap of over complicating things, persuading ourselves something is necessary when, in reality, it probably isn't.

So, what do I mean by 'basics'?

With my Krick Anna build (mentioned earlier), the entire drive of the project was to install the simplest and cheapest plant possible. This was to demonstrate that a steam plant can both be put together inexpensively and be very easy to operate. There was no compromise with this philosophy so, I'm the first to admit, it was taken to an extreme. The result was a model with a single cylinder engine; technically, therefore, it cannot be considered as self-starting and has to be run around the pond without



Despite being basic there's no reason why a bit of detailing and character cannot be added. This kit is described as 10th scale, so dolls' house accessories at 1:12th scale work perfectly well. The boat is crewed by a character figure from the Alien movies.



The Borkum has proved to be simple, reliable, robust and a pleasure to own and operate. It has taught Richard a huge amount over the years and even survived a fire — the consequences of which, luckily, required nothing more than relagging the boiler.



Fitting the attenuator valve to the boiler shell means that removing the entire plant remains as quick and easy as it was before fitting it.



A review article of the Pendle boiler in the June 2018 instalment of Boiler Room showed how useful and flexible the Borkum could be. Changing out the boiler was achieved simply by using a couple of temporary new pieces of pipe, so everything could be returned to normal aferwards.

"Sometimes I think we tend to forget the simple pleasures that can be had from running the most basic of models"

any control over the engine. This is very much along the lines of traditional point-and-press models where you have no control other than steering (see **Photo 6**) – I guess even that's something I could now fix, but back in the 1950s and '60s you really would have been in the lap of the gods out on the water. Getting back to the Krick *Anna* build, though, even with such a rock bottom specification of solid fuel for the boiler, a run time of less than ten minutes and a performance that puts you at the mercy of every duck on the pond, the model still puts a smile on

I think we tend to forget the simple pleasures that can be had from running the most basic of models, and, after all, we can still add a few details for a more realistic overall look (see **Photo 7**).

When I first started to play around with steam plant in model boats, I wanted to get a test hack on the water as quickly as possible, so I found and bought a secondhand built Krick Borkum model, fitted out with a Cheddar Puffin plant (see **Photo 8**). I have made a number of cosmetic and mechanical modifications over the years, adding an attenuator valve (see **Photo 9**), and changing to a disposable gas tank, as I firmly believe that these are two enhancements that are particularly worthwhile. Basically, though, this model has provided many hours of pleasurable sailing on the water.

I have also used it as a test bed to review boilers, such as the Pendle boiler shown in **Photo 10**, and even fitted complete steam plant for review articles, such as the Miniature Steam Models Clyde plant shown in **Photo 11**, but I've always returned it to the original Cheddar set up afterwards. One of my more memorable moments when operating the model was rescuing an electric powered tug model that had failed on the water, much to the amusement of the observing steam enthusiasts and the embarrassment of the tug owner. The Borkum is very stable, incredibly maneuverable and, with a robust simple plant like the Cheddar Puffin in it, the model is also very reliable.

So, for me at least, back to basics is all about questioning what we want in our models and being really critical of



Again, the Borkum proving invaluable as a test bed for the Miniature Steam Models Clyde plant. This time the entire Cheddar plant was removed and the Clyde plant fitted in its place, requiring very little in the way of modification.



No one wants to get involved in major surgery at the pond side and removing the engine of the Hereward to find and fix a fault is not something Richard would like to repeat. The fault was actually traced to a loose grub screw on one crosshead, interfering in the guide.



Richard quite enjoys repurposing items such as old hulls and assorted plant and putting them to good use. Seeing how a hull shape can be utilised at a completely different scale always gets the creative juices flowing.

"There's always a little gap in our lives for a simple, reliable, easy to operate, runaround model"

the value some additional sophistication brings with it. We want something that's as cheap to build as possible, that offers simple, fun and reliable operation, and which is also nice and easy in terms of maintenance. I don't want to be frustrated trying to work out what might have gone wrong with a sophisticated model when I should be enjoying sailing it. As an example, when I first tried out Hereward on the water, she stopped after a few minutes of running. As it was an annual steam day, I really wanted to run her, so I decided to remove the engine. But, after dismantling a significant amount of pipework to get to it, finding the problem, fixing it and putting everything back together again

so I could give the model another run, I'd just about had enough. It took me around an hour and a half; you can see why in **Photo 12**. If I had been using the *Borkum* I could have had the entire plant out of the boat in around five minutes!

A few suggestions...

Having a bit of a better idea now of just what constitutes the basics, let's have a think about how this relates to us. Whether a newcomer or an experienced steam modeller, I believe there's always a little gap in our lives for a simple, reliable, easy to operate, runaround model.

If you want to build one yourself, then you really can't do much better than one of the Krick kits, although the availability is starting to dwindle a little. The *Borkum*, *Alexandra* and the *Anna* can still be purchased from such vendors as Cornwall Model Boats, but

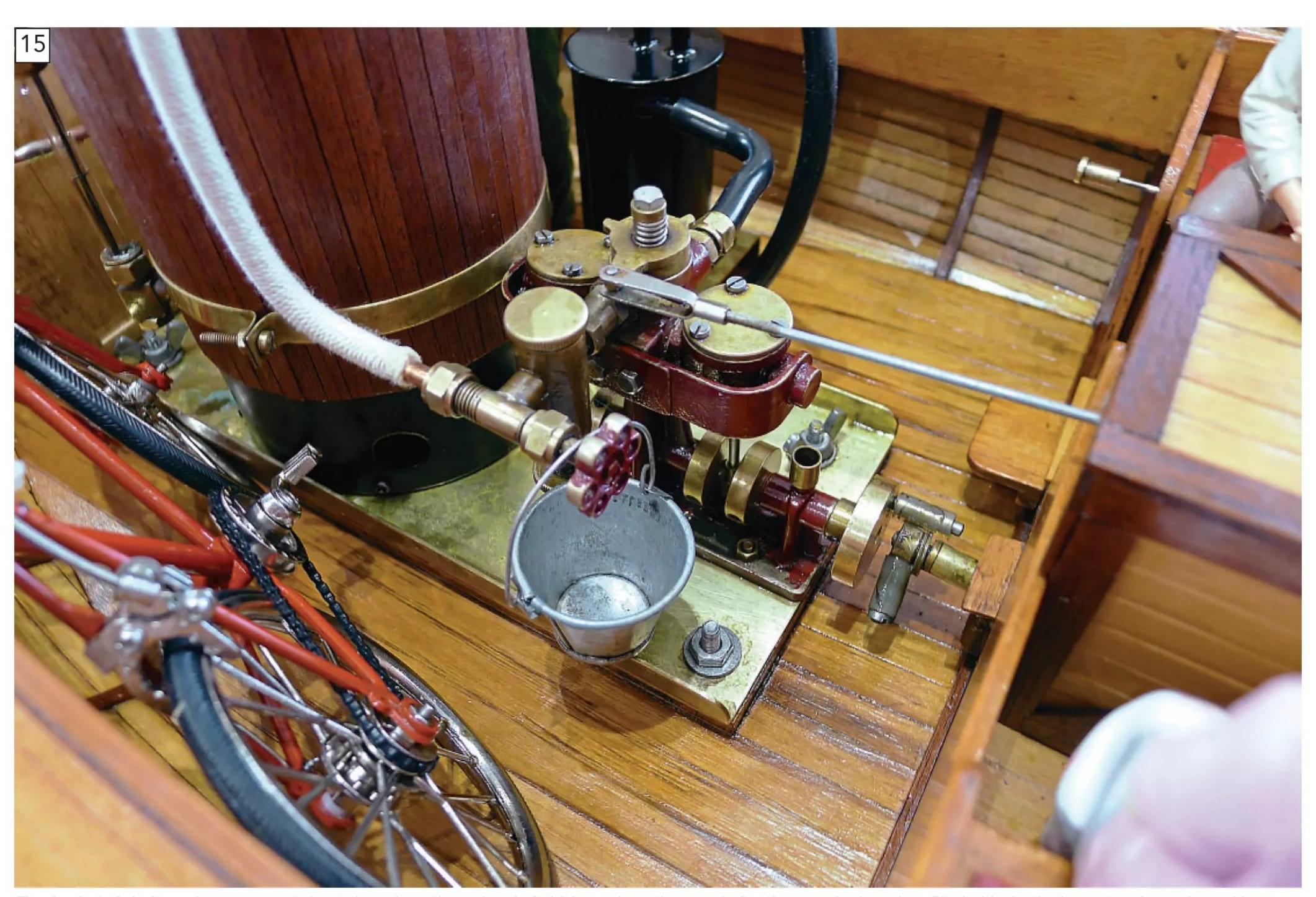


For beginners to steam, as well as more experienced steam modellers, the advantages of a plant entirely located on a single base are hard to ignore. All you need to do is fit the base into the bottom of the hull and connect up the shaft and the control valve linkage.

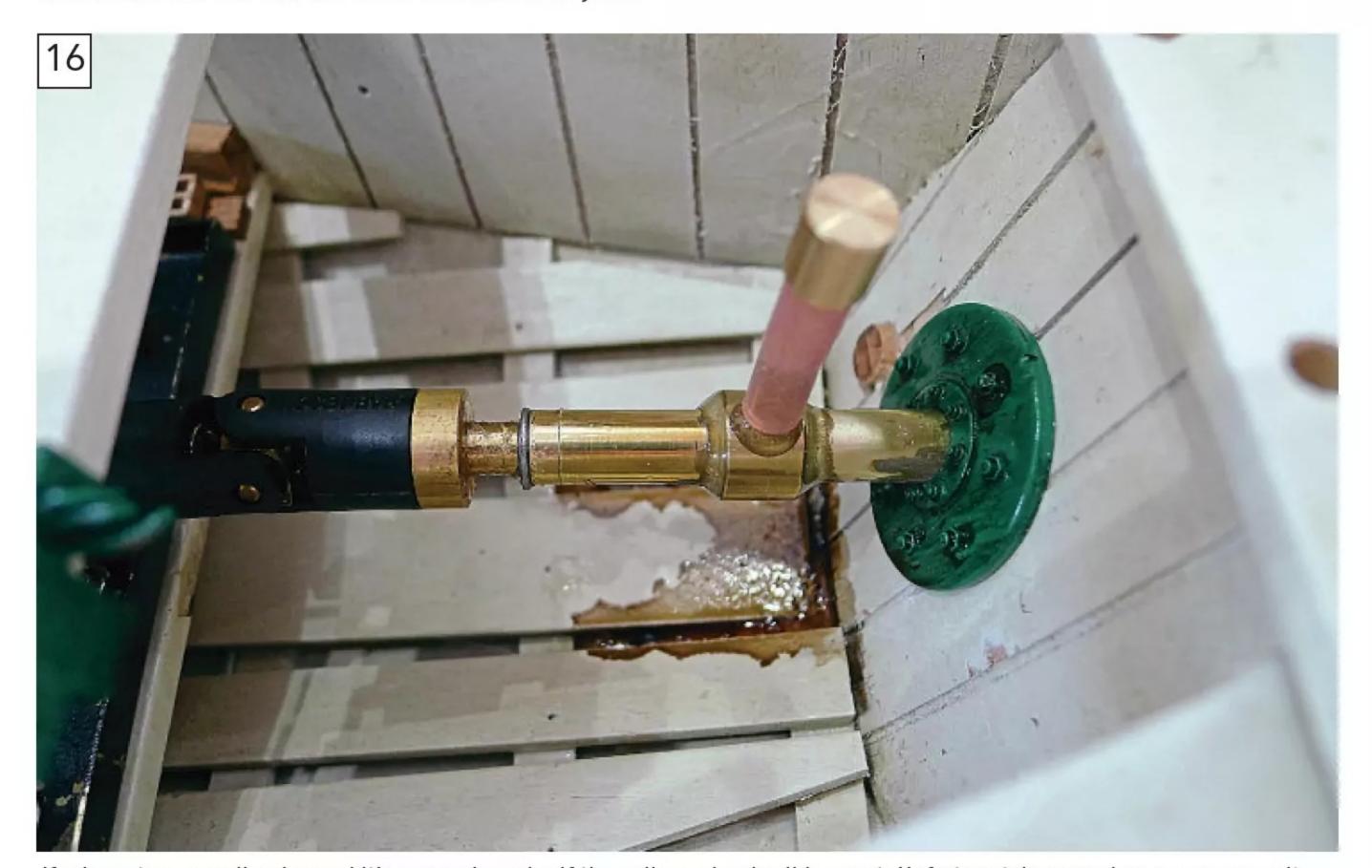
you might have to look for a secondhand Victoria kit or ready-built. Ready-built examples do come up on auction sites, but you have to be really careful about what you're buying, and how much you're being asked to pay, as frequently the seller believes his/her kit is worth considerably more than it actually is.

Alternatively, looking for creative ways in which a hull can be repurposed presents a very enjoyable challenge and can save a huge amount of time and effort. My German workboat started life as a ready-made static model of a *Titanic* lifeboat (see **Photo 13**), and I really enjoyed converting it to a radiocontrolled steam-powered model.

As regards the steam plant, the simplest possible option is a single cylinder oscillating engine plant, but for the sake of another cylinder the model is transformed from a point-and-press model into a fully controllable model,



The simplest of shaft couple arrangements has to be a pin on the engine shaft driving a pin on the prop shaft—the example shown here fitted with plastic sleeves to reduce noise and improve life. Richard has now had this in use for well over 20 years.



If a huco type coupling is used it's so much easier if the splines simply slide apart. Unfortunately, nowadays many are quite tight, but the all-metal type usually slide apart a lot easier.

which is so much more convenient and reliable. So, a twin cylinder oscillator is probably a good base line, and a boiler, separator and gas tank all mounted on a common base is also an excellent arrangement. The entire plant can then be easily removed for maintenance and

cleaning, and the gas tank can benefit from a little residual heat from the boiler to offset the gas cooling effect (see **Photo 14**). All that needs to be done to remove the plant is to disconnect the linkage to the control valve, disconnect the gas tank if external, undo the

fastenings that secure the base to the hull, disconnect the coupling if necessary, and lift out. In many of my own models I don't even have a coupling, as a rotating pin drives the shaft (see Photo 15), but if a huco type coupling is used it's so much easier if the splines simply slide apart for quick and easy dismantling (see Photo 16). A plant that is completely self-contained on a single brass base makes for uncomplicated assembly and operation, so the range of plant from Miniature Steam Models is always worth considering. Dropping the Clyde plant into the German workboat was straightforward and undemanding, yet it works beautifully every time.

Final thoughts, then, might be just which enhancements are worth your time and effort. For me, a degree of control over the gas consumption is always a consideration. This can be as simple as a mechanical gas attenuator valve or more sophisticated in the form of an electronic gas control valve. Both will eliminate the need to lift the safety valve and waste all that precious energy and will also save you the trouble of initially having to make your model fly around the pond at full speed to use up some steam. With my own *Borkum*, again, to keep things simple to operate and maintain, I actually



Never underestimate the value of being able to remove the entire plant on a single base for maintenance and cleaning. The Borkum plant can be out of the boat and onto the bench in a few minutes so that it can then be easily worked on.



We all love playing with technical things, so creating a large, imposing model with all the bells and whistles is always going to be an attractive proposition. To achieve this, though, requires a good deal of experience and usually fairly deep pockets.

"I think we can sometimes be drawn into adding complexity with no real reward"

fitted the attenuator valve directly to the boiler shell. This means that it is removed with the plant, allowing easy access for maintenance (see **Photo 17**).

Embracing life's simple pleasures

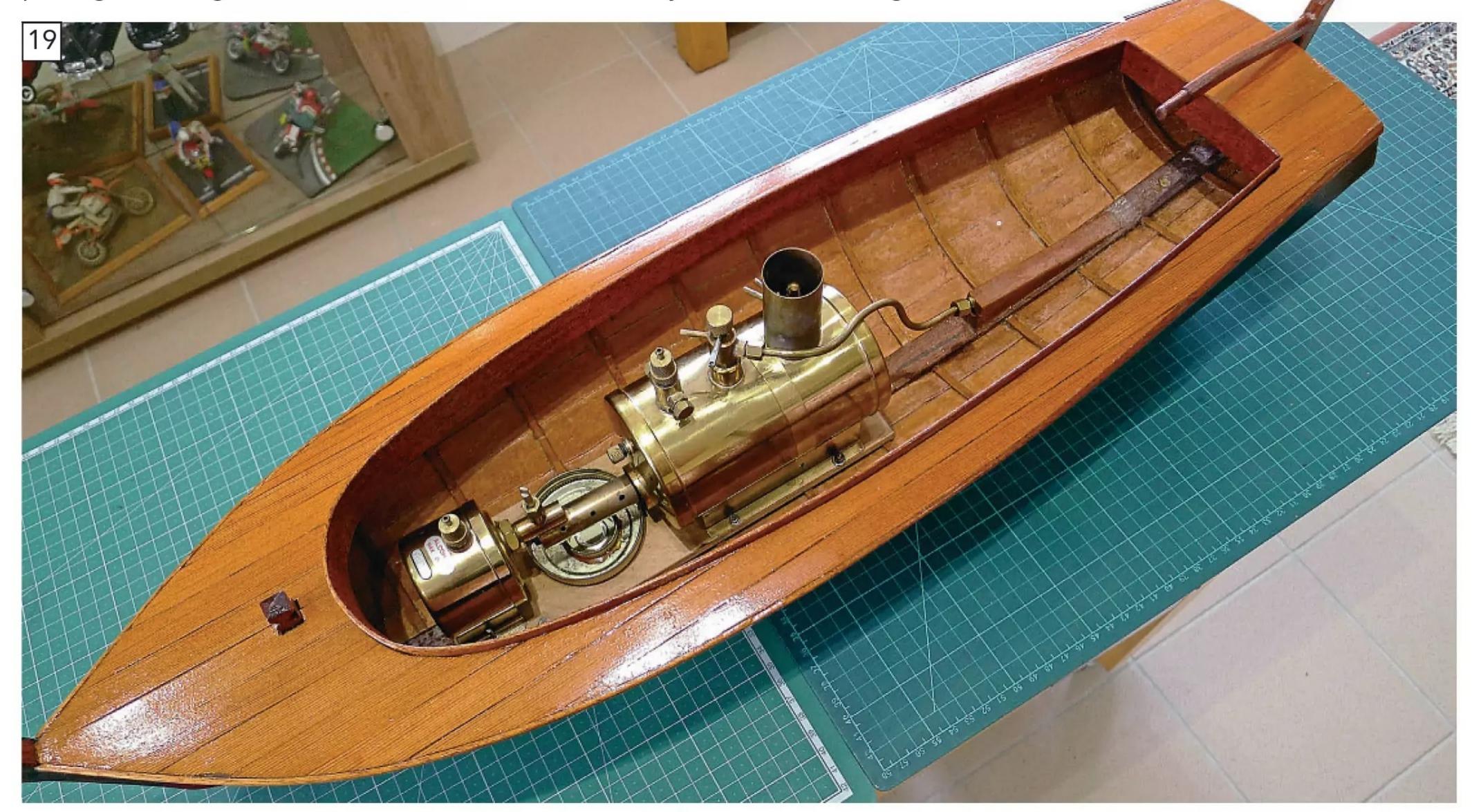
As with a lot of things, I think we can sometimes be drawn into adding complexity with no real benefit. I like to call it technology for the sake of technology. It's therefore worth just pausing and taking a bit of time to decide

what we actually need to incorporate in a build so that, ultimately, we achieve a model that's reliable *and* easy to operate.

For more experienced steam modellers, sometimes a simple build can be bit of a relief from more demanding and ambitious projects, and can result in surprisingly enjoyable, stress-free sailing sessions. That's not to say we can't also continue to enjoy making things as sophisticated and technically advanced as possible, just to push the envelope a bit (see **Photo 18**), but don't underestimate the value of a couple of hours on a Sunday morning watching a simple steam model glide around the pond.

For newcomers, I would wholeheartedly recommend starting

with a model that's easy to put together and, probably more importantly, easy to operate from the pondside. While invariably this means something simple, it doesn't necessarily have to be regarded as a stepping-stone to bigger and better models. The aim should be a boat you'll able to enjoy for many years to come, and which will eventually offer a little light relief from the trials and tribulations of any future more complex creations. In fact, my next project is going to be based on another repurposed hull, into which I will install a nice and simple plant, this time incorporating a Saito boiler (see **Photo 19**). There's a lot to be said for back to basics boating!



Richard now wants to repurpose this old hull and get the Saito boiler doing something. He did fancy the idea of a Saito engine but then looked at the prices! This will definitely be another back to basics project though.

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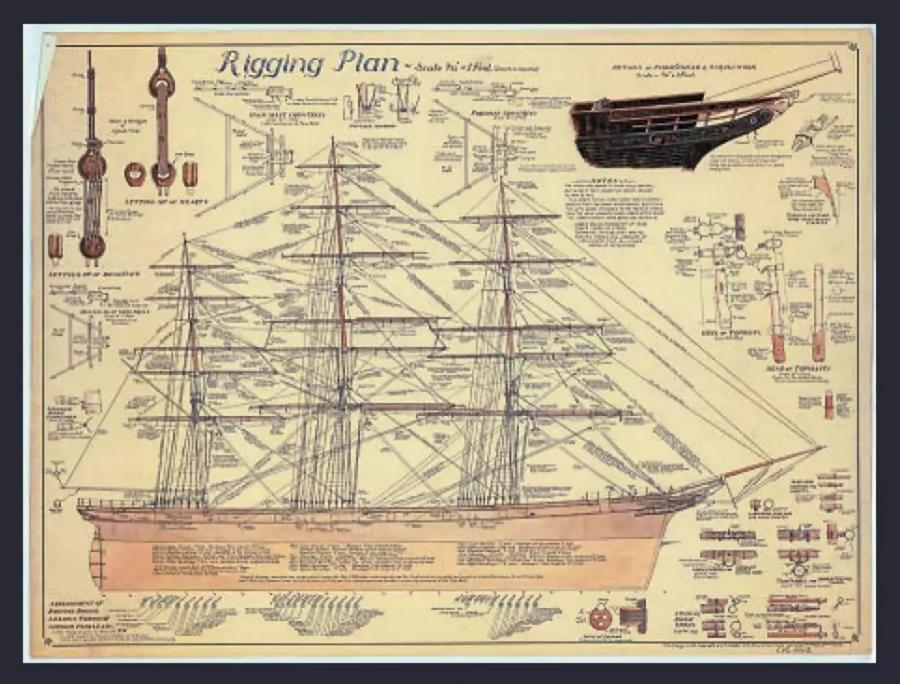
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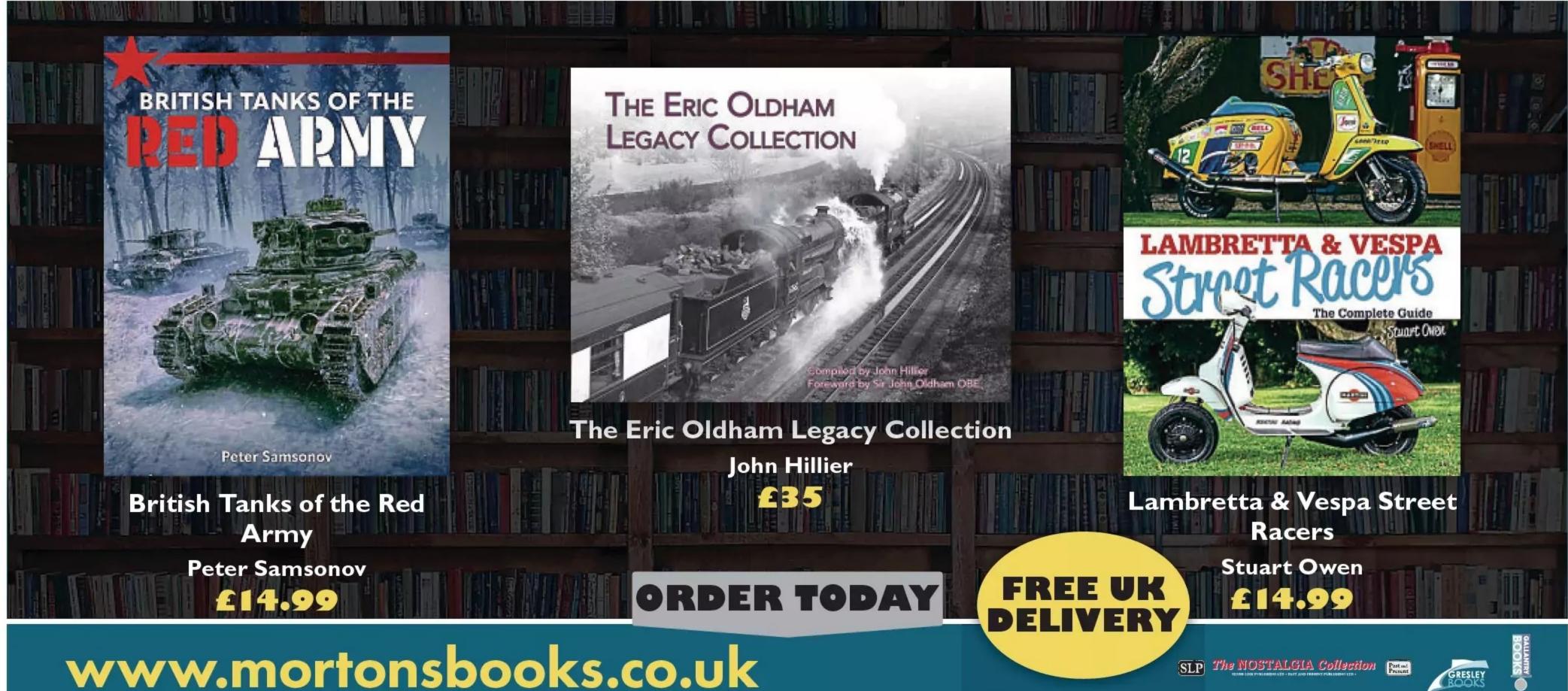


Rigging plan for Cutty Sark (1869), ID reference. M1860

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ENGINES ON THE CHEAP

Dave Wiggins draws our attention to some reasonably priced retro buys

any years ago, I ran, in this very magazine, a few mini features I called 'Bits and Pieces', presenting ideas for collecting vintage items on a budget. There's no doubt that over the 30-odd-years I've been doing what I do in the model press, both vintage engines and (to a lesser extent) radio gear have risen in value, and in many cases moved beyond what many of us (me included) can afford or justify. Just take the prices demanded these days for an Oliver Tiger' model diesel engine. Admittedly, the Oliver was one of the nicer small British model engine brands, but, even so, this was just a 2.5cc single cylinder model engine not that much higher in performance than, say, a decent ED 'Racer' or a Frog '249', yet now commands several hundred quid, whereas the others mentioned are lucky to achieve a quarter of that price.

Likewise, 20+ years ago I started writing in these pages about the rebuild of vintage Taplin-Twin diesels, marine engines which I once loved and had used back in the 1960s, but vendors are now asking up to £400 for clean looking examples which aren't even in running order, which to me seems simply insane.

But you can still seek out and collect some very nice model engines on a budget – if you're prepared to a) be a bit patient and b) carry out some simple work on damaged or grubby looking but otherwise sound examples.

Another option is to collect engines





A clean example of the bigger OS30 (5cc) glow marine engine (flywheel off).

that are a little bit more recent – Japanese glow-motors, for instance.

Engines from ED Ltd

Let's start, though, with a brace of British marine diesels from the late 1950s, made by good old ED Ltd, these being a 2.46cc 'Racer' and a 3.46cc Mk IV (aka Hunter), both needing workshop attention before display or use, and photographed for the purpose of this article exactly as they were bought.

The Hunter I bought cheaply, simply because a) it looked scruffy and b) had a homemade copper exhaust pipe soldered onto the exhaust stack – the latter being, I'm pretty certain, the reason I was the only bidder. And yet there was nothing really wrong with this engine, other than looks. All that was required was the removal of the pipe

"You can still seek out and collect some very nice model engines on a budget – if you're prepared to a) be a bit patient and b) carry out some simple work on damaged or grubby looking but otherwise sound examples"

and a thorough clean and polish. The old Mk IV was a thoroughly good, easy starting, rear disc induction model diesel, if, perhaps, a bit of a 'plodder', and it powered countless 36in cabin cruisers like Wavemasters, Sea Commanders and Marlins during its heyday in the later 1950s and throughout the '60s.

The huge selling 2.46cc 'Racer', designed by Basil Miles, was more modern in design and was an even better purchase as the engine came with both air- and water-cooled heads, plus an original ED brass flywheel and water jacket, both of which are original items and hard to find nowadays. But, again, nobody other than me wanted it, as it looked a bit woebegone. This engine was an even easier 'resto' as there was nothing to remove and nothing broken, so it really was just a polishing up job. Fortunately, during the summer of 2024 I'd purchased a simple ultrasonic cleaning tank, which made cleaning the brass a simple semi-automatic task.

Engines from OS of Japan

Of course, bargain hunting retro engine buyers need not be limited to British diesels. The next two engines featured are much more modern in design than my diesels, being from a different era

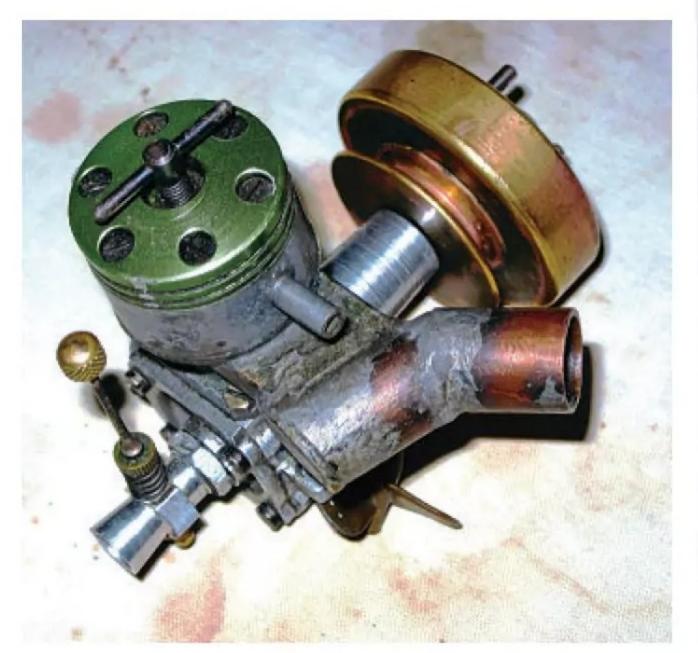




A very nice mint and boxed OS-20 (3.5cc) marine glow-motor, ready to go.



Period advertising from OS Ltd of Japan



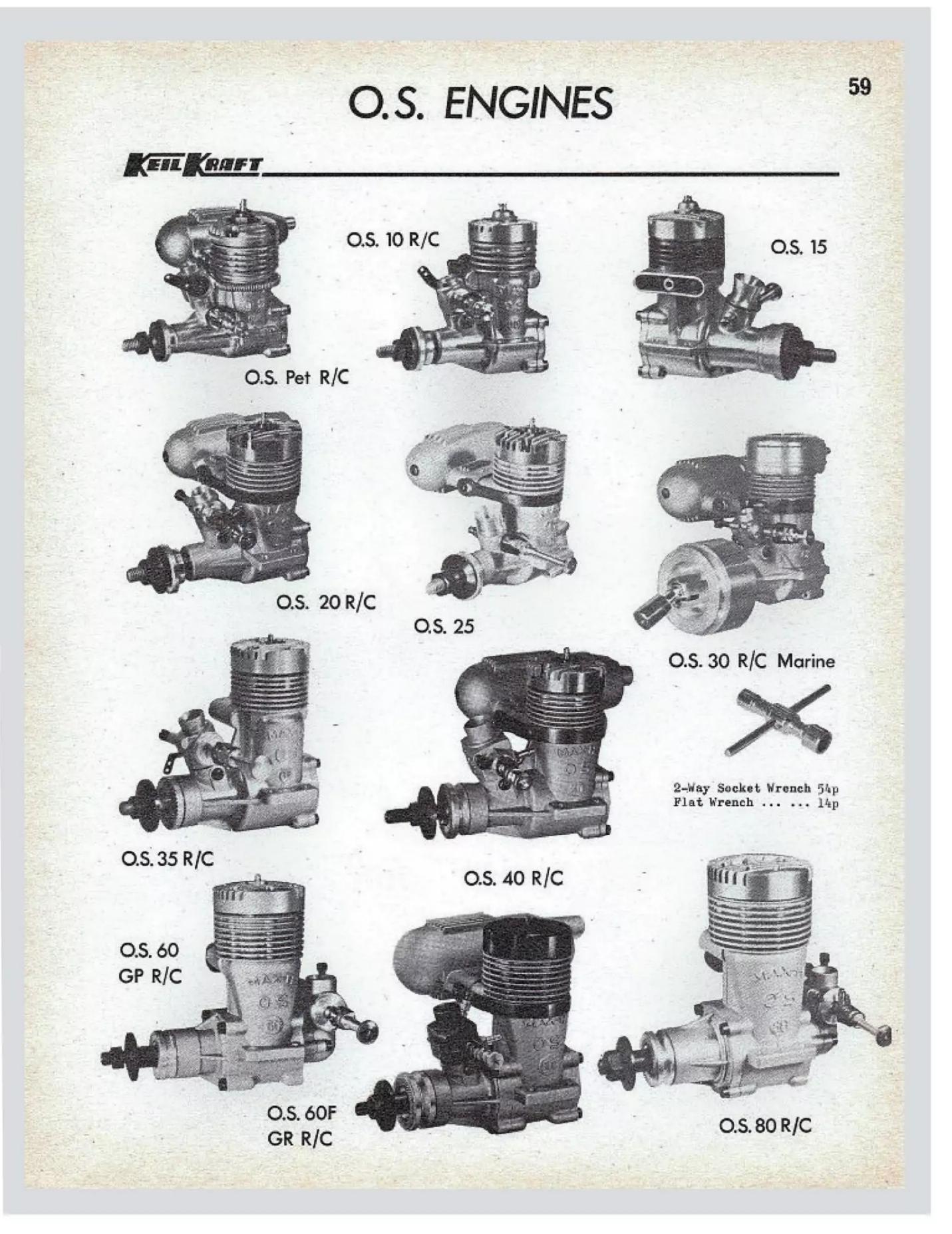
The marine ED (Mk IV) 'Hunter' 3.46cc.

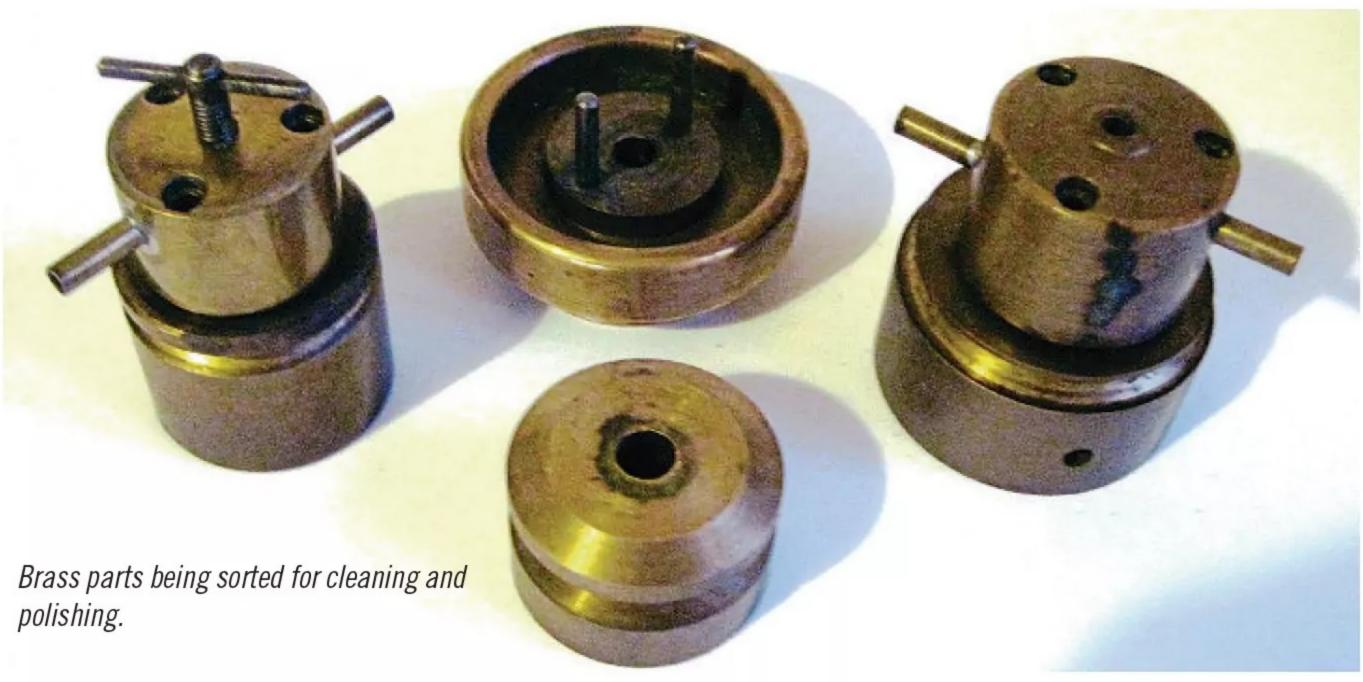


A 2.46cc ED 'Racer' being prepared and stripped in Dave's workshop.

"I really can't think of anything bad to say about OS engines"

entirely. Last year I was lucky enough to be able to pick up an OS-MAX 20 (3.5cc) marine glow engine, in 'as new' and still boxed condition, as a 'buy it now' online purchase. Why was it so





cheap? I'm not really sure, but as with the two older diesels featured, nobody else seemed to want it.

I'd really wanted an OS-MAX 30 (5cc) for sentimental reasons, as one of

these tremendously reliable Japanese 2-strokes had been my very first glow-plug engine. Ironically, a few weeks after I'd become impatient and bought my boxed '20', up popped a 30 – so I

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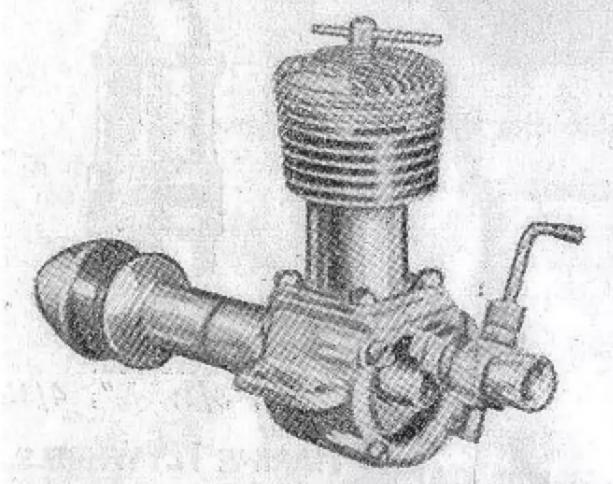
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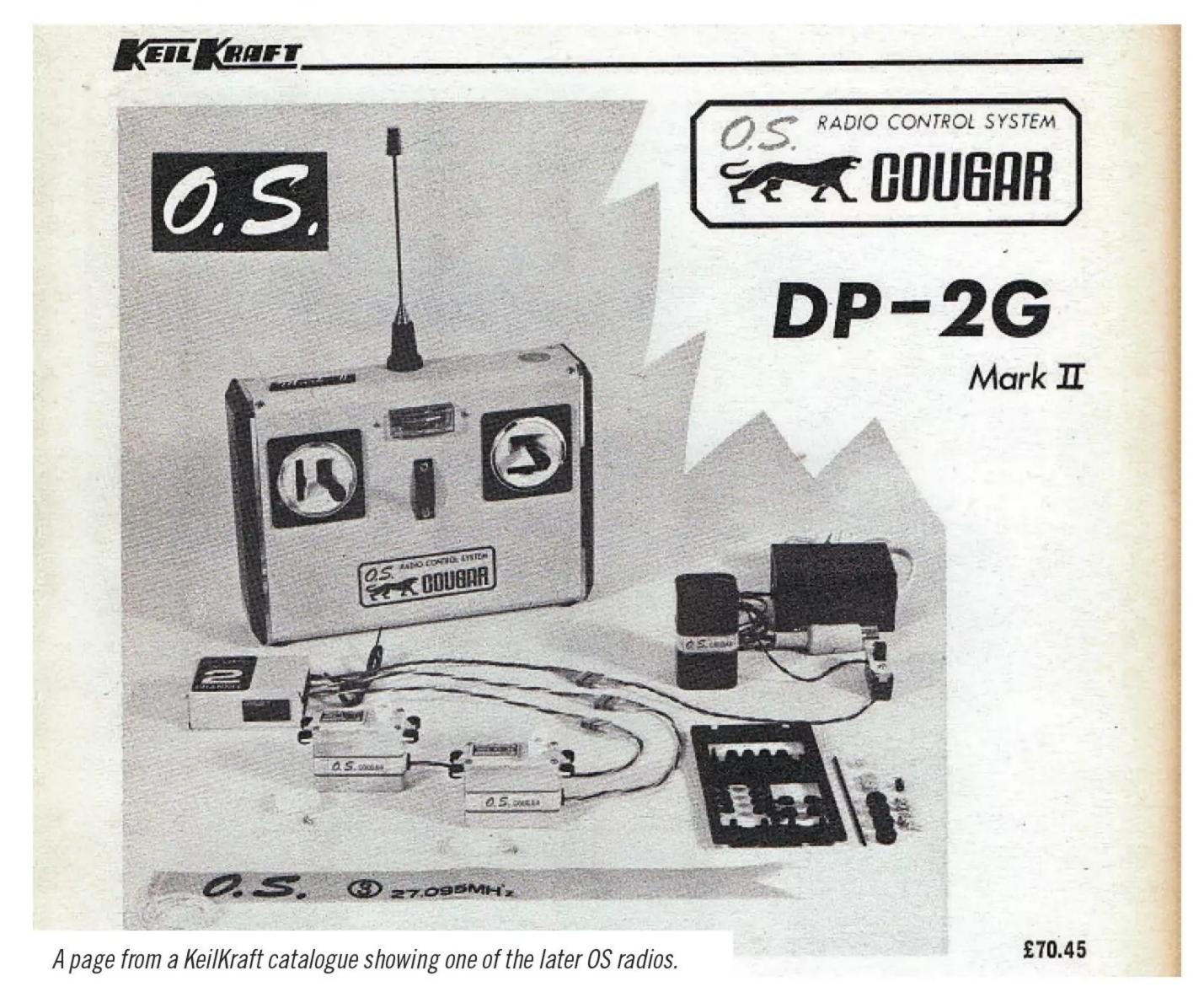
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ELFIN 2.49 c.c.

Period (late 1950s) advertising for two ED diesels.



snapped it up as well! Both of these fine little engines came complete with their original works silencers and, as with all true marine engines from OS, both have water cooled crankcases as well as the cooled marine cylinder head, which is nice to have.

I really can't think of anything bad to say about OS engines; they were so nicely made, with their diecasting comparing well to older and simpler English-built engines. I suppose you would call it 'polish'. Whatever it was, the Japanese makers knocked the English engine builders for six, with firms like Ogawa attaining ever bigger sales at the expense of our home manufacturers. Two examples of the firm's advertising are illustrated in this article. As with so many imported model products, UK distribution was by Keil-Kraft of Wickford in Essex.

OS built on its success by designing and introducing modellers to some really outstanding engineering products, putting into its range a 10cc 4-stroke, multi-cylinder jobs and even a scale Wankel (rotary) engine, something few others were doing.

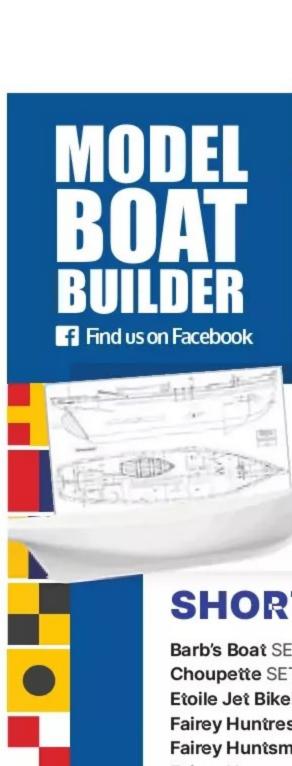
OS radio gear very briefly introduced

As well as being engine designers, OS Ltd entered the radio-control market quite early on, offering well made single and multi-channel (reed) sets under the 'Minitron' brand name before 'going proportional' with its first 4-channel digital set, all of which were really very nicely made radios.

Its follow up 'Cougar' line was a second generation/slightly lower cost replacement for the firm's first aircraft proportional, and, because of that, it attracted model boaters, especially as it included a 2-channel/2 stick version (pictured) of no lesser build quality than the aircraft sets. The Cougar line is very representative of R/C (both imported and home grown) as radio began to move, step by step, from all metal cases via plastic and metal hybrid construction to the cheaply mass-produced all-plastic styles of today.

For some reason Cougar radios never quite 'took off' in the UK. The reason for this was probably the introduction of the first Futaba Digimax 4/5, a hugely popular Japanese-made 'buy' right from the off. Quality wise there was no difference – both were reasonably well-made imported radios.

Summarising, it's pretty hard to criticise anything made by OS Ltd, this manufacturer's entire ethos seeming to be quality based, and British representatives KeilKraft did a pretty good job promoting OS engines and radios here in the UK, too.



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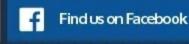
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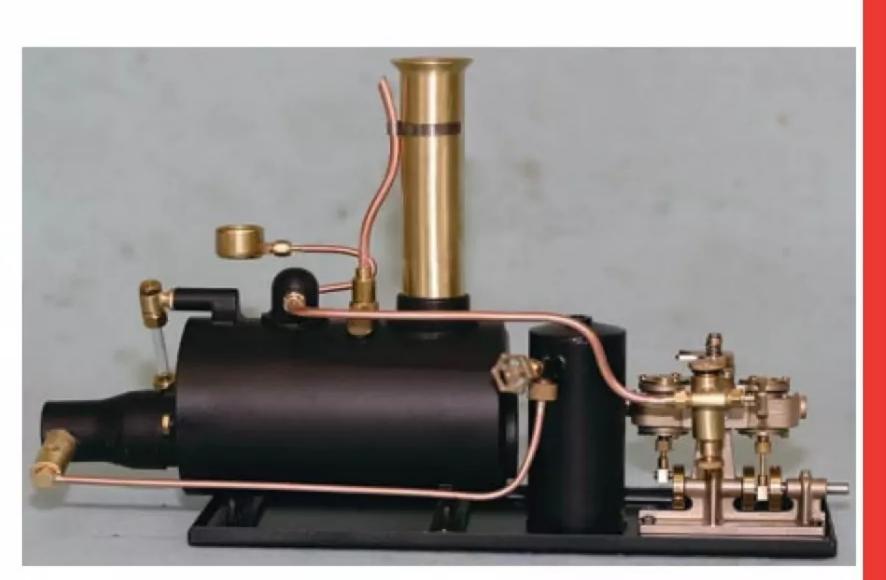
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Rembertiturm

After a long, long delay (of at least 20 years), I finally started to build, and am nearing completion, a 1:50 scale model of the offshore tugboat *Rembertiturm* from a Robbe kit.

Overall, this has been a positive experience. The plans are easy to understand and show the position of all parts. The kit also includes about eight pages of instructions, but in German! So, my limited model building experience together with my even more limited grasp of the language has presented some challenges. Thankfully, though, with the help of 'Google Translate', I've been able to understand the instructions well enough to get through some of the trickier parts of the build.

This brings me to a couple of comments regarding two articles in the July 2025 edition of Model Boats. First, I totally agree with John Mileson's advice in TLC Glow-Getter (pages 32-37) to avoid using gloss paint. I used it on *Rembertiturm* and,

in my opinion, it does give the model a 'toy-like' appearance. I would add another concern is that using gloss paint will make obvious the slightest imperfection in the finish of the model... and I have a number of those for sure!

I would also like to say how informative and enjoyable I found Glynn Guest's piece on railings (pages 22-25). I wish I had read it before attempting the railings on Rembertiturm. My challenge now is to paint the railings (with flat white/ grey paint, of course). Fortunately, most of Rembertiturm's railings are not, at this time, firmly secured to the decks. Now I must remove the railings, paint them and then re-install them without scuffing the existing paint. A process, I bet, that will further elevate my blood pressure. Isn't model building supposed to be relaxing and therapeutic? Thanks Ed!

JIM MACLAREN EMAIL

Well, you certainly don't shy away from a challenge, Jim – and wow, wow, wow, your build is looking wunderbar! Ed.









Electrow

I based the working rowing boat model I am sending you pictures of on a clinker-style hull (470mm long) purchased from Orion Mouldings, although I lowered this hull by 20mm all round. The interior of the hull was fitted out to my own design, with horizontal and vertical rails and a base board to carry all the mechanical parts. I also made mountings to carry the four mini servos (two for the pulling action and two for the lifting action), all of which are controlled by an electronic unit. Linkages were made from threaded rod to connect these servos together; the lengths had to be exactly the same for both sides to work smoothly. The oars I made from dowel and birch ply.

The Action Man figure needed some major surgery to make his arms and body more flexible. His jumper trousers and woolly hat were all made by my wife, the jumper, with its authentic cable stitch pattern to the front, was knitted to her own design using 2.25mm needles.

I've uploaded some video footage of *Electrow* in action out on the water, which can be viewed by keying the following link into your browser: https://www.youtube.com/watch?v=pfaau_Zx-8o

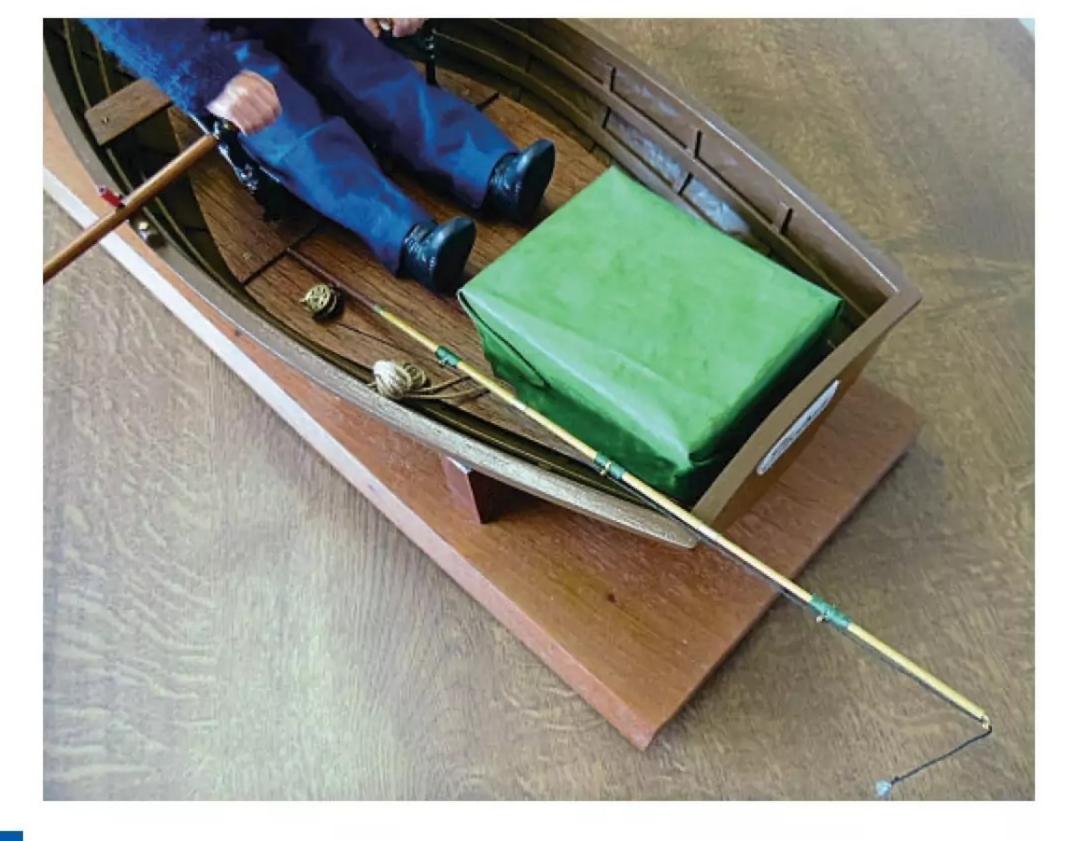
BRYAN JOHNSTON EMAIL

What a smart and beautifully built boat, Bryan. Having viewed the video footage myself, Electrow's on the water performance is wonderfully convincing, too.

As for that handsome chap, Action Man, how lucky is he to be so warmly and stylishly attired thanks to your clever wife. What a team! Ed.









Monterey Mediterranean Editon

I have just finished building the *Monterey* from Billing Boats, the Mediterranean Edition. You could call my version 'John's Edition', because I have added a few things, like LED lights and the big net winch on the bow, and I've changed the colours according to the real fishing boats that we have here in Greece – and we have plenty!

I am sending you the final photos, like I do for all of my projects. This one is also radio-controlled, but I have also built a static version.

This Billing Boats kit is pretty simple to build, so it's appropriate for a beginner, but, at the same time, the level of detail is very good indeed.

With the Mediterranean Edition you get a few extra parts, like the radar on top of the wheelhouse, the big spotlight, the life rings, the life raft, and (my all-time favourite extras) six lobsters with four cages and four cases!

JOHN ALIPRANTIS EMAIL

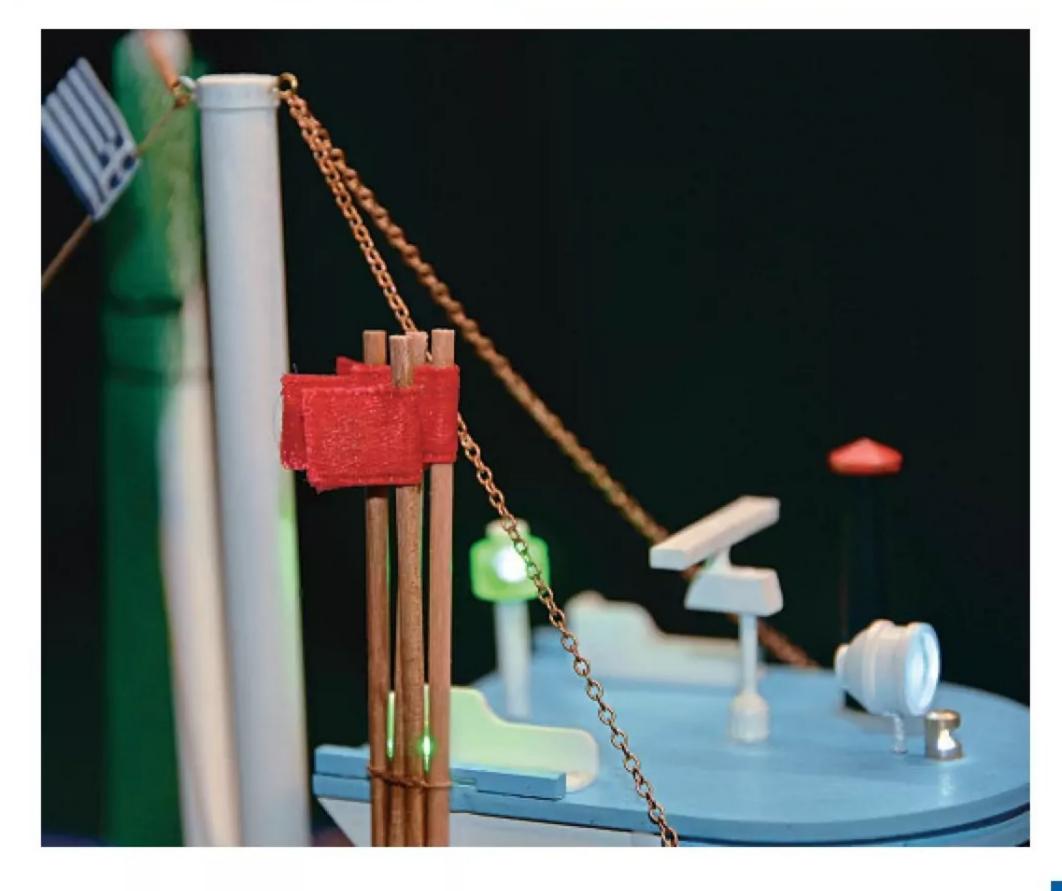
I always love seeing your fabulous builds, and all the little added extras you incorporate into them, John. The perfect reminder to fellow modellers that when it comes to customisation, "The world is your lobster!" Ed.



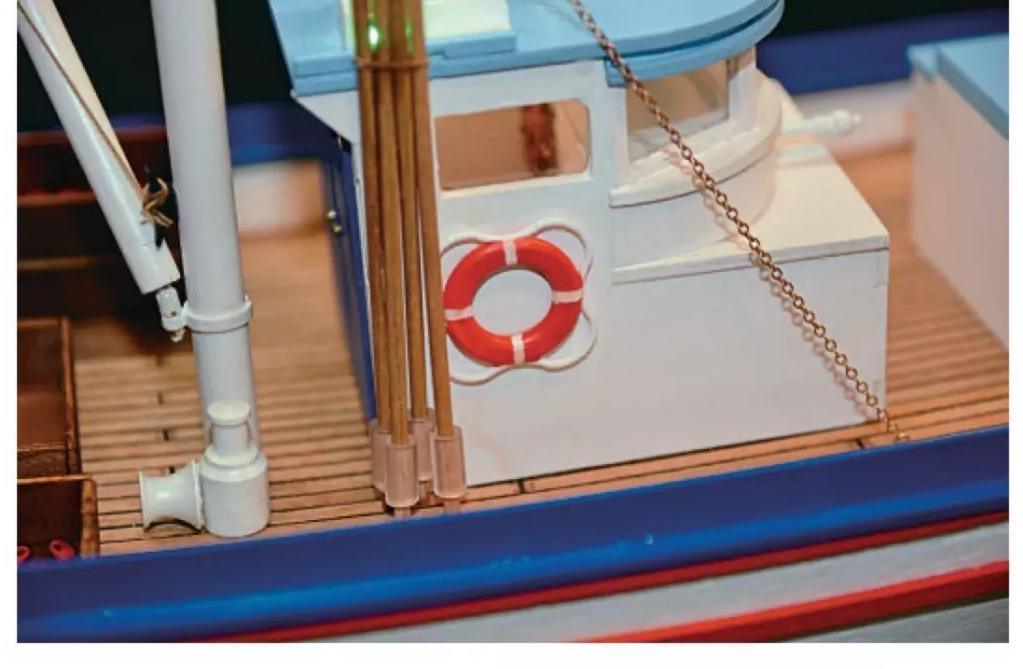


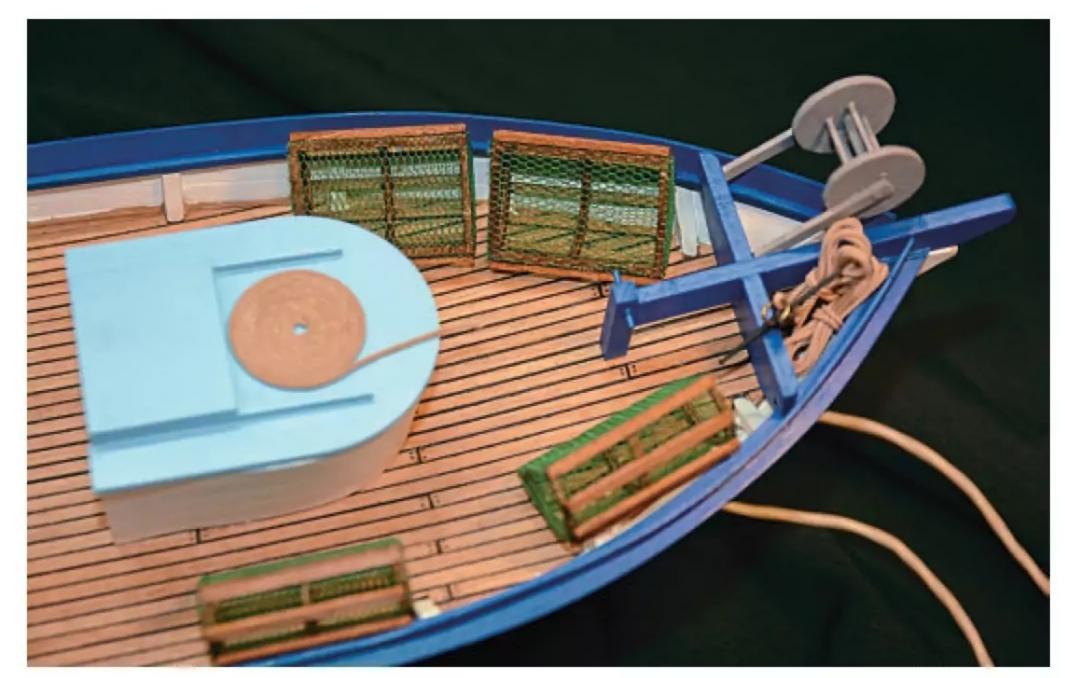


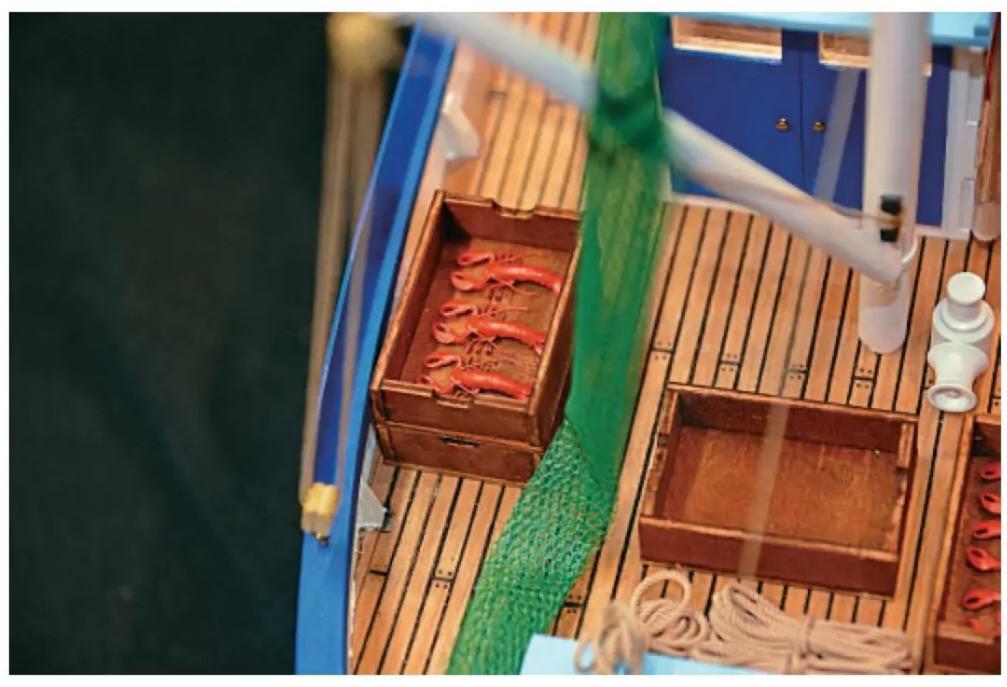


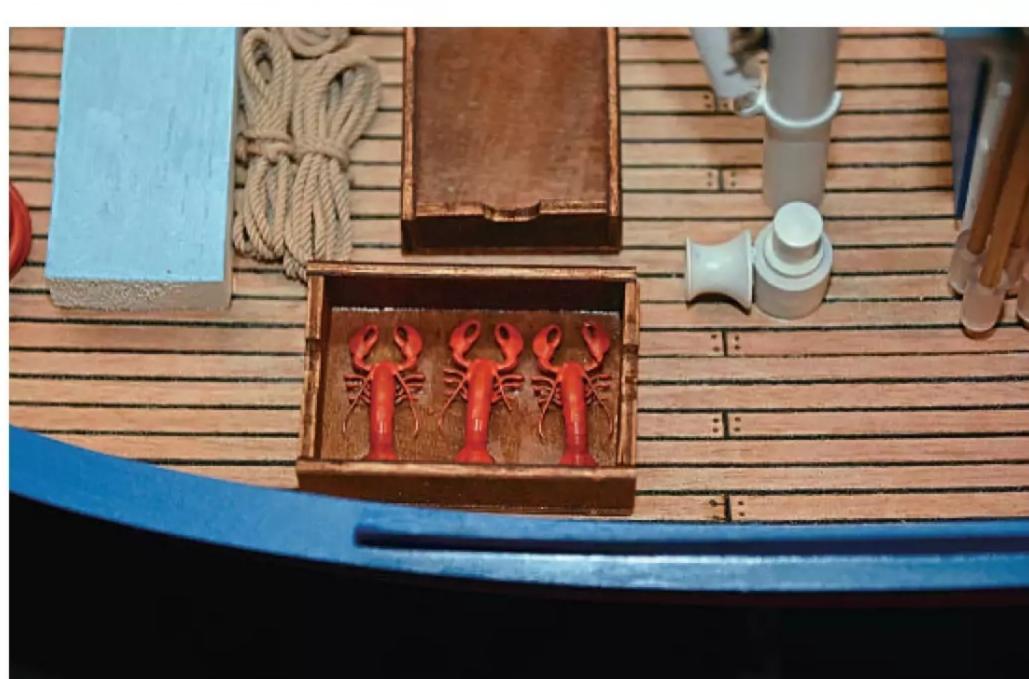


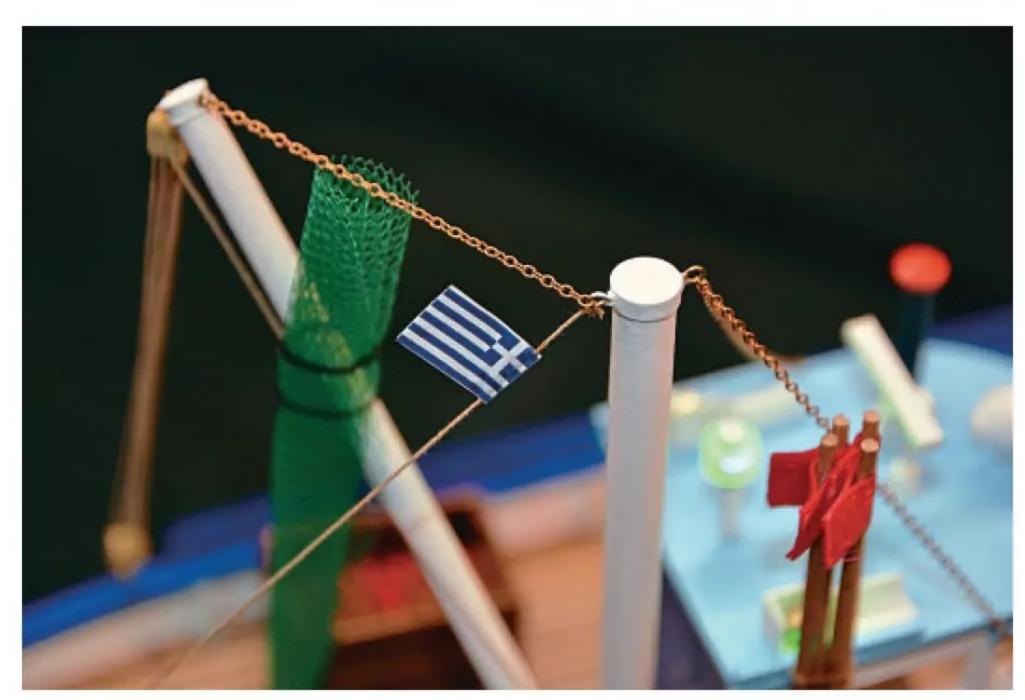
All hands on deck!

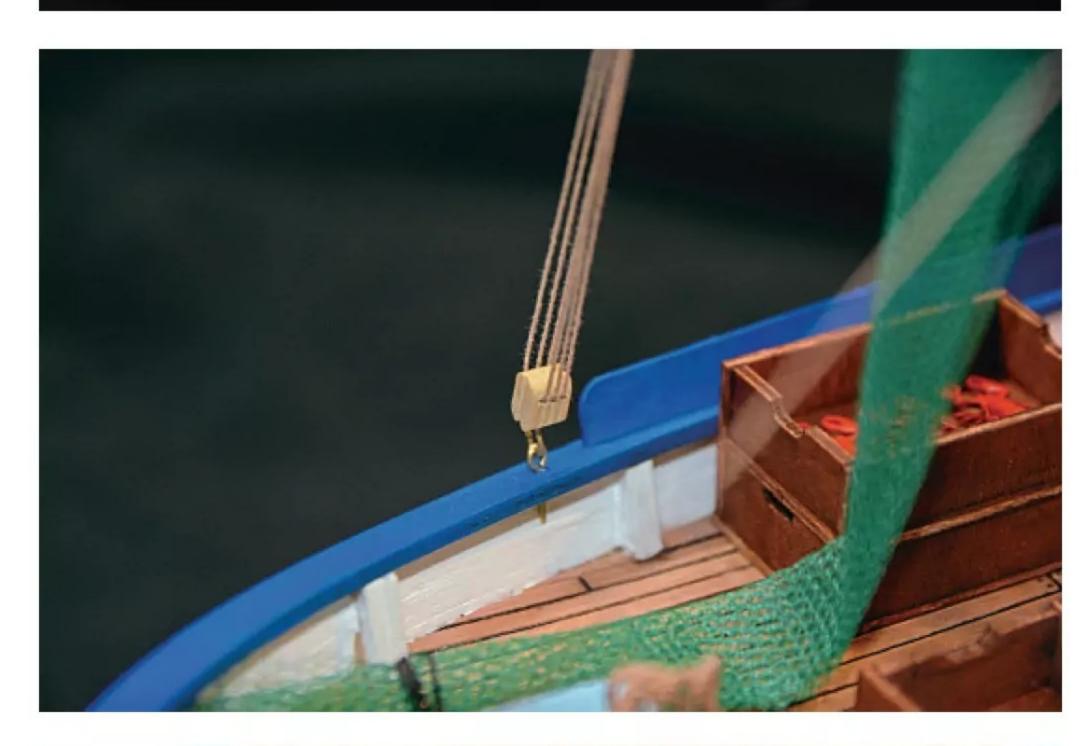


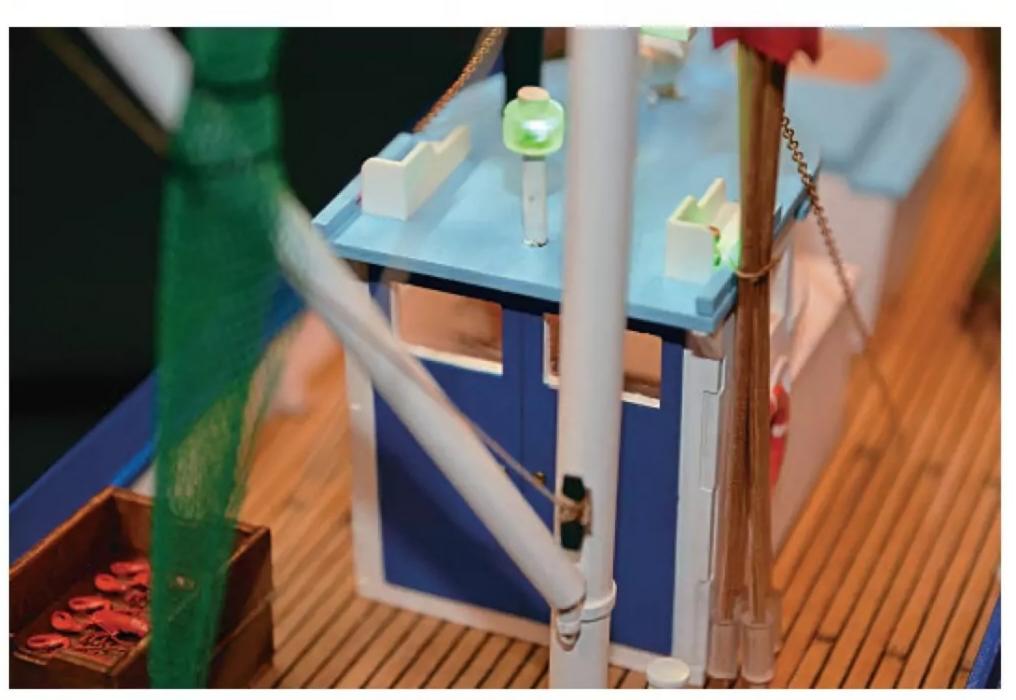














Stiletto M80

Some months ago, I wrote a piece describing my version of the stealth ship Sea Shadow, which was published in this magazine. This caused me to look for other boats in this category. I found the US experimental high speed stealth ship, Stiletto M80, which looked very interesting and, as I thought at the time, would be a simple shape to make. 10 months later, perhaps that was a little naïve; nothing is ever as easy as it might seem at the outset!

The full-size boat has quite a bit of internet coverage, with film footage, etc, available. However, I was not able to find any downloadable 2D plans, so I decided to make my own drawings from photos, etc, and scale those to 1:24 size. It was a bit of a mental exercise, but it worked out quite well.

The boat is intended for inshore work and consequently has a very shallow draught. The model, then, needed to be constructed always with minimum weight as a big consideration. The top speed of *Stiletto* is 60 knots plus with surface piercing propellers. The faceted profile provides a minimum radar signature. It can carry a variety of autonomous aircraft on its upper flight deck (I opted for a Northrop Grumman MQ-8B unmanned helicopter). Similarly,

surface or underwater craft can be accommodated in the space within the stern), or an R.I.B can be an alternative, which can be launched from the stern loading ramp (see pic). These features added to my interest.

So, to work... I needed four props, (two pairs of two), four brushless motors (tank type steering) and four ESCs to drive them, two Li-Po 3,300mAh 11.1 vdc batteries, two fan cooling towers to cool the hard working motors which are buried deep in the stern of the two main hulls (there are a total of five, pentamaran). The idea was to provide minimum hull wetted area, contain the bow wave and combine this with air flow within the hull through cavities, which helps the boat to reach its very high speed. All very clever. These features, along with onboard lighting, rotating radar scanner bar, etc, were starting to add up to what I had originally thought was going to be a simple-ish project. However, like all modellers, we persevere, and my specification resulted in the model as shown.

Sunday, September 14, 2025, saw the model's launch day. The weather was not too bad, with a light wind and occasional showers. I arrived very early at one of my club (Weymouth

and Portland MBC) sailing venues, Mangerton Mill Lake. This early start meant I would have little in the way of an audience, to hide my possible shame, if the boat sank or caught fire. As it turned out, neither fate took place, and I was able to gain enough video film to complete a documentary of the ship's history and the model's construction. The only downside was that the model had very little speed. Plenty of stern wake, which is intentional, but props a bit too far out of the water. Flat out, the scale speed is in the order of 18mph, which I doubt it will ever attain with my setup – we shall see. I think a bit more ballast will help in that area.

Overall, I was quite pleased with the initial trial, and this boat has certainly given me something to think about over the winter months.

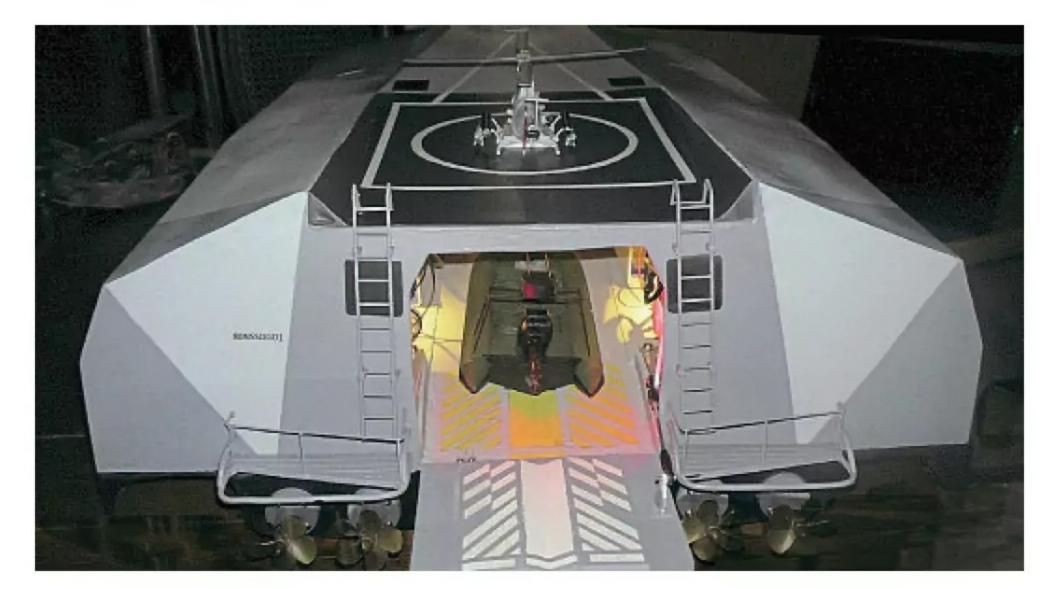
ROBIN SEARLE EMAIL

I must say that having now looked at the image of the full-size Stiletto released into the Public Domain and included here, Robin, you've done a marvellously job of scaling down this beast of a vessel – experimental modelling at its very best. Thanks so much for sharing. Ed.

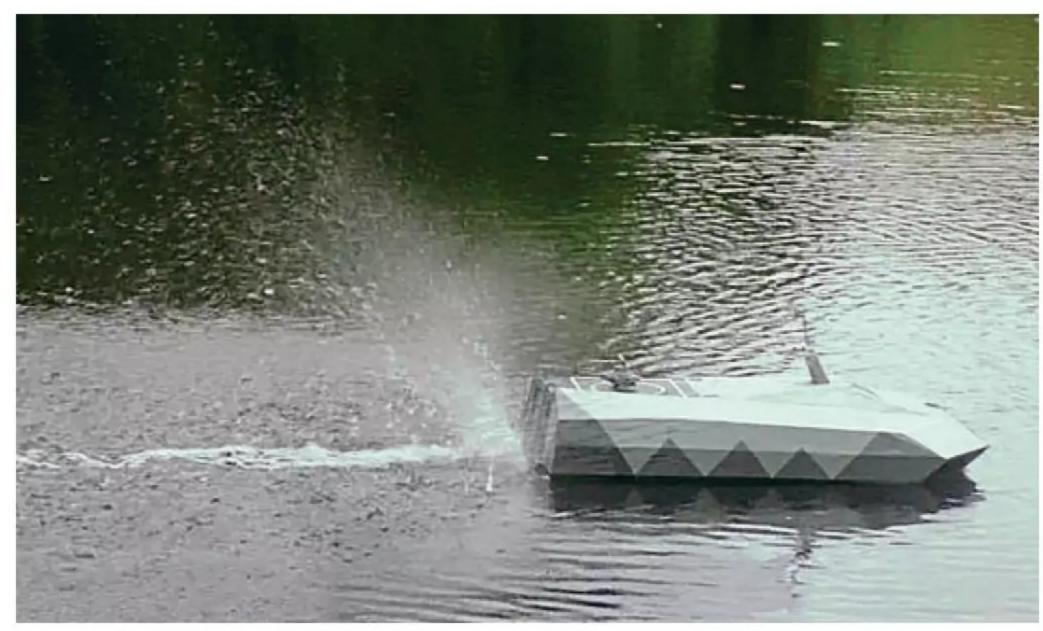


The crew of the Stiletto readying the vessel as it prepares to launch a UAV during Exercise Howler in San Diego on May 6, 2006).









Z Craft and RPL

Many years ago now, I was stationed at 17 Port Training Regiment Royal Engineers, at the existing Marchwood Military Port near Southampton, where I trained on Z Craft and RPL (Ramp Powered Lighters).

The Regiment initially comprised 51 and 52 Port Squadrons. On July 15, 1965, the Regiment transferred to the Royal Corps of Transport. I was stationed in Aden at that time, on a two-year posting working on Z Craft and RPLs.

Z Craft were simple, shallow-draft, ramped vessels, 135 feet long (excluding the ramp), with a 30ft beam and a 2ft to 4ft sloping draft. They had a deck 'the size of a tennis court', accommodation for the crew of 8-10 and a speed on a pair of light diesels of 8-10 knots, with a displacement of 216 tons.

The RPL was a small landing craft with accommodation for six,



Nicholas Leaper's 1:24 scale Z Craft.



The RPL, also beautifully modelled to 1:24 scale by Nicholas.

comprising a tank deck capable of carrying a load of approximately 30 tons. RPL 02 Bude was at Marchwood Military Camp when I was posted there after basic training at Aldershot.

Both models are scratch built out of wood, 1:24 scale (1/2in to 1ft), mostly from photographs taken at the time. Both ramps work (with deck hand figures operating the hand winches on my Z Craft and hydraulic winches on the RPL). All workings are hidden below decks and radio-controlled, plus there are working lights and radar and both models have engine sound systems installed. The hinged bulwarks on the Z Craft also work. Both are powered by Mobile Marine Models, T12 motors plus prop shafts. The props, from Dean's Marine, are contra rotating, while the speed controllers, etc, came from Action Electronics.

Specs for the models are as follows:





Z Craft

Length (including ramp) 78in
Beam 15in
Deck to keel 41/2in

RPL

Length 42in, plus 9in ramp
Beam 11in
Deck to keel 31/2in

I was born in 1945 and enlisted in 1962 for six years' service. It would be interesting to hear from anyone who remembers these crafts.

NICHOLAS LEAPER SOLENT R/C MBC SCALE SECTION

What a very talented modeller you are, Nicholas. To have built these two beauties from scratch with no actual plans to work from is an amazing achievement. Ed.





Your Letters

Got views to air or information to share? Then we want to hear from you!

Letters can either be forwarded via email to editor@modelboats.co.uk or via post to Readers' Letters, Mortons Media Group, Media Centre, Morton Way, Horncastle, Lincs LN9 6JR

Fairey figures

I read with interest Chris Fellows' article in the September edition on the history of the Fairey Marine models and their real-life counterparts. I am interested in both but right now especially the former, having just purchased an SLEC kit for the Huntsman 31 with view to reviving my



The posable figures from the Bruder Farm toy range used by Colin for his Huntsman and Swordsman builds.

model making pass time, which has been on hold for several decades since my teenage years!

One thing which I noticed particularly was Photo 10 on page 24 of the Swordsman 33, which is at the same scale as my Huntsman kit (1:16). In the photo there is a scale figure at the helm. I always think that models look a lot better with some figures, particularly where the helm is open and very visible. I have been trawling the internet to try and find scale figures but to no avail; those that are available are more often than not military figures which are quite inappropriate for this use or are at the wrong scale, or in most cases both! Any advice or suggestions as to how I might be able to obtain a figure along the lines of the one in the photo would be very gratefully received.

Many thanks for the magazine. It's great that such niche areas are still covered.

MURRAY BRACEWELL EMAIL

Glad you enjoyed the feature, Murray. I referred your query over to Colin Bishop, who built the model with figure at the helm you mention, so am sharing his reply (which I have also forward to you via email) as it may also be of interest to other readers.

"I quite agree that they look much better with a helmsman. I used the posable figures from the Bruder Farm toy range for my Huntsman and Swordsman (see link below) https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.farmtoysonline.

co.uk%2fcollections%2fbruderfigures&c=E,1,muu_qdOJzL9zZgHn pXsA3pwxzkhRUHVi7qiODRWoGu3 J3O90jdARKQknfKF4TAG_1R6Sn1H egutiBs-MRu8kkT63G2j1rWYORM7_ D36QbQ,,&typo=1

You can buy these elsewhere. You can also repaint the clothes in which they're attired if you don't like the colours".

Hope this is of help. Ed.

Glasgow Richmond Model Boat Club Regatta

On Sunday, August 17, we (the Glasgow Richmond Model Boat Club) proudly hosted our much-anticipated 2025 Annual Regatta Day. The event has become one of the highlights of our club calendar, and this year proved no exception.

The day turned out to be much hotter than anyone expected — unusual for Scotland — and the sunshine only seemed to bring out more visitors and modellers, who gathered to join us in enjoying a day full of activity, friendship, and of course, model boats!

The park was filled with an impressive variety of models, both sailing and showcased in the display area. Each model reflected the dedication and skill of its builder, drawing admiration from both modellers and members of the public alike. We also had visitors from Oban, who bought with them two large and very well-made models of the MV *Isle of Mull* and the TS *King George V*, both in 1:32 scale and about

9ft long, which looked magnificent on the water!

A first this year was the introduction of our Old School Boat Display, featuring some superb classic models, some of them over 40 years old. A number were still sailing smoothly, while others are currently under restoration. Each boat told a story, reminding us how model building can connect generations within families.

The competitions went ahead successfully, with plenty of excitement and friendly rivalry. Our judges and participants ensured the events ran smoothly, and the audience enjoyed watching. The Steering and Docking competitions were well fought out, both for 1st place and for the highly coveted 'Room for improvement' award. Astonishing us all was young Adam Duffy; not only was he moved up to the adult steering competitions when we realised he far more capable than any of his peers, he then went on to win the overall event!

Beyond the competitions, we made sure the Regatta had something for everyone of all ages. Whether people came to compete, admire the models or simply enjoy a day out in the park, our aim was that nobody left disappointed — and the feedback we've received suggests we succeeded in that goal.

All in all, it was a strong and enjoyable event, and we're thankful to everyone who attended and contributed. With each year, our Regatta Day continues to develop, and we're already looking forward to next year's event, aiming to make it even bigger and better.

COLIN MILLER GRMBC SECRETARY

Thanks so much for sharing this report and all the lovely photos taken on the day, Colin. Congratulations to everyone involved in organising what was clearly a wonderful day – even the weather gods smiled on you – and, of course, to Adam! Ed.



A perfect setting for a regatta, the Glasgow & Richmond MBC's beautiful boating pond and clubhouse.



The harbour built by club members getting plenty of use.



Just one of the models drawing plenty of attention was this super little tug named Thor.



Bravo to young Adam
Duffy, who was not
only moved up from
the junior to adult
steering competition
but then astonished
everyone by going
on to win the overall
event!

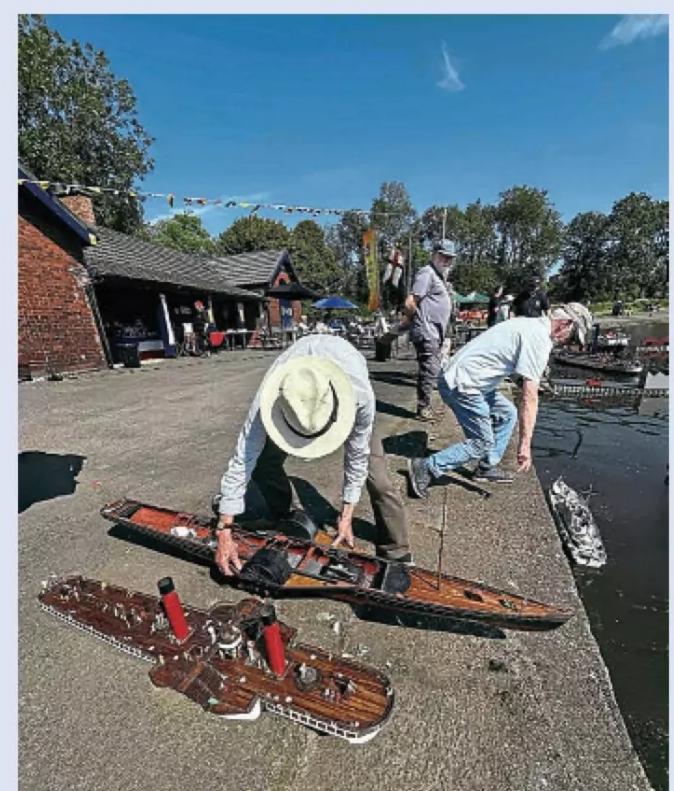


As well as sailing demos, a static display allowed visitors to closely inspect some superbly built models.





Having made the journey all the way from Oban, these two huge (1:32 scale) beauties, the MV Isle of Mull and the TS King George V, looked magnificent on the water.



Preparing to set sail.

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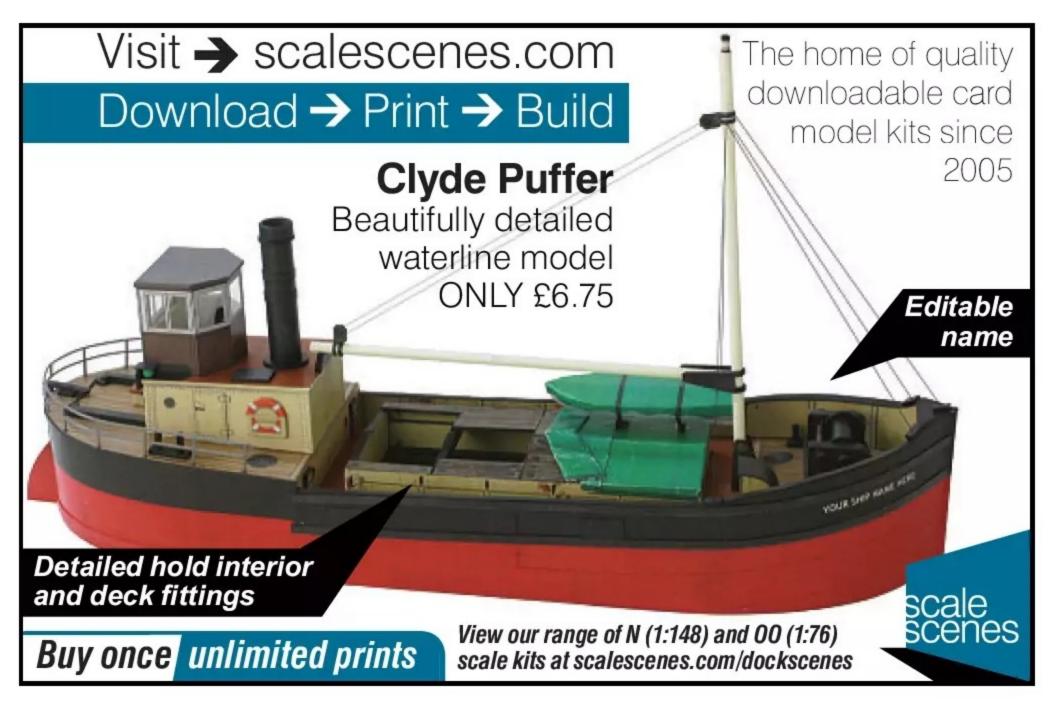
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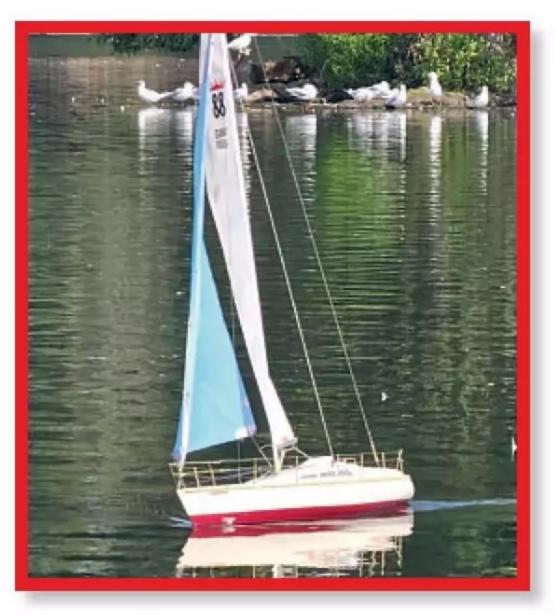
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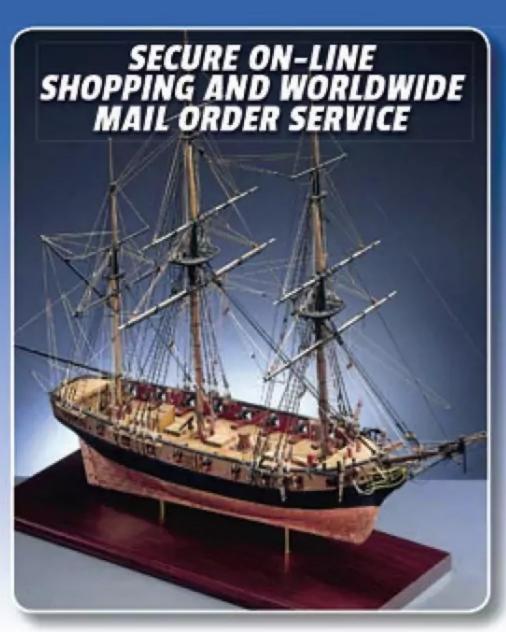


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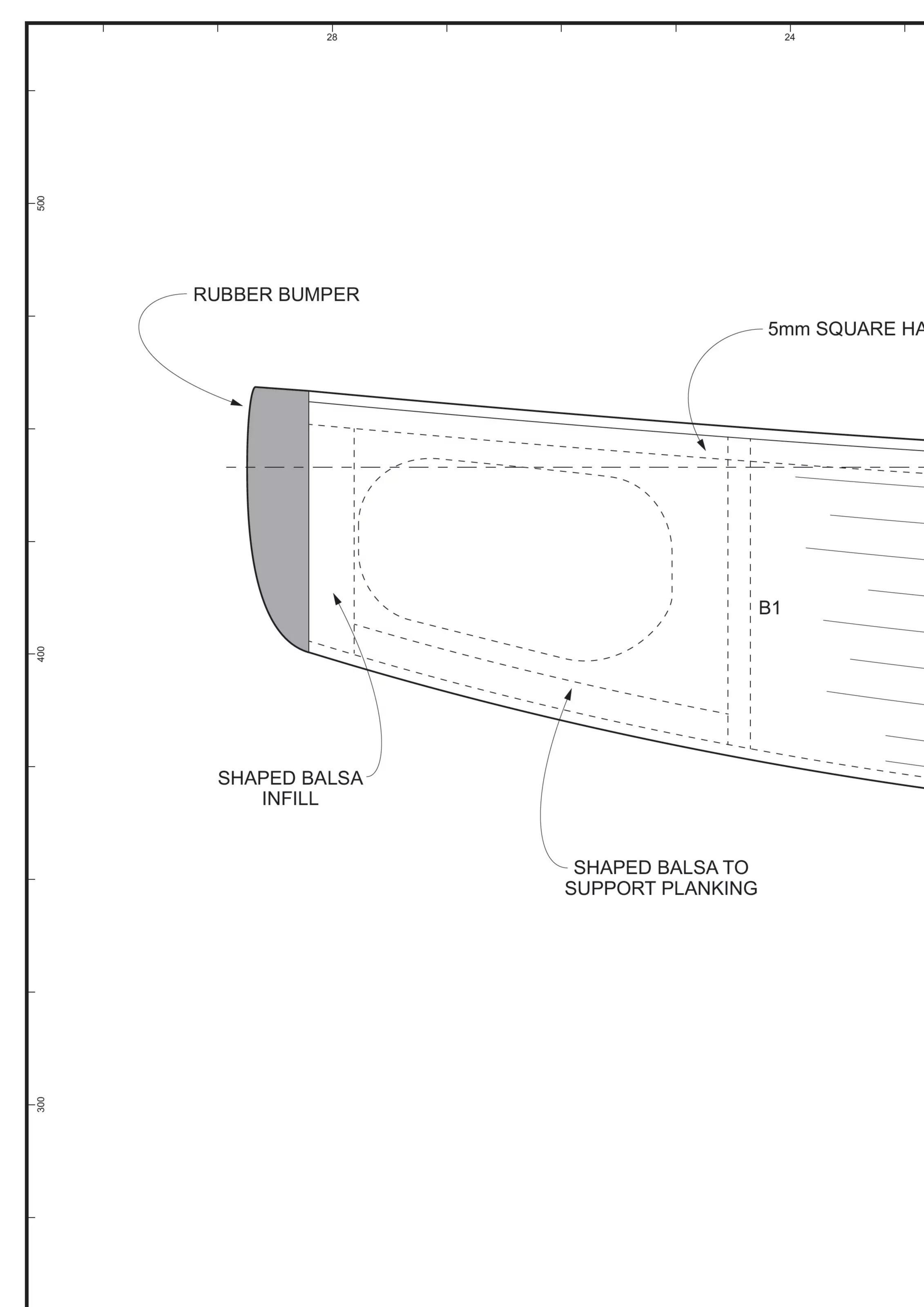


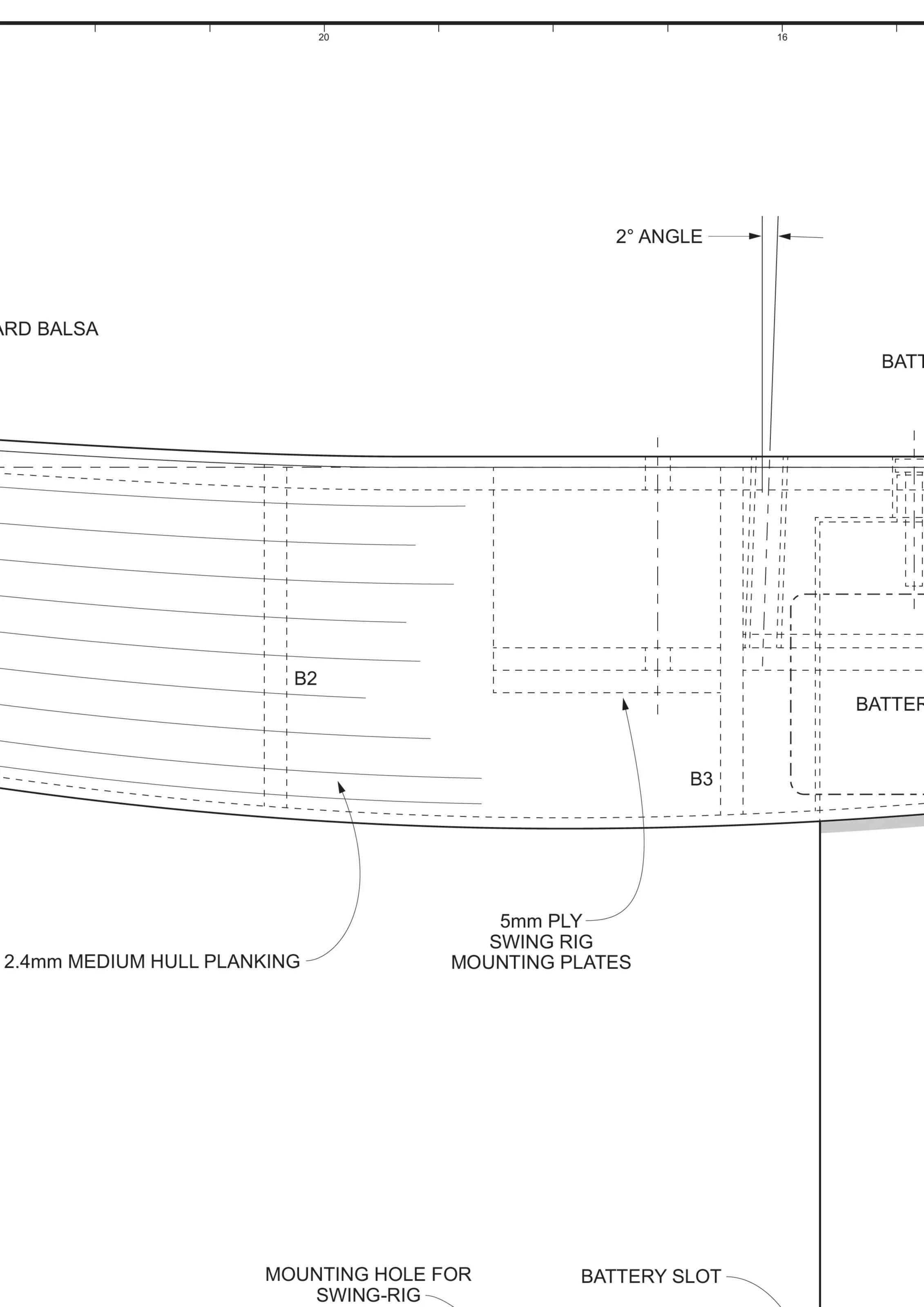


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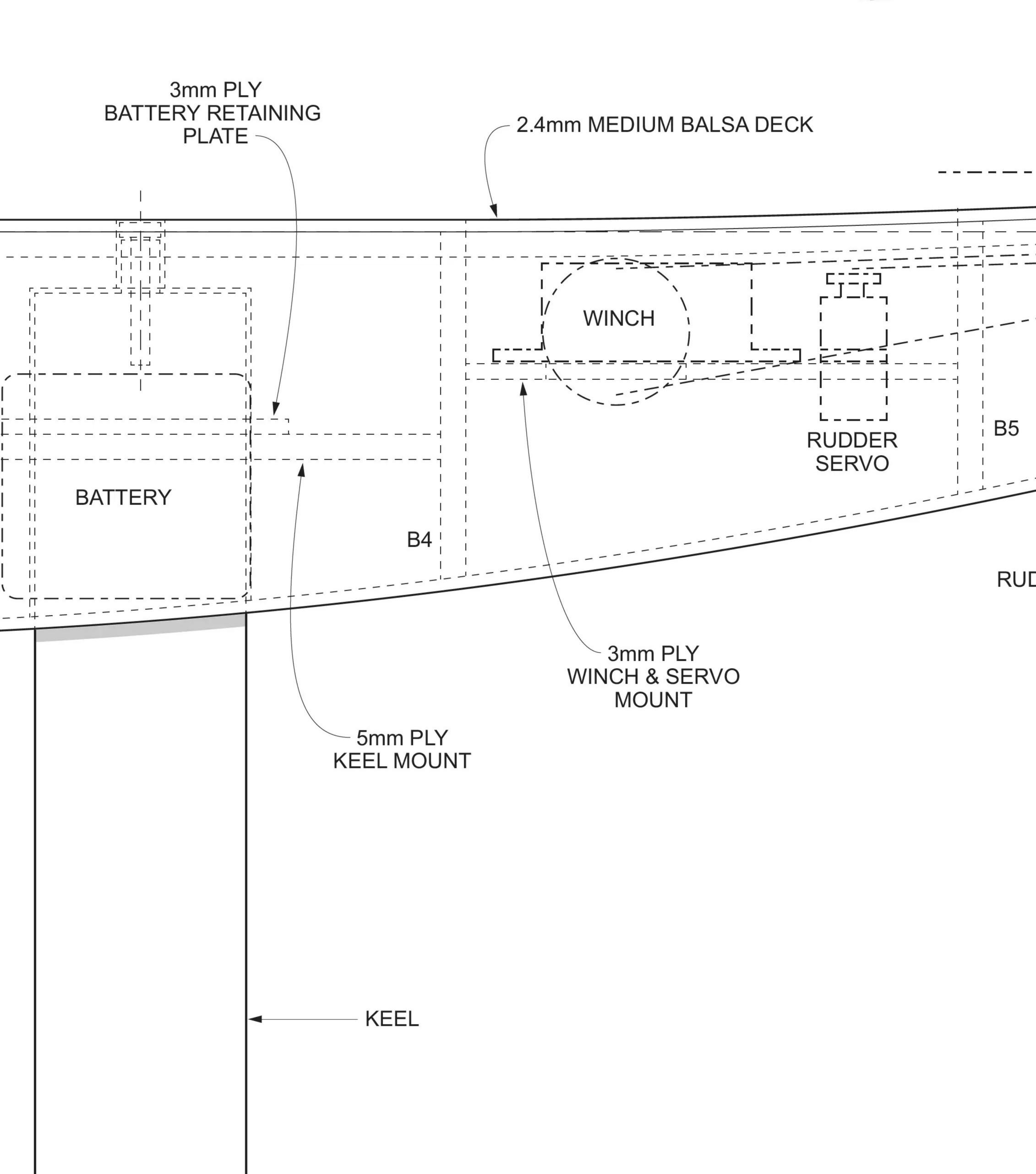




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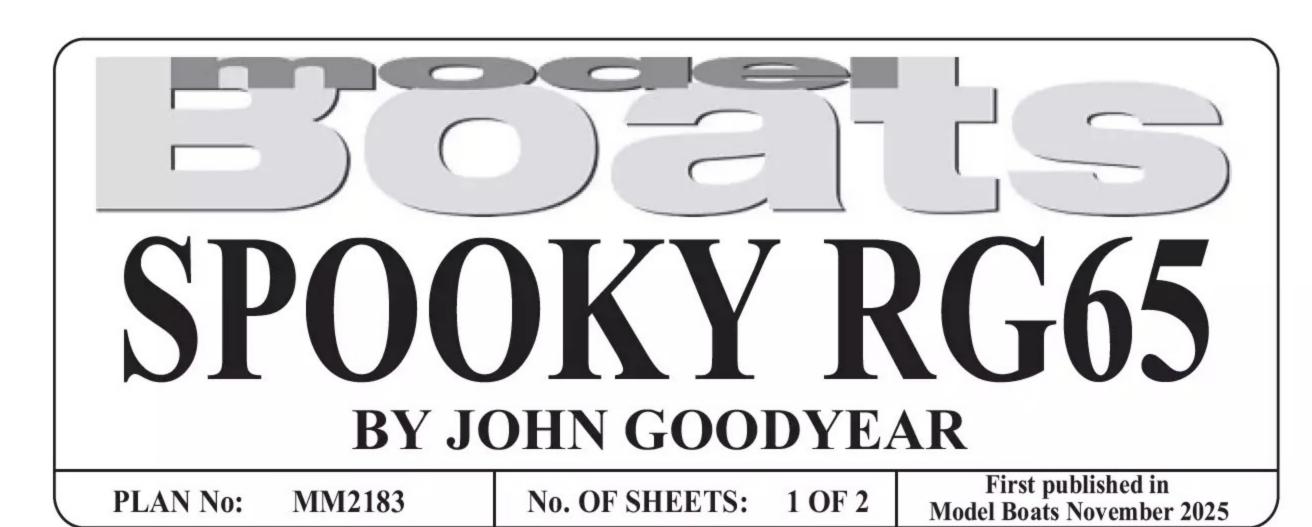
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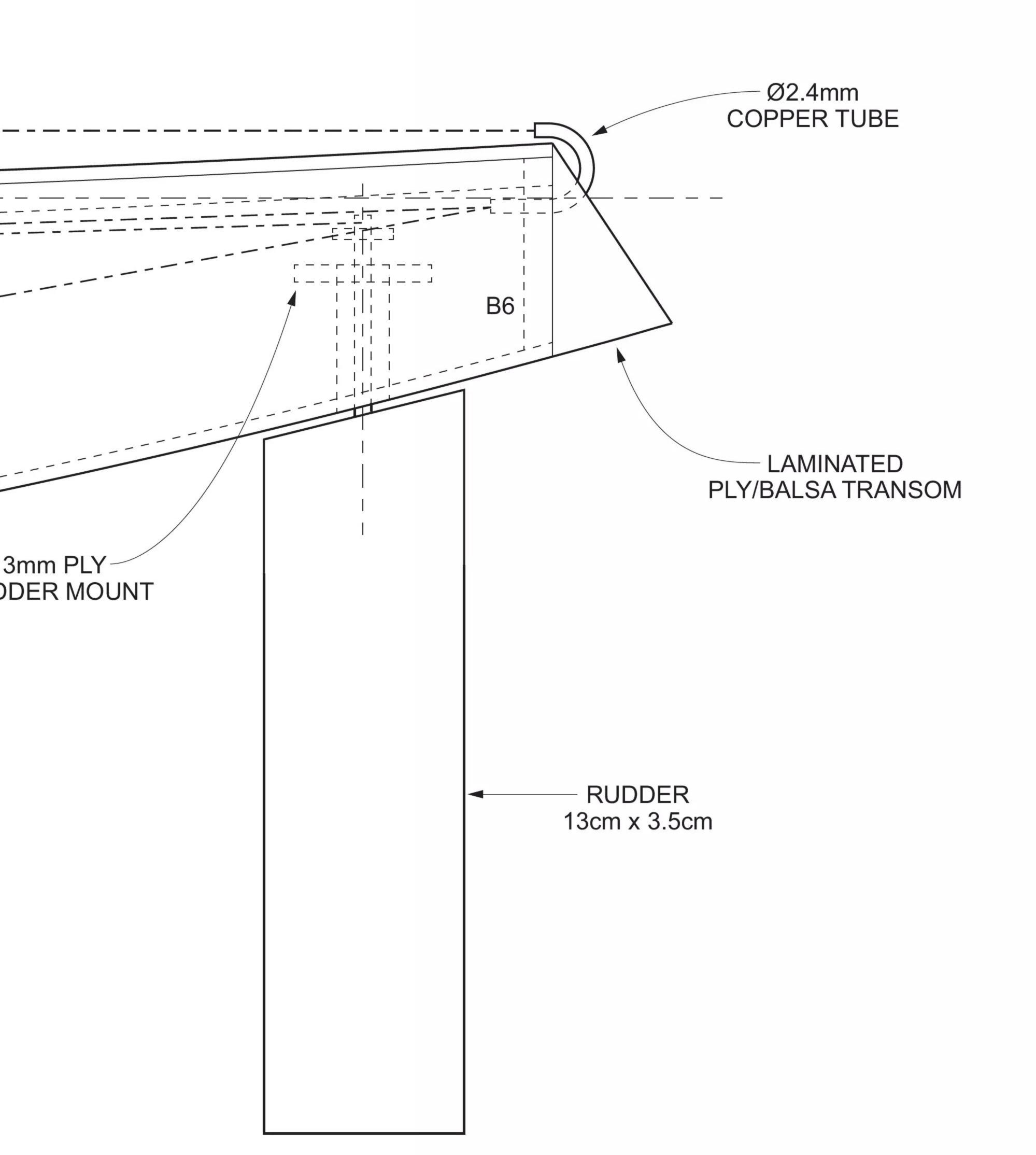
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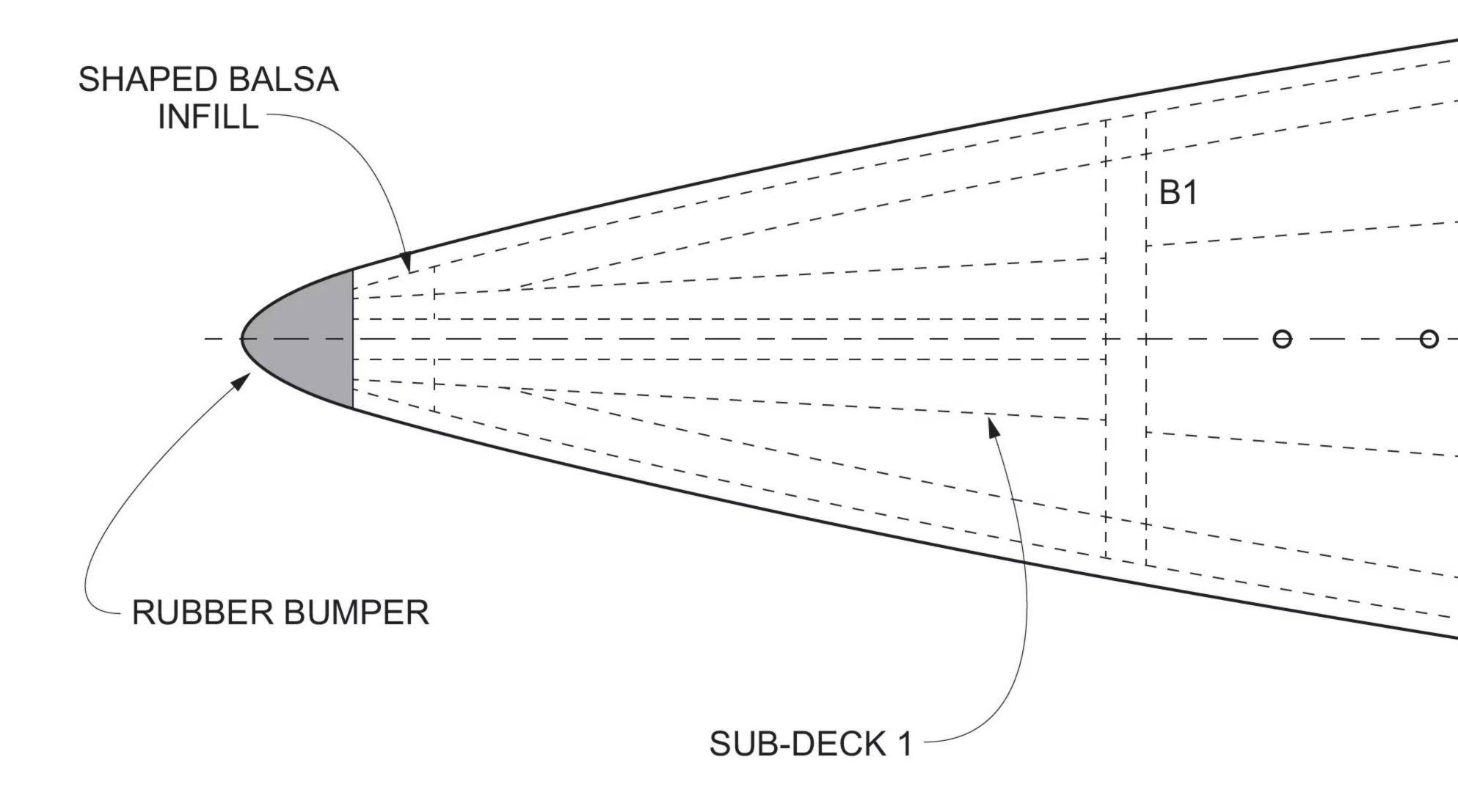
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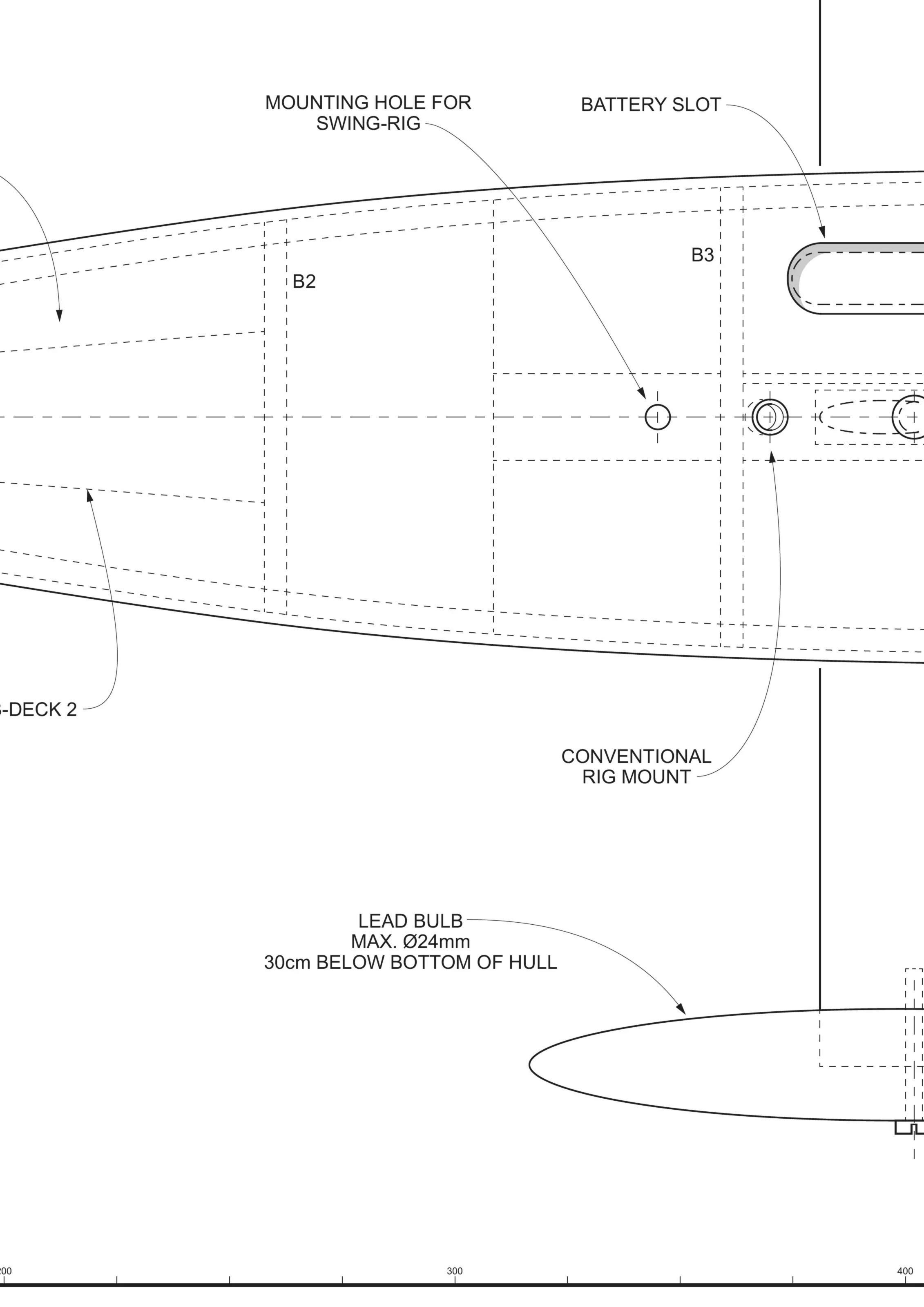


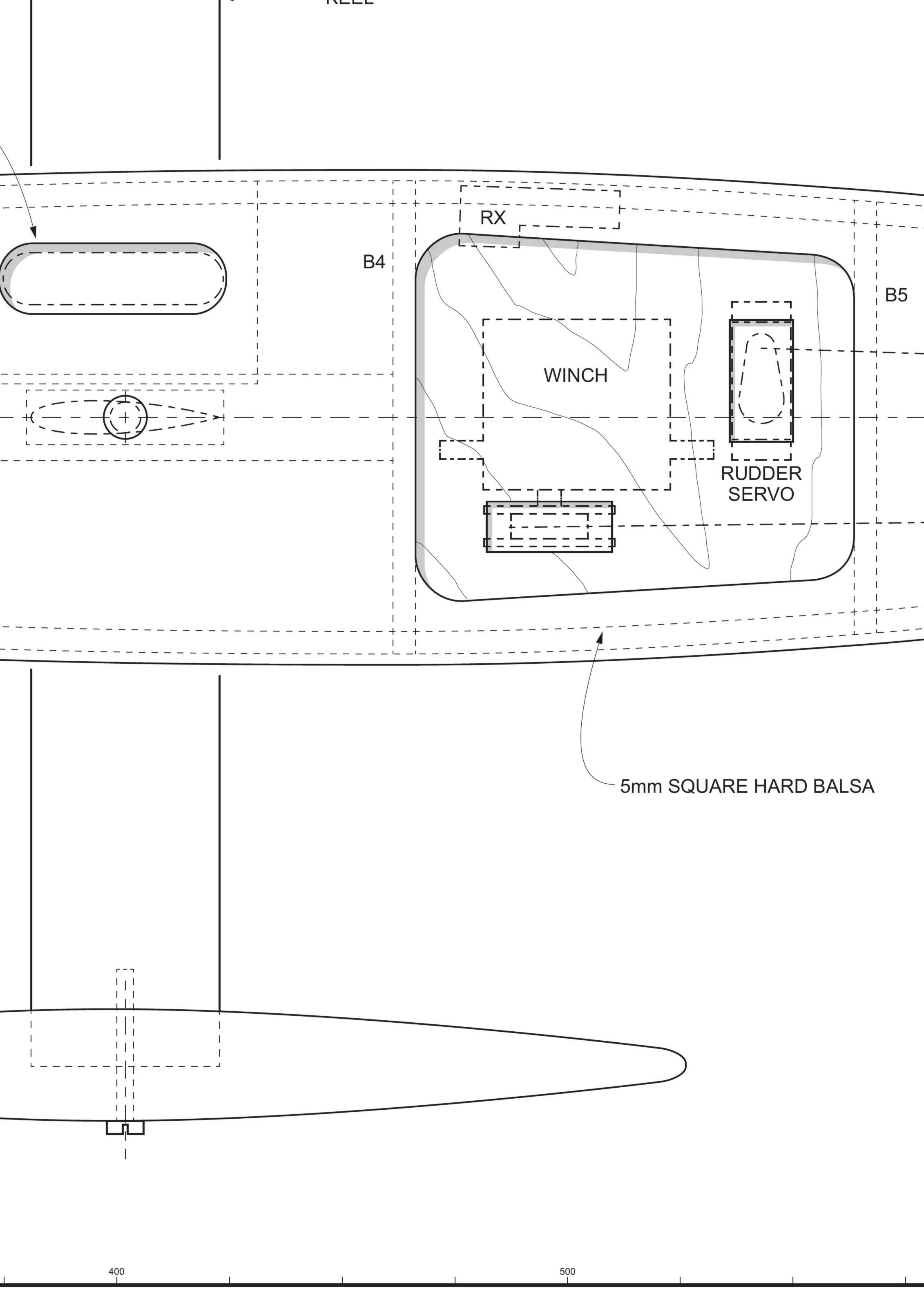
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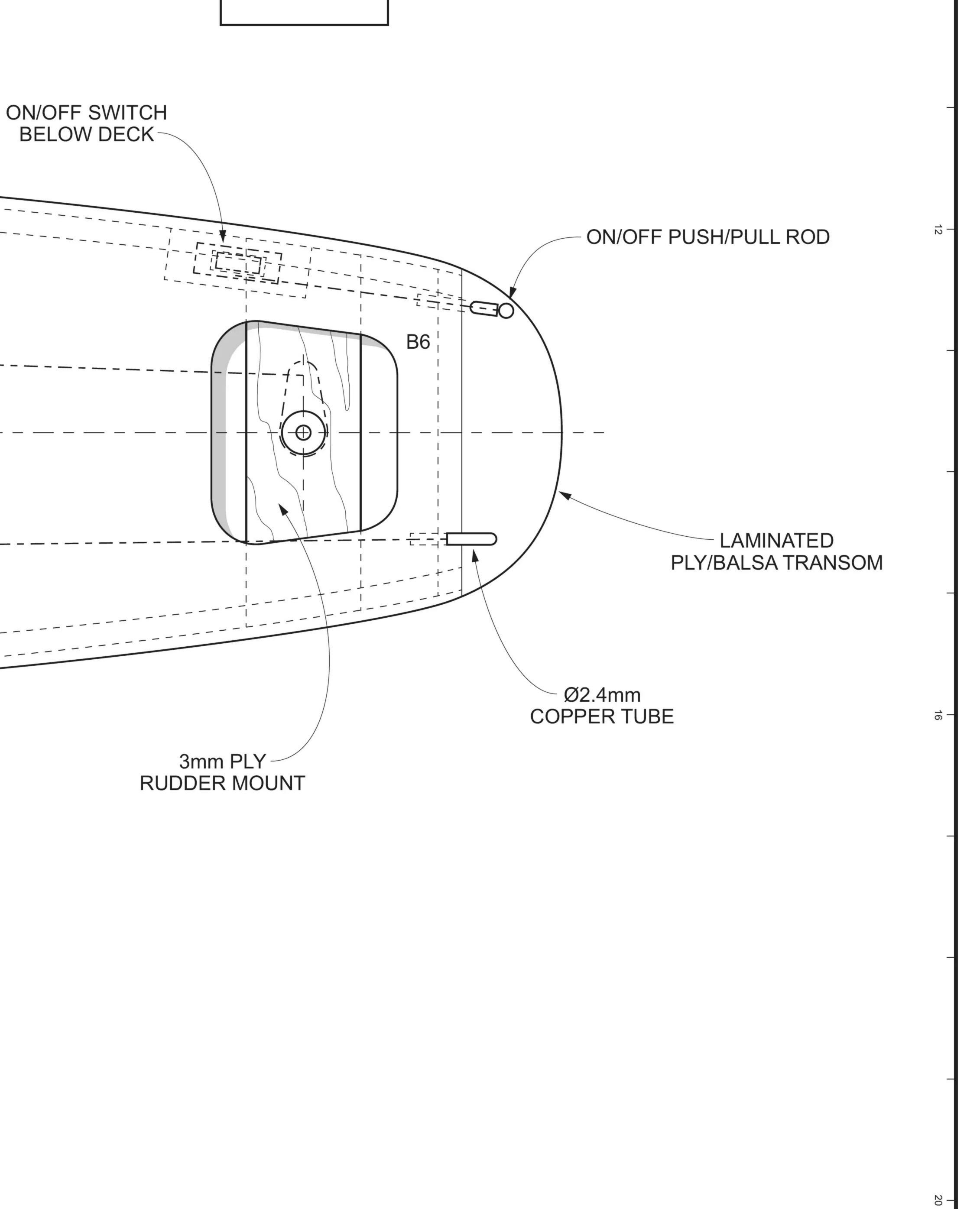


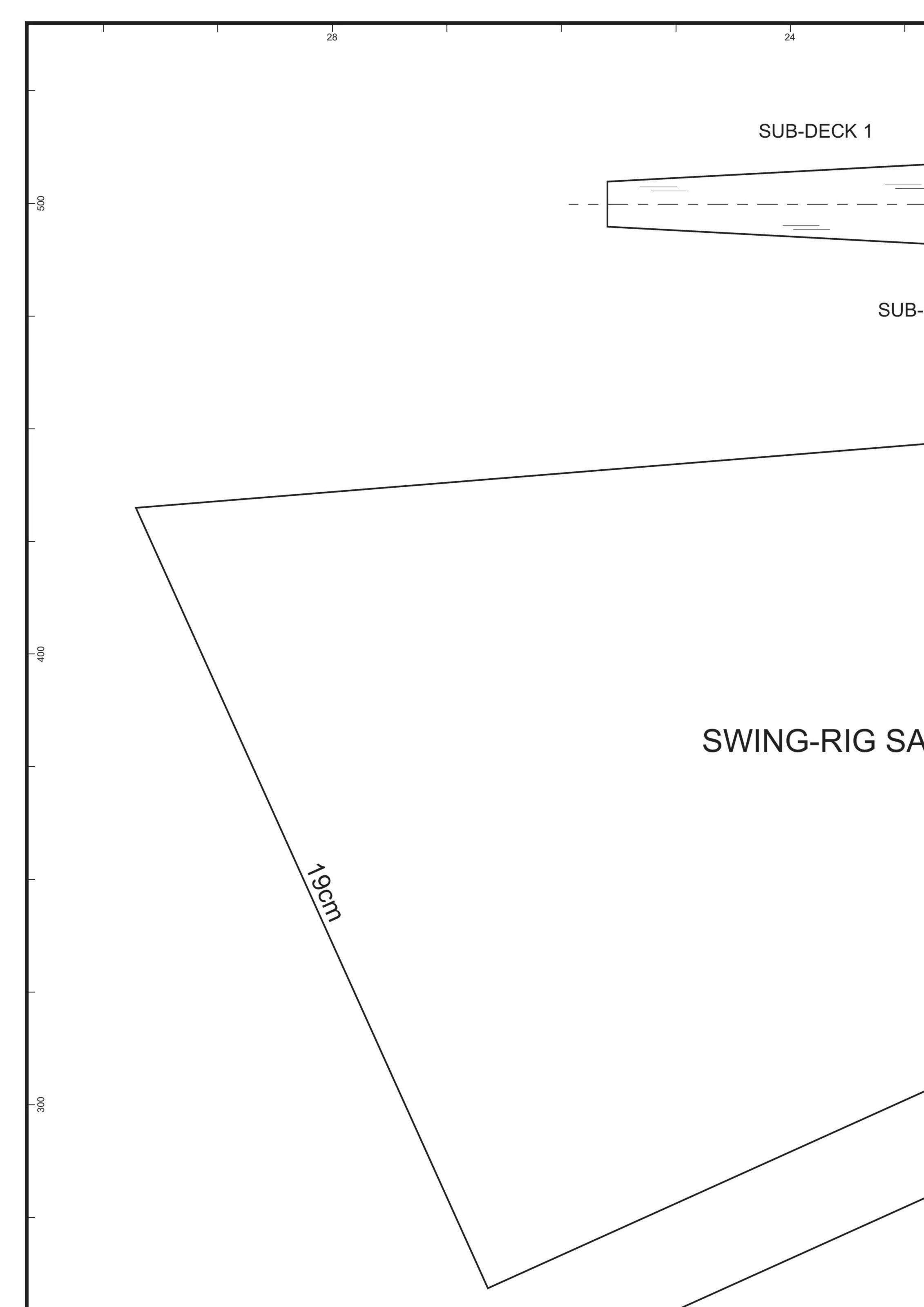
SUB

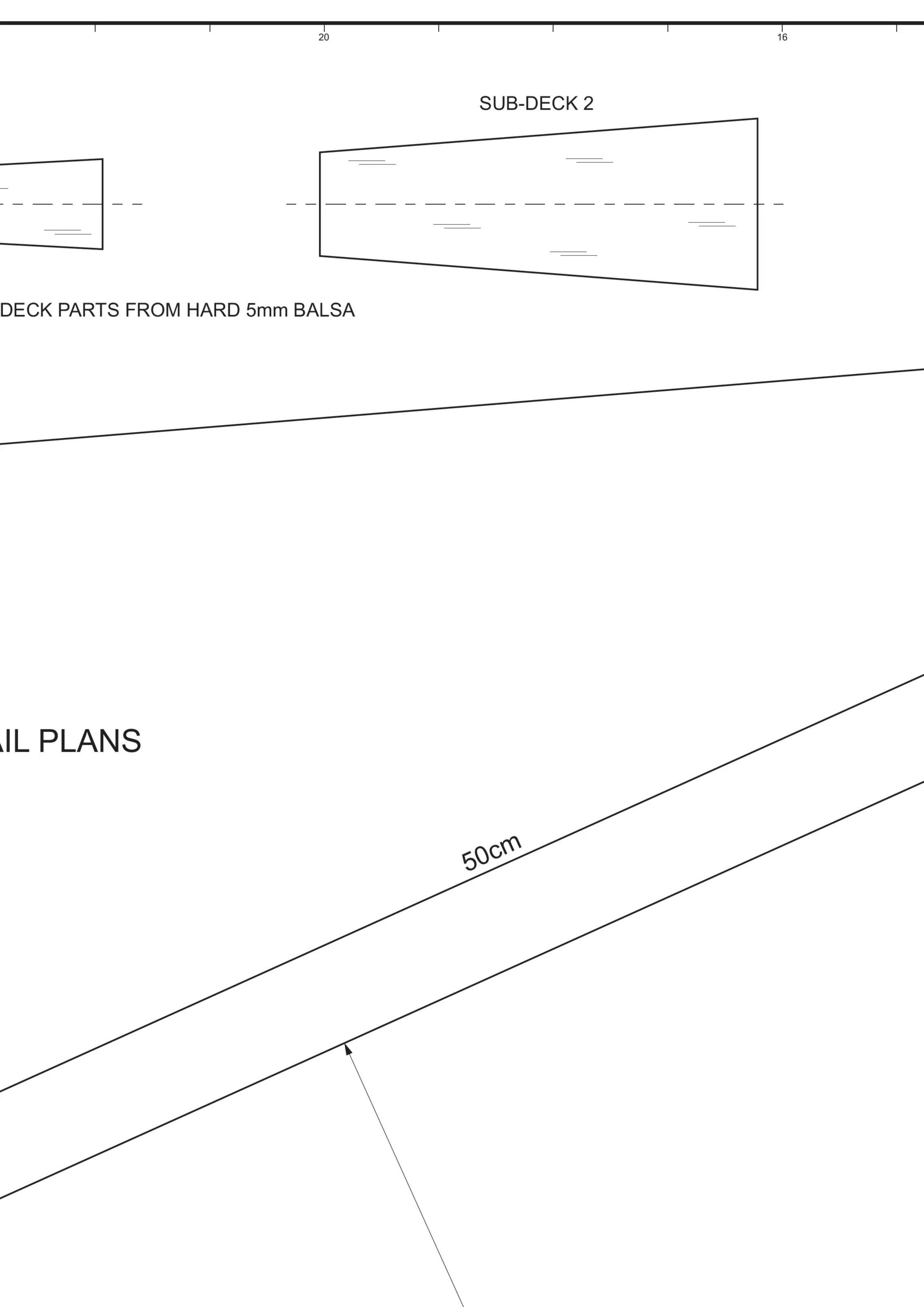
SCALE MM

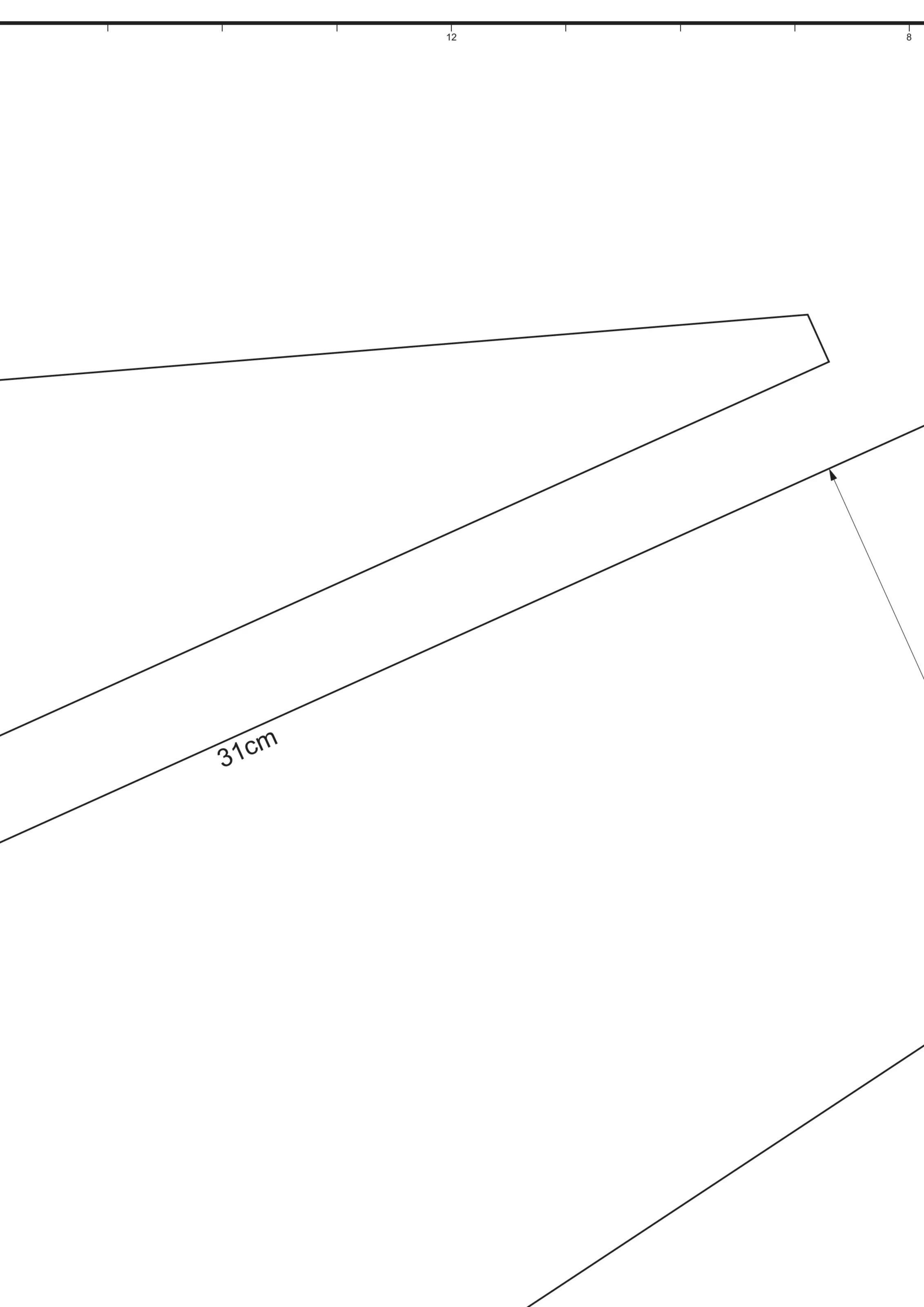


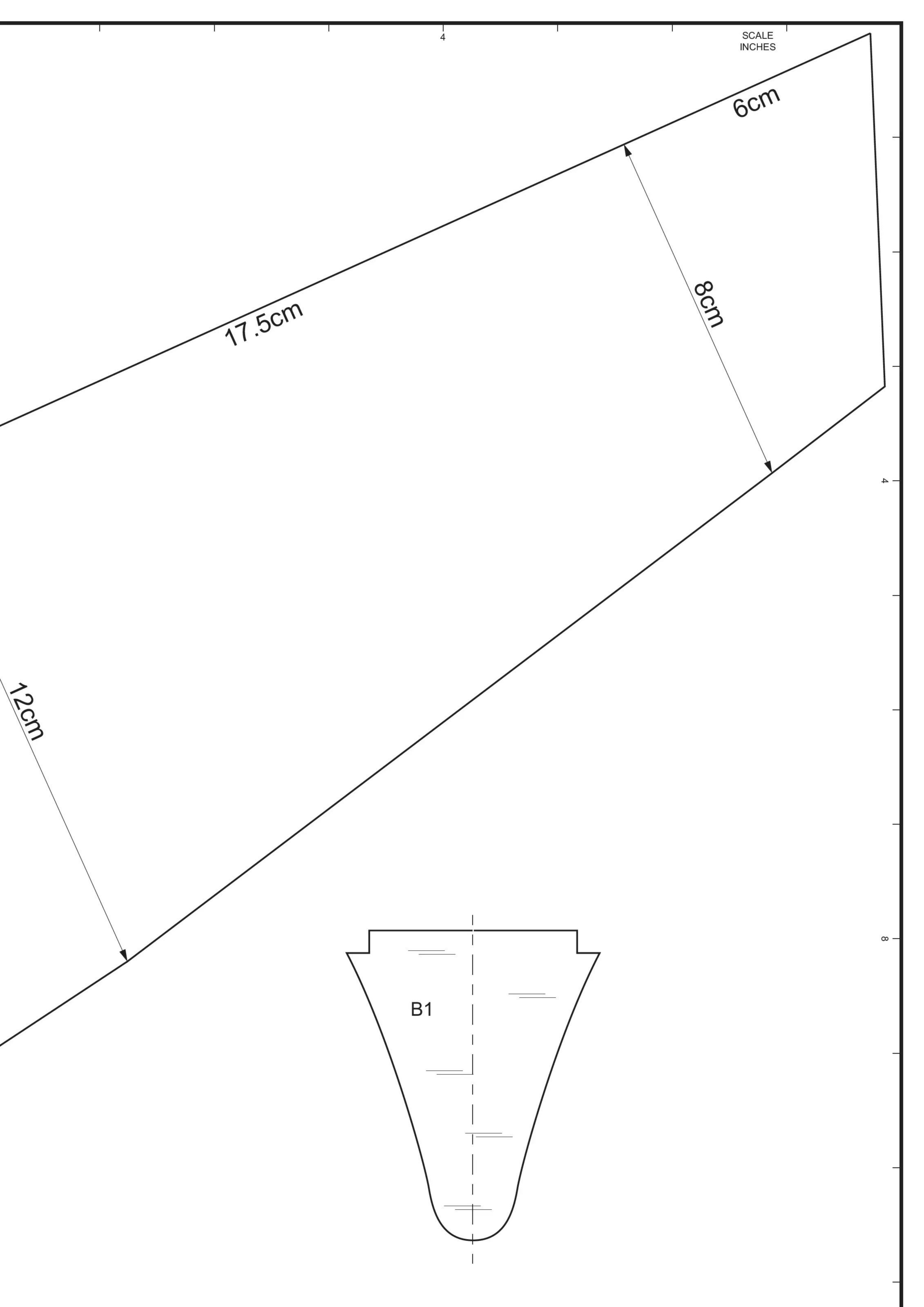


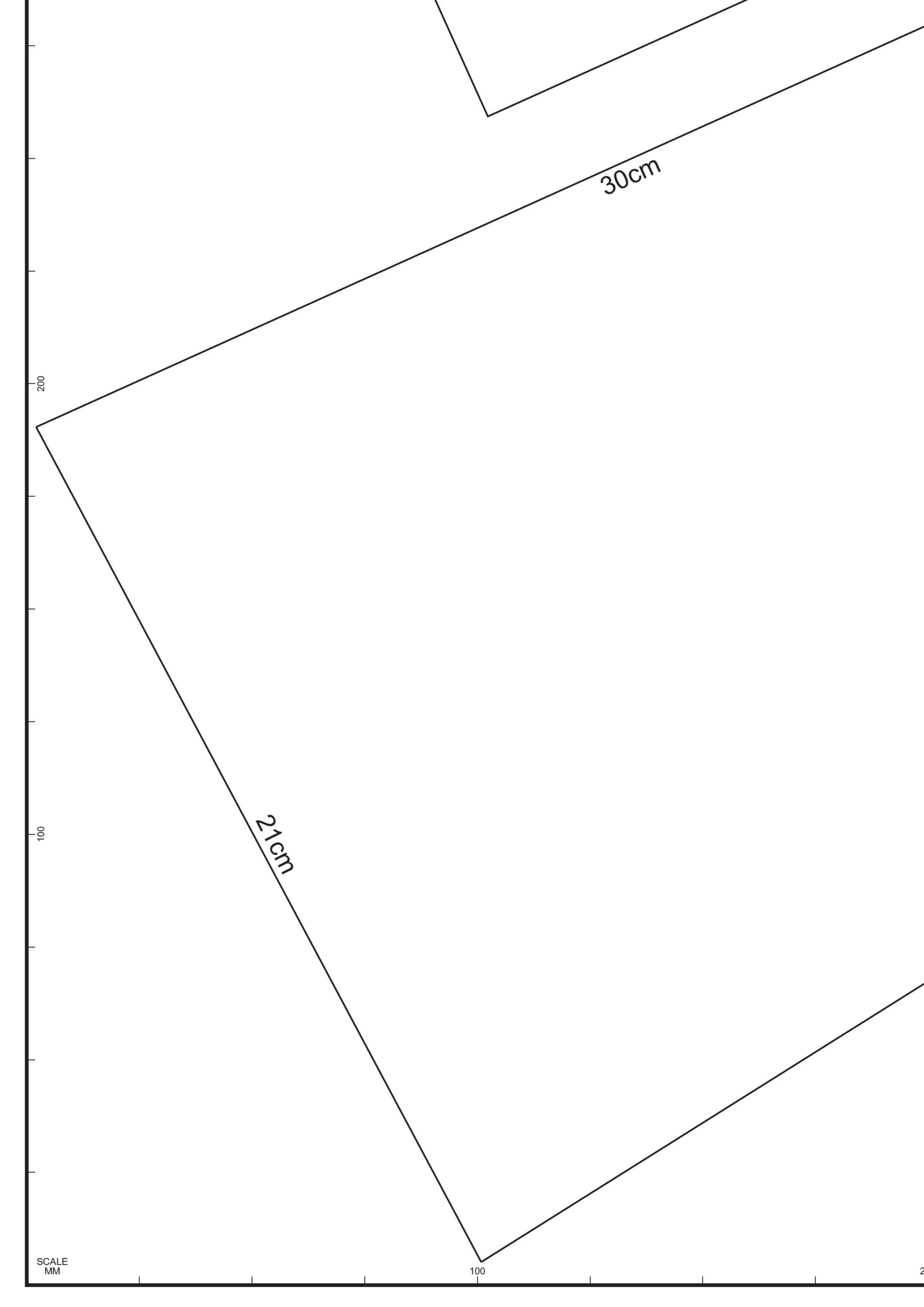


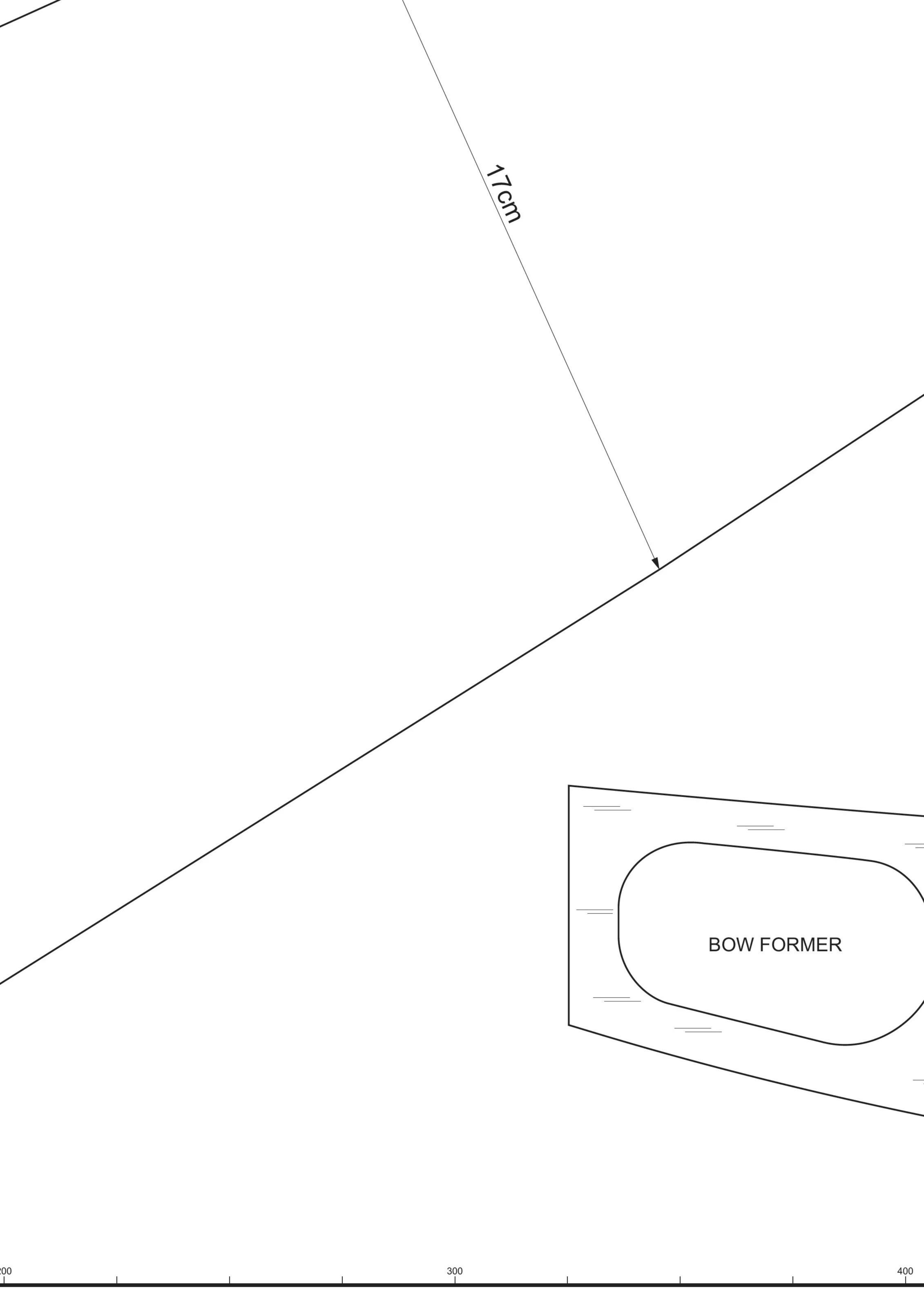


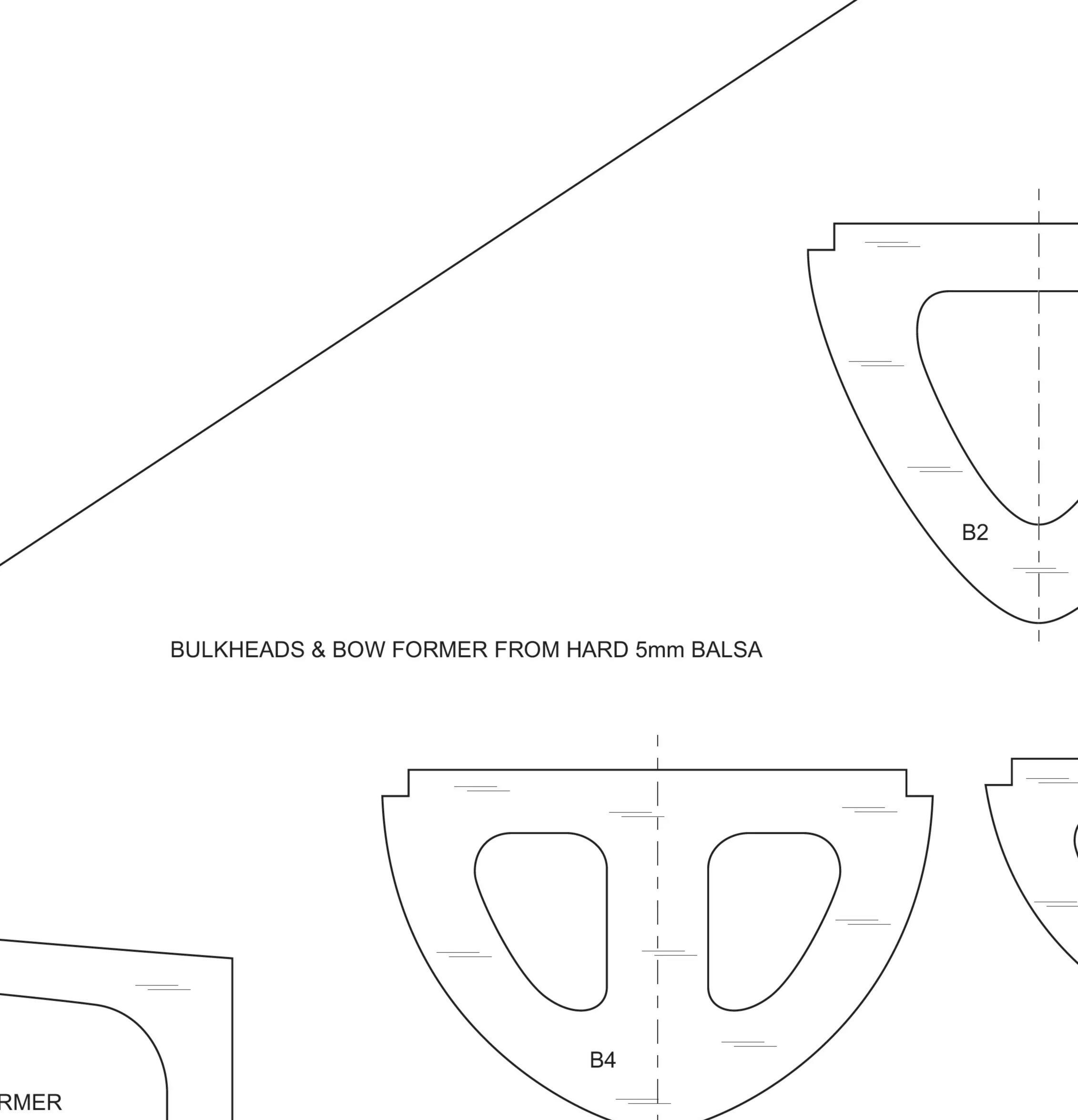






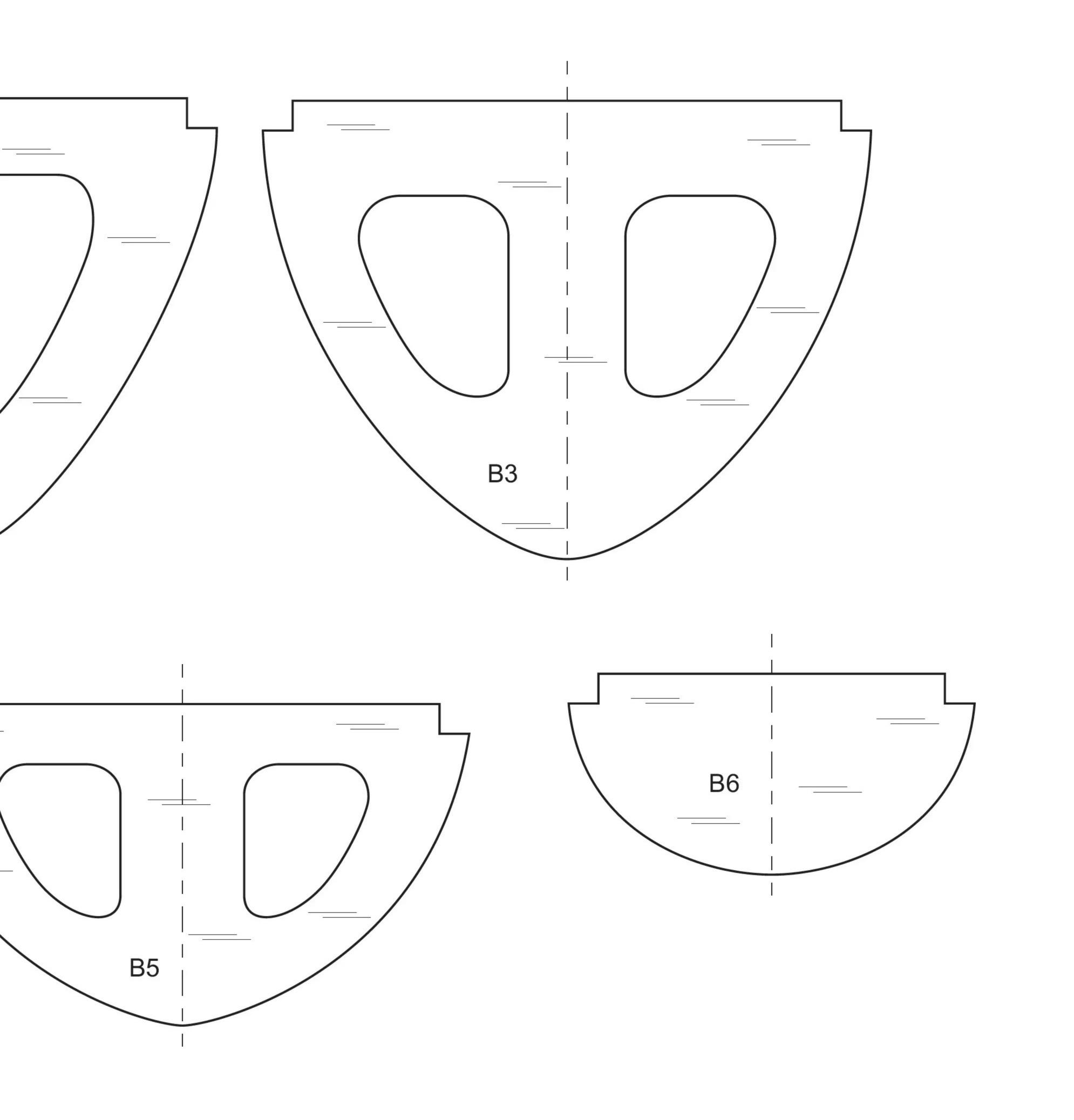






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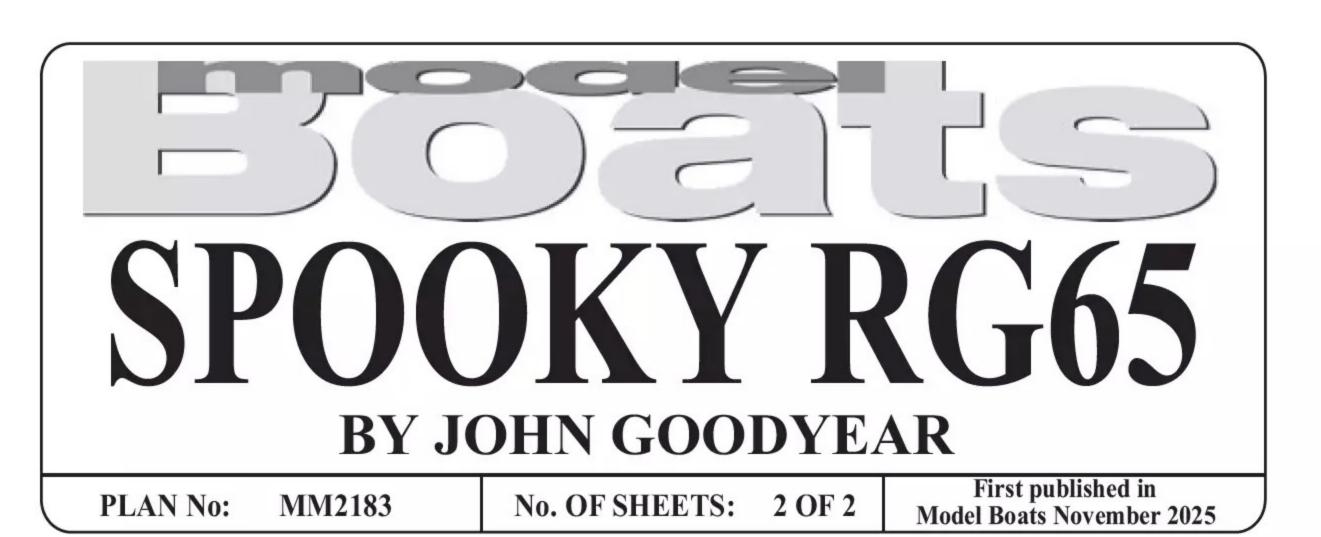
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