TRANSLATION LINKS

1. type into your browser ... **english+italian+glossary+nautical terms**
2. utilise the translation dictionary 'Nautical Terms & Expressions' from Euromodel website

Essential Resources for the Falmouth

July 2020

This resource information file was based on the original text supplied by Euromodel and then expanded in detail as the actual ship was constructed by the author, Peter Coward.

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Falmouth

18th. Century English Mercantile Vessel

Launched 1752

Scale 1:75

[To navigate through the contents – use 'control + click']

Contents

Illustrations

[The figures below are not hyperlinked]

Euromodel Preview

Euromodel kits are based on sets of drawings by a naval architect and contain a comprehensive amount of detail that are a challenge to the serious ship modeller.

This is in contrast to most other kits that whilst they also contain excellent plans, the intention there is to achieve a build matching the plans provided.

Euromodel offers plans with an incredible amount of detail not seen in other commercial kits. This respected company has provided sufficient material in the kit to build a basic form of the ship but a full interpretation of the plans can easily lead to a full scratch build.

Whilst *all* plan drawings are important to the construction of the Falmouth, the builder is well advised to focus on three – Plan Sheets 1, 2, 3 and especially 5

It could well be argued that *the build outcome is somewhere on the continuum between a standard model construction and a scratch model*. How far you wish to extend this continuum is up to you and your build of this ship will be determined by the degree of complexity you choose.

The kit material will go a long way towards achieving a good model but be aware that the purchase of some extra material might be necessary depending on how far you wish to go in emulating the plans. There will be little left over from the kit contents, but during the construction you should experience a compelling drive to create something better than the basic model. Thus the Euromodel plans – unlike plans from other commercial kit companies - cannot be taken as a set of prescriptive drawings that the modeler must emulate.

Euromodel provides just the basic material needs and leaves it up to the modeler to determine how far he will extend his skills. In this build, I certainly added extra material and did alter some components.

In summary, then, the build is a very fluid process allowing for a wide variation in the final outcome.

Chapter 1: INTRODUCTION

Historical Notes

The Falmouth was launched in Blackwall, England in 1752. It was the first trading vessel of the English East India Company and showed a close resemblance to a warship in sail plan and rigging, with the most up-to-date reef-points to her topsails The ship was equipped with a large amount of artillery, unusual for the trading vessels of that period. In that she was run along the lines of naval discipline was due to the fact that the vessel could sail alone without any convoy ship, since its rich load was a good bounty for all the enemy vessels and pirate ships.

Figure 1: Finished Model of the Falmouth

The Falmouth could easily combat a war-ship of the same tonnage, thanks to its crew of 180 experienced men including the best trained gunners. The superiority of the crew was partly due to the incentive granted to each gunman allowing each individual to transport his own 5 tonnage of goods there and 2 tonnage back. These goods were usually sold as smuggled goods to the black market. The Falmouth was of 499 tons and was in service until 1764 completing five voyages for the East India Company. She was eventually abandoned at Batavia (modern Jakarta) in Indonesia after a battle in Manila in 1766.

An unusual feature of this ship is the *ponte la sole* ('sun deck') which is thought to have been added during her time in Asia to give extra shelter from the equatorial sun.

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Construction Philosophy

Euromodel have tried to simulate all the designs of the 'Falmouth' in every possible way, with attention to detail in order to appeal to the advanced model builder to construct this model. The designs allow you to construct the vessel using both pre-cut materials ready to use, and materials that require preparation.

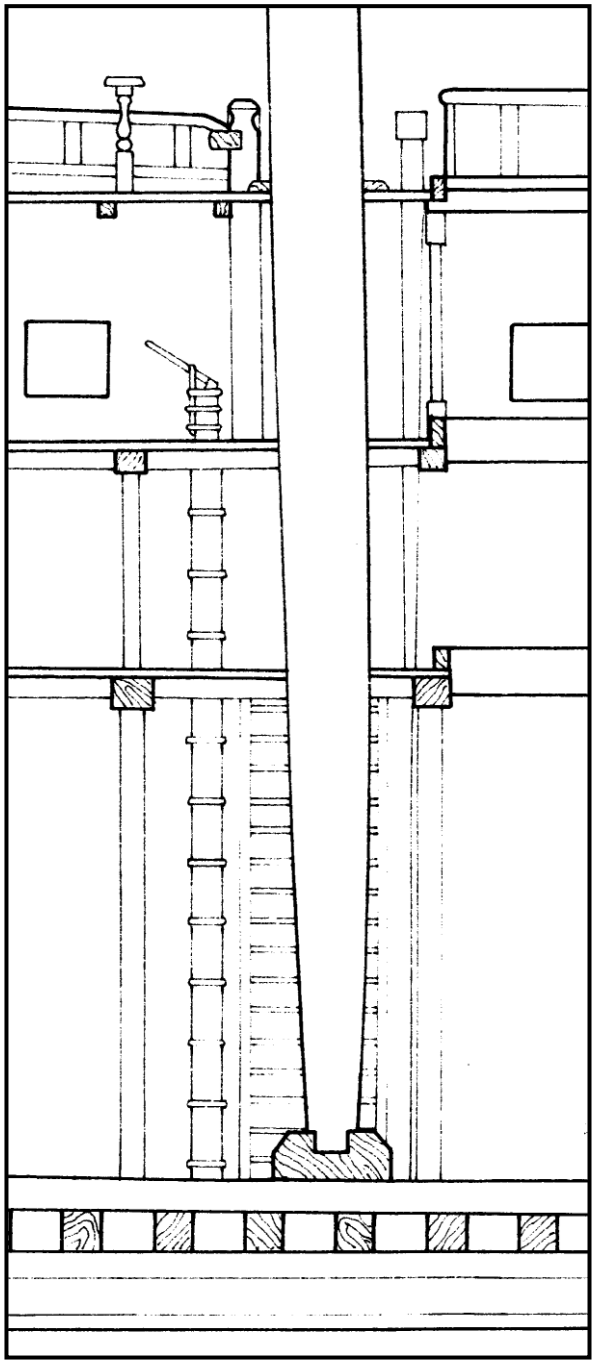


Figure 2: Sectional View from Plan Sheet 1

Kit Building versus 'Scratch' Building

There may well be some confusion in looking at the plans since there is some considerable detail intended for the 'scratch' builder but which is not provided for in the kit. The drawing opposite shows the detail that *could* be included below decks if engaging in a full scratch build.

Plan Sheet 2 contains a considerable amount of scratch information. This is a sheet that is useful in interpreting the hull structure but does contain much that is outside the scope of this kit.

This kit has a comprehensive array of items to utilise in building this ship. In many cases, these items may not display exactly the same dimensions as the plan sheets but nevertheless will enable the construction of a fine ship. The kit builder will use what is provided but the scratch builder will utilise the plans more fully and decide to spend far more time building particular items.

How *Did* I Build This Ship?

I felt compelled to build this ship from the kit provided but at the same time felt myself drawn to the highly detailed plans which portray far more than the kit provides for. What to do ?

I decided to create a text and photographic portrayal of how the ship could be built from the kit and located in a document on the Euromodel website named '**Falmouth'**. However, at many points I realised that there were alternative and more detailed construction processes that could be carried out. This usually meant the supply of extra material but having gone to the expense of purchasing the kit, the cost of the extra items was incidental. For these alternative processes, you will observe the heading 'Alternative 1' which uses a very straightforward and basic approach usually with the supplied material as it is whereas the heading 'Alternative 2' often shows the method that I used which probably involved modifying the supplied pieces and/or using extra material

A good example is shown by the two ship's capstans on Plan Sheet 6. The immense detail provided will enable the construction of the capstans along with the ratchet mechanisms. That degree of accuracy is beyond the scope of any kit but not the avid scratch builder. However ... I found myself continually referring to the plan sheet diagrams and calculating how I might improve upon what is in the kit. Somehow, I suspect every builder will become – to some degree – a 'kit/scratch' builder.

In any case it's essential to exercise patience and attention to detail while constructing this model. Without question this ship must be built with passion. The plans are there, an outline of the fundamental steps are there but in the end the modeller must display a high degree of flair. The plans must be studied at length before beginning because it is there that the builders will develop a 'set of instructions' for themselves. **The kit will not necessarily provide all that is required if the modeller aims to include some of the finer detail.**

The kit WILL enable an excellent model to be built from the materials supplied. The plans must be studied at length before beginning because it is there that the builders will develop a 'set of instructions' for themselves.

A complimentary criticism of Euromodel's kits is that the photos displayed on the internet do not portray the kit contents provided but in fact are scratch models. The simple fact is that there are so many variations and additions to the original design possible that (at the risk of repetition) no two ships are going to look the same. The more you examine the plans, the more you are likely to lean towards the 'scratch' style of construction.

Euromodel appreciates your choosing this product and wishes you a challenging experience. There is no question that the detail provided here on the plans and the material contained in the kit sets Euromodel kits apart from other kits available on the market.

Construction Manual

The following documentation will hopefully assist other future builders an easier pathway of construction. There is no doubt that others will see 'flaws' or better ways of carrying out some step. In the end, there can be no one way of doing anything so please read what I have written and then make your own judgement about the best method for you and your build.

With a limited build-time to create this hull, many might well criticise the quality of construction at some points and you might also be aware that photographing a small area on the hull and enlarging it produces a very different image to the one seen simply through the eye. So whatever you see, make yours better !

This manual is a real 'ship building in progress' and unlike other similar texts, the photographs show the raw work as it is being done – no 'pristine publication-type photos.

Kit Variations

The serious modeller, of course, can make a myriad of changes and material substitutions. The choice is theirs.

As I said earlier, Euromodel have supplied material which will enable you to produce a fine vessel

As an illustration, here are a number of changes possible – but the list could go on and on ...

1. You can decide to build a complete gun deck along with correct planking and carriage-mounted guns (refer to Plan Sheet 3 for required cut-outs in frames). This is an alternative to the 'half-guns' supplied.

2. The decks were traditionally well-scrubbed and lighter in colour than the planking on the hulls. The kit supplies walnut but you could elect to choose a lighter coloured wood.

3. Different woods are available from suppliers for constructing masts & yards but the timber supplied is of excellent quality.

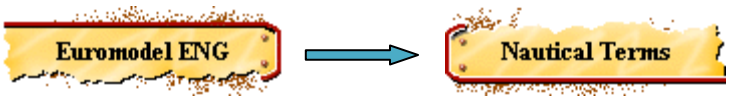
Text References

1. *Historic Ship Models* by Wolfram zu Mondfeld (1989). This book I have repeatedly utilised for historical accuracy when dealing with any part of a period ship. This is a 'must have' text. It explains everything nautical to do with early ships. This is a book that is almost a required companion if you are building the Mordaunt – the front cover of my copy is in disarray and pages have fallen out (but never lost) and glued back in as I continually research nautical aspects related to the ship.

2. *The Masting and Rigging of English Ships of War 1625 – 1860* by James Lee (1984). Another indispensable book ! Without this, the masting and especially the rigging would have been difficult.

Chapter 2: PLAN TRANSLATION (from Italian to English)

Whilst every care has been taken with this translation, the author claims little depth of knowledge of Italian and thus various grammar and syntax errors will be apparent to those who are bilingual in these two languages.



An on-line dictionary is to be found on the Euromodel website – 'Nautical Terms' and this will provide assistance for a *large range of terms NOT included in the following pages* of translation from Italian to English.

Italian – English Translation

Tavola 1 VISTA DI ASSIEME	Plan Sheet 1 OVERALL PERSPECTIVE
VELA DI RANDA	SPANKER SAIL
VELA DI CONTROMEZZANA	MIZZEN TOPGALLANT STAYSAIL
VELA DI MAESTRA	MAIN SAIL
VELA DI GABBIA DI MAESTRA	MAIN TOPSAIL
VELACCIO DI MAESTRA	MAIN TOPGALLANT SAIL
VELA DI STRALLO DI MAESTRA	MAIN TOPMAST STAYSAIL
VELA DI STRALLO DI GABBIA	MAIN TOPGALLANT STAYSAIL
VELA DI TRINCHETTO	FOREMAST SAIL
VELA DI PARROCCHETTO	FORE TOPSAIL
VELACCINO DI TRINCHETTO	FORE TOPGALLANT SAIL
FIOCCO	INNER JIB
CONTROFIOCCO	OUTER JIB
CIVADA	SPRITSAIL
CONTROCIVADA	UPPER SPRITSAIL
Bottazzi :listelli noce mm. 3x3 e 1,5x3.	Little wale: Walnut strips 3 x 3 and 1.5 x 3 mm.
Fasciame dello scafo:Listelli noce mm6x2	Planking : walnut strips 6 x 2 mm.
Rinforzi esterni ricavati da listello noce mm.10x3. Sagomare secondo la curvatura della fiancata.Sporgenza mm. 3 Vedi sezione tavola 2 (Per semplificare il lavoro al modellista,nella scatola di montaggio troverà un listello in noce da mm.4x4x300 e con esso realizzerà i rinforzi).	External reinforcement using the walnut timber 10 x 3 mm. Shape follows the sweep of the broadside. Protrusion 3 mm. See Plan 2. (In order to simplify the task, we have included in the kit a walnut timber of 4 x 4 x 300 mm. as an alternative.)
Incintoni : Listelli mm.6x2 da sovrapporre al fasciame sottostante.	Wales: Timbers of 6 x 2 mm. to be put over the planking.

Tavola 2 SCAFO-VISTE E SEZIONI	Plan Sheet 2 HULL:DRAWINGS & SECTIONS
VISTA IN PIANTA DELLO SCAFO	PLAN VIEW
PORTELLI CANNONI	GUNS PORTS
SEZIONE LONGITUDINALE DELLO SCAFO	SIDE VIEW OF FRAMES
VISTA DELLO SPECCHIO DI POPPA	STERN VIEW
VISTA DELLA PRUA CON SERPA E POLENA	BOW VIEW
SEZIONE SULL'ORDINATA "3" CON VISTA VERSO POPPA	SECTION VIEW OF THE HULL "FRAME 3" TOWARD STERN VIEW
SEZIONE SULL'ORDINATA "A" CON VISTA VERSO PRUA	SECTION VIEW OF THE HULL "FRAME A" TOWARD BOW VIEW
SEZIONE TRASVERSALE DELLO SCAFO SULL'ORDINATA DI MAESTRA CON VISTA VERSO POPPA	CROSS PLAN OF FRAMEWORK LOOKING TOWARD STERN VIEW

Tavola 3 VISTA PROSPETTICA E MONTAGGIO DEI PEZZI DI POPPA	Plan Sheet 3 PERSPECTIVE VIEW & ASSEMBLY OF THE STERN PIECES
VISTA PROSPETTICA DELL'OSSATURA.	PERSPECTIVE VIEW OF FRAMES.
SCHEMA DI MONTAGGIO DEI PEZZI DI POPPA.	PLAN BUILDING OF THE STERN PIECES.
Istruzioni per il montaggio dei pezzi: Le parti metalliche dello specchio di poppa e delle due campane vanno montate nello stesso ordine della numerazione. Prima del montaggio i pezzi andranno opportunamente tinteggiati. Tagliare il fasciame dello scafo all'altezza della galleria come indicato nel disegno "A". Incollare internamente i due spessori a-b, dopo averli opportunamente sagomati,per aumentare la superficie di incollaggio del pezzo N°1. La stessa operazione (con lo stesso scopo) verrà eseguita con i riempimenti c-d-e-f . Usare del collante Epossidico. Prima di incollare sullo scafo i pezzi 4-5-8-9 tagliare e pareggiare i bottazzi in modo da non avere sporgenze sullo scafo nella superficie di incollaggio. I pezzi 6-7 possono essere omessi:sono indicati nello schema per essere usati,nello spessore necessario, solo nel caso che i pezzi 4-5-8-9 non coprano correttamente la superficie prevista. Nello schema non sono indicati i fregi, la cui messa in opera non presenta alcuna difficoltà. Tutti i pezzi, per la loro duttilità, possono essere facilmente adattati alle superfici curve.	Instructions for building: The metal parts of the stern and the buttocks pairs, are to be built as shown by their numbers. Before putting the pieces in their position it is better to paint them. Cut the hull planking at the gallery high as indicated in the design "A". Glue in the inside the two thicknesses a-b, after having shaped them properly in order to increase the surface to be glued of piece N° 1. You'll have to do the same operation (with the same order) with the fillers c-d-e-f. Before glueing pieces 4-5-8-9 on the hull, cut and balance the little wales in order to avoid any protrusion on the hull surface to be glued. Pieces 6-7 can be omitted - they are included only in case pieces 4-5-8-9 will not cover properly the foreseen surface. There should be no difficulty in the positing of the metal ornaments as every piece can be easily adapted to the sweeping surfaces.

Tavola 4 ORDINATE E CHIGLIA	Plan Sheet 4 FRAMES & KEEL
N.B.1) TUTTE LE ORDINATE SONO DISEGNATE ESCLUDENDO LO SPESSORE DEL FASCIAME.	N.B.1) ALL FRAMES ARE DESIGNED EXCLUDING THE THICKNESS OF THE PLANKING.
N.B. 2) ORDINATE E FALSA CHIGLIA SONO IN COMPENSATO DA MM. 5.	N.B. 2) FRAMES AND FALSE-KEEL ARE IN PLYWOOD OF SIZE 5 MM.
Incollare uno spessore tra le linee tratteggiate a prua via dell'ordinata. Su questa si appoggerà il ponte di batteria.	Glue as shown by the dotted lines, an appropriate shaped support on Frame 3 for the Gun Battery Deck.
Riempimenti del dritto di poppa in noce	Stern post in walnut
Chiglia e sottochiglia in noce	Keel and under-keel in walnut
Lato superiore sinistro	Left top side
VISTA ALTO	HIGH VIEW
VISTA FIANCO	SIDE VIEW
Riempimento di prua in legno duro.Da sagomare	Shape and glue the filler block bow on the

ed incollare sulla zona tratteggiata. N°2 pezzi, di cui uno opposto a disegno.	dashed area. There are two pieces opposite each other.
RUOTA DI PRUA IN NOCE. Da rastremare come da disegno.	WALNUT STEM POST to be tapered as per design.
Prima della messa in opera del fasciame, questa parte della chiglia va rastremata da ambo i lati in modo che lo spessore della chiglia più lo spessore del fasciame non superi i 6 mm.	Before applying the planking, need to taper both sides of this part of the keel so that its thickness plus the planking thickness will not be more than 6 mm.

Tavola 5 LINEE D'ACQUA E COPERTE	Plan Sheet 5 WATER-LINES & DECKS
LINEE D'ACQUA IN SEZIONE	WATERLINE PLAN – BODY PLAN
LINEE D'ACQUA IN PIANTA	WATERLINE PLAN – HALF BREADTH PLAN
A: PONTE DI CASSERO	A: QUARTER DECK
B: PONTE AL SOLE	B: 'SUN DECK' – deck added at a later stage for protection from the equatorial sun.
C: PONTE DI BATTERIA 1 PEZZO A DISEGNO 1 PEZZO OPPOSTO A DISEGNO	C: GUN DECK. 1 PIECE AS THE DESIGN 1 PIECE OPPOSITE THE DESIGN
D: PONTE DI COPERTA	D: MAIN DECK
E: GALLERIA	E: GALLERY
TUTTI I PEZZI SONO IN COMPENSATO DA MM.2	ALL DECKS ARE PLYWOOD 2 MM.

Tavola 6 MANOVRE FISSE E DETTAGLI	Plan Sheet 6 STANDING RIGGING & DETAILS
SCHEMA DELLE MANOVRE FISSE (o ... etc.	SCHEME OF STANDING RIGGING
ARRIVO SUL BOMPRESSO DELLO STRALLO DI MAESTRA	JOINING ON THE BOWSPRIT OF THE MAIN STAY
ARRIVI DEGLI STRALLI DI TRINCHETTO E DETTAGLIO DEL TIENTIBENE DEL... etc.	JOINING OF THE FORE MAIN STAYS & DETAIL
DETTAGLIO DELLA FASCIATURA E FISSAGGIO DELLO STRALLO	DETAIL OF THE PLANKING AND FIXING OF THE STAY
ARRIVO A PARANCO DELLO STRALLO DI GABBIA.	STAYS FROM THE MAST TOPS CONNECTING THROUGH TACKLE TO THE DECKING
STROPPO IN METALLO E FISSAGGIO IN COFFA DELLE BIGOTTE.	METAL TIE AND FIXING THE DEADEYES AT TOP
PASSAGGI DEL CAVO DI RAGNA.	BRINGING ROPES TO SINGLE POINT (E.G. FIDDLE BLOCK)
ORDINE (DA PRUA A POPPA) DELL' INCAPPELLAGGIO DELLE SARTIE.	ORDER (BOW TO STERN) OF THE FIXING SHROUDS
DETTAGLIO DELL' INCAPPELLAGGIO DELLE	DETAIL OF THE SHROUDS FIXING AND

SARTIE E SISTEMAZIONE ... etc	APPLYING THE STAY EYES
NODO PARLATO PER LA ... etc	KNOT TO FIX THE RATLINES
STROPPO DELLE BIGOTTE E FISSAGGIO DELLE LANDRE.	METAL STRAP OF THE DEADEYES AND FIXING.
MENSOLA DEL PARASARTIE.	BRACKET OF THE CHANNEL.
PASSAGGIO E LEGATURA DEI CORRIDORI.	RIGGING THE DEADEYES
DETTAGLIO DEI PARASARTIE	DETAIL OF THE CHANNELS
Tavola 7 VELE DI MAESTRA E MANOVRE	Plan Sheet 7 MAIN SAILS & STANDING RIGGING
VISTA DA POPPA	STERN VIEW
VISTA DA PRUA	BOW VIEW
BOSA	CRINGLE
VELA	SAIL
LEGATURA DELLA MANOVRA ALLA BOSA.	RIGGING TO THE CRINGLE
BOSA DI INFERITURA	CRINGLE RIGGING
BUGNA	CLEW
BENDE DEI TERZAROLI	REEF'S BEND
LEGATURA DEI MATAFIONI	FIXING THE REEF-POINTS
A PARANCO	TO THE TACKLE
A PARANCO A PIÈ D'ALBERO	TO THE TACKLE AT FOOT OF MAST
CAVATOIA	HOLE IN SIDE OF HULL *(SEE FIGURE)*
Tavola 8 VELE DI TRINCHETTO E MANOVRE	Plan Sheet 8 FORESAILS & STANDING RIGGINGS
VISTA DA POPPA	STERN VIEW
VISTA DA PRUA	BOW VIEW
A PARANCO	TO THE TACKLE
A PARANCO A PIÈ D'ALBERO	TO THE TACKLE AT FOOT OF MAST
Tavola 9 VELE DI M EZZANA E DI CIVADA E ARRIVE DELLE MANOVRE	Plan Sheet 9 MIZZEN SAILS & SPRITSAIL & STANDING RIGGINGS
VISTA DA POPPA	STERN VIEW
VISTA DA PRUA	BOW VIEW
Alla bitta	To the bollard
A paranco	To tackle
Tavola 10 VELE DI TAGLIO	Plan Sheet 10 CUT OF SAILS
A PARANCO A2 – 151	TO TACKLE A2 – 151
A PARANCO A2 IN COFFA	TO TACKLE A2 ON THE TOP
PER E XI – 155	FOR E XI – 155
Tavola 11 DETTAGLIO ALBERI , PENNONI ,	Plan Sheet 11 MASTS, YARDS, TOPS & CROSS-

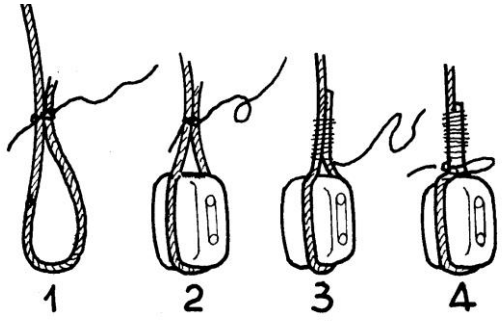
COFFE E CROCETTE	TREES
TRINCHETTO	FORE
Albero di trinchetto	Foremast
Pennone di trinchetto	Fore main yard
Albero di parrocchetto	Fore lower topsail mast
Pennone di parrocchetto	Fore topsail yard
Pennone di velaccino	Fore royal yard
MAESTRA	MAIN
Albero di maestra	Main mast
Pennone di maestra	Main lower yard
Albero di gabbia di maestra	Main lower topsail mast
Alberetto di maestra	Main topgallant sail mast
Pennone di gabbia	Main lower topsail yard
Pennone di velaccio	Main topgallant yard
MEZZANA	MIZZEN
Albero di mezzana	Mizzen lower mast
Verga secca	"Verga secca" (*see figure*)
Albero di contromezzana	Mizzen lower topsail mast
Pennone di contromezzana	Mizzen topmast yard
Picco di randa. (vista superiore)	Spanker (*upper view*)
BOMPRESSO	BOWSPRIT
Pennone di civada	Springsail yard
Asta di bompresso	Bowsprit boom
Pennone di controcivada	Upper spritsail yard
Testa di moro di bompresso	Bowsprit cap
COFFA DI TRINCHETTO	FOREMAST
Crocetta	Crosstree
Testa di moro	Cap
COFFA DI MAESTRA	MAIN TOP
COFFA DI MEZZANA	MIZZEN TOP
DETTAGLIO DEL BUTTAFUORI DI SCOPAMARE (fuori scala)	DETAIL OF STUDDING SAIL BOOMS (not to scale)
Distanziatore in legno	Wooden spacer
Legatura in cordino	Cord ties
Anello in ottone brunito	Brass ring
In ottone brunito	Burnish brass
Da realizzarsi a cura del modellista.	To be realized by model-maker
N.B. Tutta questa parte delle coffe (o crocette) alle teste di moro , sia per gli alberi che per il bompresso , va dipinta completamente di nero.	N.B. Tops, cross trees, masts and bowsprit to be completely dark paint.

Tavola 12	Plan Sheet 12
PARTICOLARI	PARTICULAR DETAIL
Avvertenza: I pezzi descritti in questa tavola riportano dettagli irreperibili nelle altre tavole. Inoltre alcune misure sono state modificate. Ciò é stato fatto per i modellisti che intendono	Attention: The pieces described in this table do have particulars that cannot be found in the other tables. This is for the model-maker that would like to incorporate extra detail into the ship.

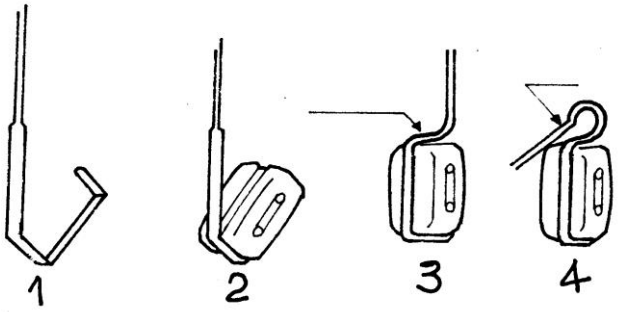
autocostruirsi ... etc.	
TIMONE	RUDDER
Tondino d'ottone da saldare al lamierino.	Brass rod to be soldered to the metal
RUOTA DEL TIMONE	SHIP'S WHEEL
GRUA DI CAPONE (scala 2:1)	CATHEAD (scale 2:1)
ANCORA DI POSTA E SPERANZA	BOW & EMERGENCY ANCHOR
CANNONI N° 8 pezzi N° 20 pezzi	GUNS N° 8 pieces. N° 20 pieces.
Mezze canne. N° 2 pezzi N° 6 pezzi	Half guns N° 2 pieces N° 6 pieces
AFFUSTO DETTAGLIATO Scala 2:1 Sezione	GUN CARRIAGE DETAIL Scale 2:1 Section.
Vista prospettica dell'imbr... (posizione in parata)	Prospective view of guns position
ARGANO A SALPARE	WINCH
ARGANO DI TONNEGGIO	CAPSTAN
CHIESUOLA	COMPASS HOUSING
CUCINA (articolo facoltativo da realizzare a cura del modellista) N.B. La cucina e il camino sono in ferro. Paiolato del castello. La base è in refrattario	KITCHEN/STOVE - to be created by the model-maker. N.B. Stove and flu are made of iron with fumes venting through a grating in the forecastle deck Base of the stove is on refractory bricks.
PAZIENZA DI TRINCHETTO	MAIN PIN RAIL
PAZIENZA DI MAESTRA	FORE PIN RAIL
PAZIENZA DI MEZZANA	MIZZEN PIN RAIL
BITTA	BOLLARD
SCALA DEL PONTE AL SOLE	UPPER QUARTER DECK LADDER
SCALA DEL PONTE DI COPERTA	MAIN DECK LADDER
A POPPAVIA	TOWARDS STERNS
A PRUAVIA	TOWARDS BOW
BALAUSTRA	BALCONY
SCIALUPPA E ATTREZZATURA	LIFEBOAT & FITTINGS
Albero di maestra	Main mast
Albero di trinchetto	Fore mast
Bompresso	Bowsprit
Antenna di maestra	Main lateen yard
Antenna di trinchetto	Fore lateen yard
Timone	Rudder
Barilotto	Water barrel
Sassola	Scooper
Alighiero	Boat-hook
Remo. (N° 12 pezzi.)	Oar (12 pieces)
ASTA DI BANDIERA Sul coronamento di poppa	FLAGPOLE On the taffrail

Plan Sheet 13

The following translation is more of a literal form than being of nautical correctness !



1. Tie a simple knot.
2. Insert the block and add a bit of glue whilst tightening the cord against the bottom of the block.
3. Tightly wrap the cord.
4. Tighten the winding with a last wrap through the loop and cut off the excess.



1. Flatten with a hammer a section of galvanized wire, calculating clearly the length and bend.
2. Insert the block into the hook.
3. Close and solder.
4. Fold and form a hook and cut.

Colouring the Model

Black

Upper & lower wales; mast head; standing rigging; yard arm braces; mast rope bindings

Gold

Figure head, sculptures, navigation light & general decorations.

Bright Red

Gun carriages, winches, capstans, bitts, shell holders, belaying racks, pin racks, inside of gun port doors & port door opening edges.

Metallic

All metallic parts, stove & flue

White

Window frames & surrounds; lower hull planks.

Natural Wood

Upper hull planking; Decks, masts, yards.

Chapter 3: THE KIT

Drawings

The diagrams are beautifully drawn and would allow a scratch-built kit to be readily developed. The difficulty is to separate the essential detail necessary to build the kit from the other more seriously accurate detail.

A point I found useful was for many – but not all – plan sheets to be carefully cut into small sections and placed into plastic sleeves in a folder. This way I could arrange the drawings in semblance of order of construction. Another very useful step was to print off the Italian-English translations, cut out the English translations and stick them over the appropriate Italian words (see Fig. 4)

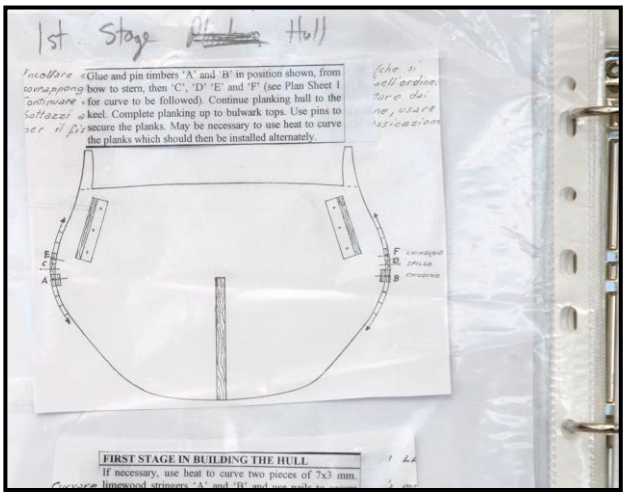


Figure 3: Cutting the Plan Sheets into Sections

Figure 4: Numbering of Each Metal Piece

Metal decorations

All cast metal decorations are contained in small but unmarked plastic packets. They have very few blemishes to remove. On the reverse side of the casting there is a specific number that identifies that piece. There are some excellent side and stern views on pages in the instructional booklet or CD that allows the kit builder to identify the castings with little problem.

Now is the time to go through every packet, identify the pieces. What I then did was to place an identifying name or number inside each packet and re-staple them ready for future use.

Much patience is required to identify these pieces and I would caution against direct contact with the skin – use gloves when cleaning & painting the pieces. Certainly any filing should be carried out in a separate area that can be easily cleaned up. Obviously any painting and gilding will need to be done before assembly onto the ship. More on their useage later.

Scrap Material

The laser-cut material in this kit is surrounded by pieces of wood which may appear to be superfluous – do not discard this 'waste' as there will be a number of places in the ship build where it becomes useful.

Component list

Wood – Laser-cut

Hull: Keel(1) – Chiglia
Decks: Main Deck (1) - Ponte di coperta
Quarter Deck (1) – Ponte di cassero
Sun Deck (1) – Ponte al sole
Stern: Rudder - Timone
Posts: Stem Post (1) - Ruota di prua
Support Base (1) – Invasatura anteriore + posteriore

Transverse Frames(10) – Ordinate
Gun Deck(1) – Ponte di Batteria
Gallery Deck (1) – Ponte di galleria

Wood – Limewood – listello tiglio

35 x 65 x 170 (1)	Filler Block for Bow - Riempimento di prua
1.5 x 6 x 760 mm. (70)	First Planking - 1° Fasciame
12 x 12 x 500 mm.(2)	Half Gun Support (Gun Battery Deck) - Supporti per mezze canne *(also refer to material under 'Wood – Plywood')*
3 x 10 x 200 mm.(1)	Mast Cheeks – Maschette
3 x 6 x 760 mm. (2)	Longitudinal Stringers – Correnti longitudinali

Wood –Walnut – listello noce

Planking

1 x 6 x 760 mm. (70)	Second Planking - 2° Fasciame
0.5 x 3 x 720 mm. (45)	Deck Planking - Rivestimento ponti
0.5 x 3 x 500 mm. (4)	Deck Border - Rivestimento ponti

5 x 7 x 720 mm. (1)	Keel – Sottochiglia This replaces the 5 x 5 mm. and 2 x 5 mm. lengths shown in Plan Sheet 4. Part of the 5 x 7 mm. length also allows for one of the two sections of the stern post; the other section of 5 x 5 x 120 mm. is shown as a separate item immediately below …
5 x 5 x120 mm. (1)	Stern Post - Ruota di poppa/dritto di poppa
2 x 10 x 500 mm. (1)	Channel – Parasartie
2 x 5 x760 mm. (4)	Channel bracket, Wale, Rail, Binnacle, Rail support, External ladder
6 x 6 x 200 mm. (1)	Cat Head - Gru di capone; Prow Deck Bulkhead Bitt

Wales - Incintoni
2 x 6 x 760 mm. (4)
2 x 3 x 760 mm. (2)
2 x 2 x 760 mm. (2)

2 x 3 x 150 mm. (1)	Mizzen Fife Rail – Cavigliera di mezzana
2 x 2 x 600 mm. (2)	Ratlines, Mast cheeks, column support for Type 22/089
2 x 2 x 500 mm. (1)	Crosstrees - Crocette
2 x 5 x 650 mm. (2)	Bulwark Capping Rail – Capodibanda
2 x 4 x 650 mm. (2)	Bulwark Capping Rail – Capodibanda
2 x 4 x 500 mm.	Trestletrees - Barre costiere

Gunports

1 x 10 x 500 mm. (1)	Lining - Battuta portelli cannoni
1 x 8 x 500 mm. (1)	Lining
1.5 x 10 x 500 mm. (1)	Hatch - Portelli cannoni
1.5 x 12 x 500 mm.	Hatch

3 x 3 x 700 mm. (2) Stanchions , bollard, binnacle supports , outrigger of bow

3 x 3 x 150 mm. (1)	Mizzen bitts
1.5 x 1.5 x 500 mm. (1)	Caprail stanchions
4 x 4 x 500 mm. (2)	Bollard – Bittone di drizza; Fiferail Bitts (Main & Foremast) – Bitta; Hull reinforcement - Rinforzi esterni

Stern	
2 x 8 x 300 mm. (1)	Stern Support Pieces - Supporti specchio
2 x 1 x 200 mm. (1)	Transom – Specchio di poppa

1 x 1 x 500 mm. (2)	Mast Top Battens – Serretta coprigiunto
1.5 x 3 x 600 mm. (1)	Border of mast top
2.5 x 1 x 350 mm. (1)	Mast top railing
2.5 x 4 x 300 mm.	Fife Rails (Main & Foremast) – Cavigliera de maestra e trinchetto
1.5 x 4 x 200 mm.	Balaustrade - Balaustra
10 x 10 x 345 mm. (1)	Connecting piece for base board

Wood –Plywood – compensato

5 x 35 x 300 mm. (1)	Half-gun supports
1 x 70 x 250 mm. (1)	Mast tops

Accessories

Anchor(regulation) with stock;40mm. (2) - Ancore da mm. 60 complete di ceppi (Art.11/037)
Anchor (emergency) with stock;50mm. (2) - Ancore da mm. 50 complete di ceppi (Art.11/038)
Anchor Rings (4) - anelli per ancore
Barrel – Botte (Art.22/112)
Bell(1) – Campana (Art.11/107)
Binnacle for bell - Chiesuola per campana (Art.11/363)

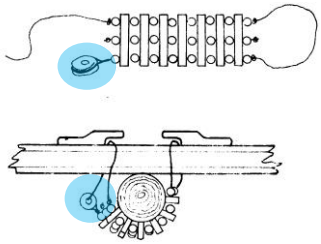
Blocks:

A1/A2: 3mm., 1 hole (154) (see Plan 13) - Bozzelli da mm. 3 a 1 foro (Art.22/026)
B1: 5mm., 1 hole(30) - Bozzelli da mm. 5 a 1 foro (Art.22/028)
B2: 5mm., 2 hole (40) - Bozzelli da mm. 5 a 2 foro (Art.22/032)
B3: 5mm., 3 hole (8) -Bozzelli da mm. 5 a 3 fori (Art.22/113)
H: Heart, 7 mm. (2) - Bozzelli a cuore da mm. 7 (Art.22/157)
C: Violin, 7 mm. (10) - Bozzelli a violino da mm. 7 (Art.22/083)

Capstan, 19 x 25 mm (2) – Argano (Art.22/133)
Two capstans are provided in case the builder wishes to construct the anchor capstan as well (although it will not be visible).

Chain Plates/ Deadeye Straps:
5mm.x 28 (34) - Lande da mm. 5 (Art.11/313)
5mm.x 20 (8) - Lande da mm. 5 (Art.11/316)
3mm.x 18 (28) - Landre da mm. 3 (Art.11/434)

Deadeyes:
3mm.(1-hole) (4) (used in the parrels; refer to diagram opposite) - Bigotte da mm. 3 (Art.22/036)
G: 5mm.(3-hole)(92) - Bigotte da mm. 5 (Art.22/020)
F: 3mm.(3-hole) (64) - Bigotte da mm. 3 (Art.22/018)



Eye pins, 2mm. (30) - Anelli diam. mm. 2 con gambo
Grating strips, 1.5 x 1.5 x 60mm. (220) - Elementi per paiolato da mm. 50 (Art.22/162)

Armament (refer to following page)
- Full Guns - Cannoni:
  - 30mm. (8) (Main Deck) - Cannoni da mm. 30 (Art.11/015)
- Half Guns
  - 22mm. (28) (Under & on Gun Deck) - Mezze canne da mm. 22 (Art.11/309)

NOTE:
Plan Sheet 12 shows the use of full guns on the two lower decks: such diagrams are only for illustration purposes for a real 'scratch' model. The kit utilises half-guns.

- Gun Carriages 19 mm. (8) -Affusti per cannoni da mm. 19 (Art.22/001)
- Gun Door Hinges (56) - Cerniere portelli cannoni (Art. 11/289)
- Wheels - Ruote per cannoni diam. 4mm.(16) (Art.22/148); diam. 5mm. (16) (Art.22/149)
- Axles:
  - wooden rod 2 x 200mm (2)- Tondini di kotò diam.mm. 2 per assali affusti
  - brass rod 1.5 x 100mm. (2) -Tondino ottone da mm. 1.5 per spine cannoni

Ladders complete with steps (2) - Scale complete di gradini e spallette (Art.22/002)
Lantern (1) – Lanterna (Art.55/009)

Mast Caps - Testa di moro
- Main Mast(5 x 12 x23mm.) (1) Art.22/173
- Main Mast (4 x 8 x 16mm.) (1); Art./22/169;
- Foremast (5 x 11 x 21mm.) (1) Art.22/171;
- Foremast (4 x 7 x 15mm.) (1) Art.22/168;
- Mizzen (5 x 8 x 18mm.) (1) Art.22/170
- Bowsprit (5 x 12 x 2mm.) (1) Art.22/172
- Flagpole (3 x 5 x 10mm.) (1) Art.22/161

Metal decorations set - Serie completa decorazioni fuse (Art.11/433)
Plate for ship's name on supporting base (1) - Targhetta Invaso (Art.12/010)
Rigging yarn
0.25mm.(Art. 77/025); 0.40mm.(Art. 77/040); 0.60mm. (Art. 77/060); 1.0mm.(Art. 77/100); 1.50mm. (Art. 77/150)
Rings (2mm.) (30) - Anelli diam. mm. 2
Rudder hinges (6) - Cerniere timone complete (Art.11/291)
Sailboat Hull With Keel, 130mm. (1) - Scialuppa da mm. 120 c/chiglia (Art.88/014)
Sail Cloth, 450 x 900 mm. - Serie tela per vele mm. 450 x 900 (Art. 15/010)
Stanchions 8mm. (7) – Colonnie (Art. 22/090)
Wheel, Ship's (1) – Ruota o corona (Art. 22/100)
- Roller for rope (1) - Cilindro o tamburo
- Support of wheel (2) – Supporto del timone

Wooden Rods: 12 x 410mm. (1); 10 x 675 mm. (1) ; 8 x 660 mm. (1); 6 x 650 mm. (1); 5 x 630 mm. (1); 5 x 500 mm. (1); 5 x 300 mm.(1); 4 x 760 mm.(1); 4 x 600 mm.(1); 3 x 340mm. (1); 2 x 600mm. (1); 2 x 700mm.(1)

Set of Plans (13 sheets) - Serie disegni (No 13 Tavole) (Art.66/011)

Instructions - Istruzioni

Chapter 4: SOME USEFUL TECHNIQUES

Measuring Gun Ports Along the Hull

The following commentary is about taking things to an extreme 'measure' and only represents a whim that I decided to follow. Maybe very few builders will ever go this extent ... but in order to interpret the plan drawings of the hull side view, it should be remembered that the drawings are a three-dimensional view shown in two dimensions. Allowances could be made for this 'abberation'. The changes in dimension will be small and if this change is not followed, things will still fit into place. This particularly relates to ports and the wales.

Remember though, the position of the ports was established early in the construction of the hull so what follows, for most, will be superflous !

These techniques allows for a closer reproduction of that shown in the plan drawings.

Fig. 5 indicates how the bottom edge position of the port might be determined.

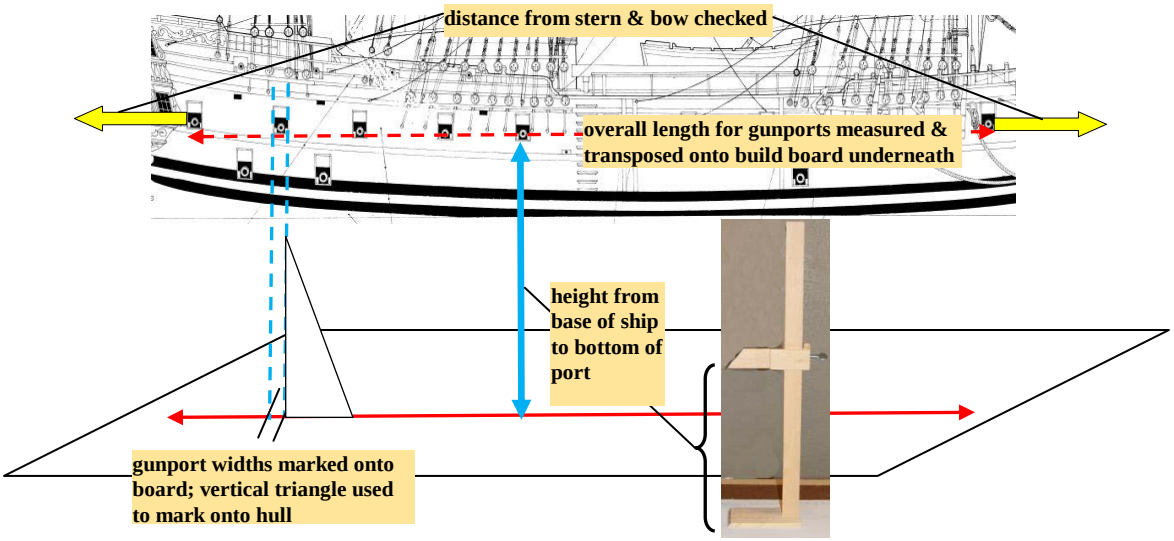
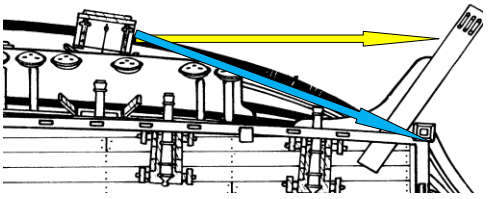


Figure 5: Establishing Gunport Positions



Yellow Arrow:
the 3-D view measurement shown on the drawing

Blue Arrow:
the 2-D length along the hull will be greater than the observed 3-D length

One aspect to double check on is the width of the ports as the bow curves – particularly the end port (chase port). On the drawings, these will appear to narrow due to their being a three-dimensional representation. In fact, all ports will have the same width.

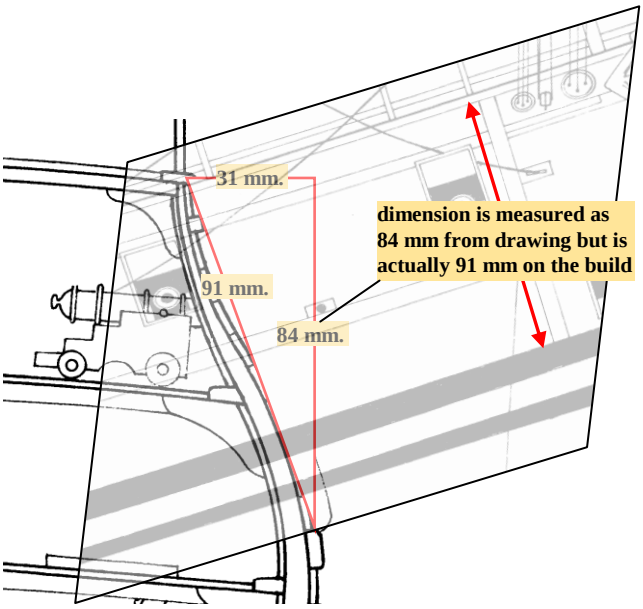


Figure 6: Making Adjustments for Three Dimensions

Fig. 6 illustrates a common problem faced by builders – the drawing illustrates what is *seen* but not what is *measured* … it is a three-dimensional view presented as a two-dimensional view. The figures shown in Fig. 6 were taken straight off the computer screen but the *ratio of figures will remain the same*.

84 mm. from the drawing is actually 91 mm. on the model.

For gunport and wale readings, the figures obtained would be multiplied by 91/84.

(i.e. increasing measurements by a factor of **1.083**)

e.g. ***28 mm***. becomes 28 x 91/84 = ***30 mm.***

Measuring Bulwark Height

Builders often comment on the need for the bulwarks to be higher above the deck than is shown in the drawings. Part of Plan Sheet 'A' is shown below that explains the problem and provides the correction necessary.

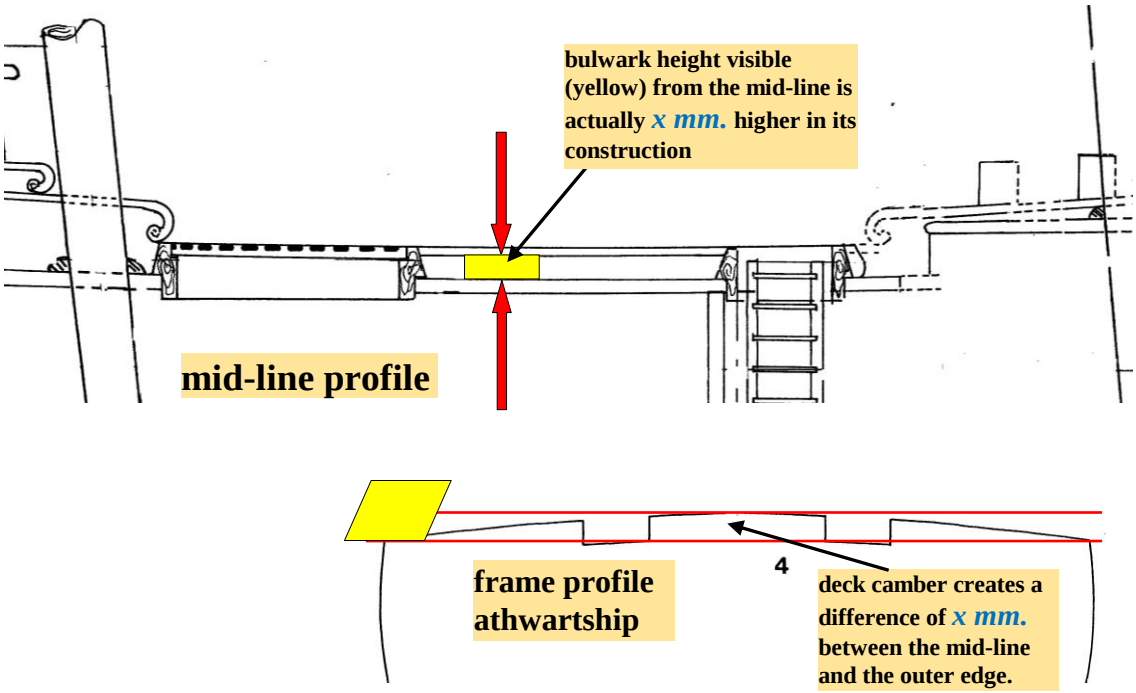


Figure 7: Bulwark Height Correction

Metal Bending

A number of kits – especially those of Euromodel - are supplied with metal decorations such as stern window sections and beakhead rails. Whilst they are usually formed somewhat to the required shape, further bending is required to fit the model being built. The following procedure, outlined by *marktiedens* [MSW], is a straightforward one that avoids the metal becoming brittle and breaking ...

Figure 8: Heat Gun

"Using thick leather gloves to keep from burning my fingers, I found that holding the metal ... in the heated air from the heat gun, I could bend the metal pieces quite easily.

During the bending I did not let the metal cool too much. When I felt I could start the bending I just backed away from the heat gun - the metal would stay hot, but not too hot. I didn`t want it to cool too fast in the middle of trying to make a curve. I did the heating several times because I had to hold it up to the ship to check the curve and it would cool down. Re-heating several times did not seem to affect the workability of the metal. It was a trial & error kind of thing, but it seemed to work out ok. I probably spent 30 minutes bending each piece.

Even after all the filing I had to do to make them conform to the curves of the hull, I had to tweak the bends I made earlier. Just had to be careful not to get the metal too hot - just enough so it can be bent. The temperature at the nozzle of the heat gun is about 500 degrees (F), so it wouldn`t take long to overheat the metal & destroy it. I held the pieces close to the gun only about 7 or 8 seconds then backed away. When I could feel the metal not wanting to bend anymore I moved a little closer to the gun to warm it more. Kind of hard to explain - I just did it by "feel".

After a bit of filing to fit the curves of the hull, they were painted gold & glued in place. The low setting on the heat gun is all that is necessary to heat the metal to be bent."

Extra Eye Bolts

A small drill bit of a desired diameter is placed in a vice, some brass wire (e.g. 0.8 mm.) is wrapped around it and then twisted with a pair of pliers. A suitable nail is an alternative 'tool' to substitute for the drill. The image shows some 0.8mm wire and a #55 drill bit. The advantage with this methods is that the eye bolt produced with the twisted wire makes for a stronger bonding in timber compared to a single wire stem.

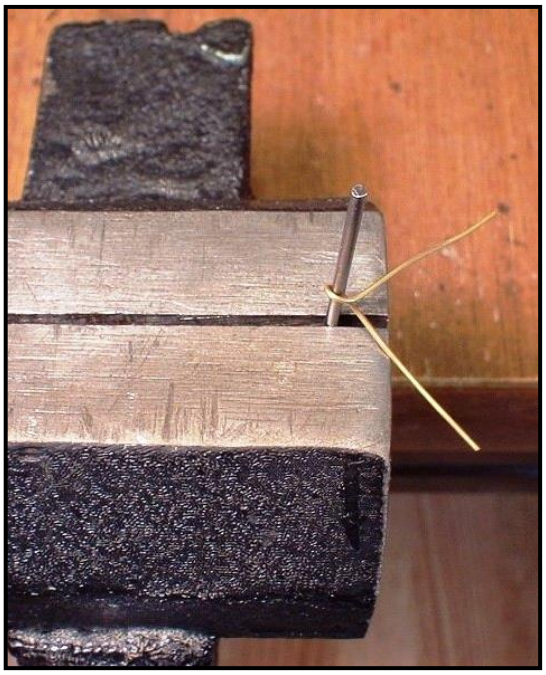


Figure 9: Drill or Nail in Vice

Figure 10: Twisted Tail of Eye Bolt

Transferring Plan Drawings Directly Onto Timber Surfaces

- Produce a laser print (NOT an inkjet print) copy of the drawing to be copied.
- Obtain a solvent containing Xylene (e.g. thinner for a various paints, etc.)
- Tape the printed side of the drawing copy to the timber to prevent movement.
- D*ampen* the paper back with xylene.
- Carefully scrape a hard edge (such as an old plastic card) over the print,

This process transfers the laser ink onto the wood every bit as sharp and clear as the original.

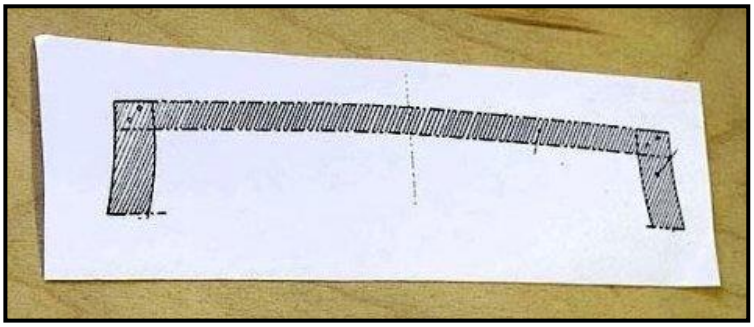


Figure 11: Laser Print Copy

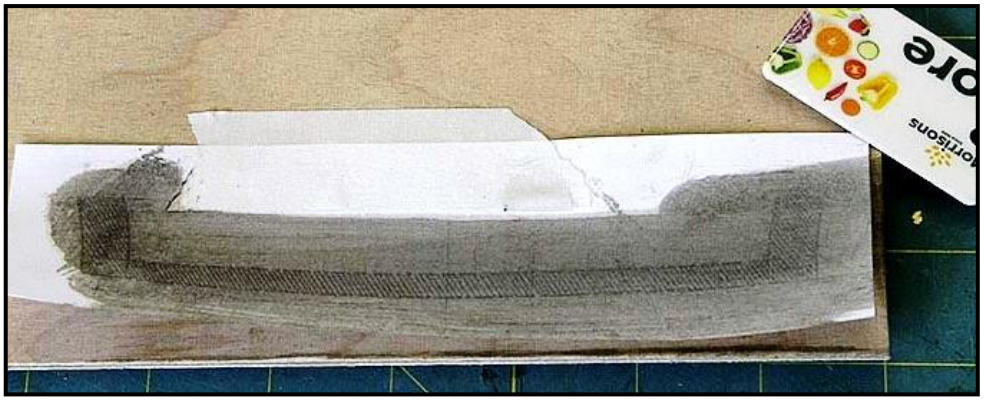


Figure 12: Reversed Side Wiped Over with Xylene

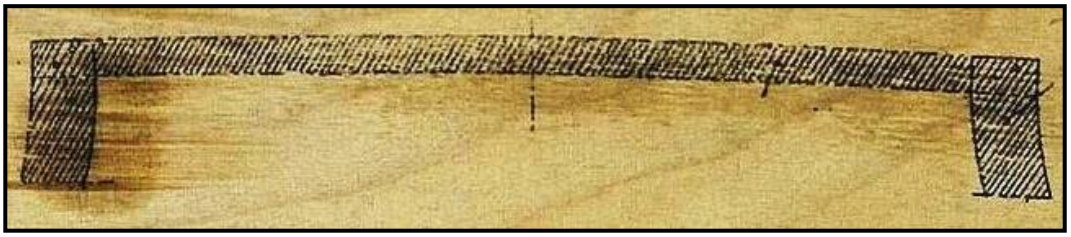


Figure 13: Print Transferred Onto Timber

Colours

Bianco - white

Rosso vivo – bright red

Legno naturale – timber

Nero – black

Oro antico – antique gold

Brunito - metallic

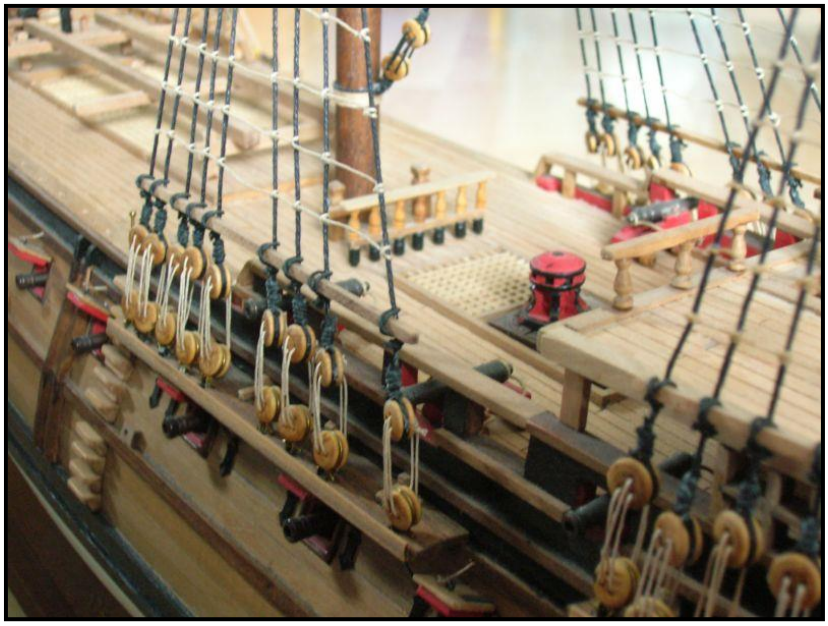


Figure 14: A Modeller's Interpretation of Colour

Euromodel have made the following suggestions but in the end it is up to you.

Black

Upper & lower wales; mast head; standing rigging; yard arm braces; mast rope bindings

Gold

Figure head, sculptures, navigation light & general decorations.

Bright Red

Gun carriages, winches, capstans, bitts, shell holders, belaying racks, pin racks, inside of gun port doors & port door opening edges.

Metallic

All metallic parts, stove & flue

White

Window frames & surrounds; lower hull planks.

Natural Wood

Upper hull planking; Decks, masts, yards.