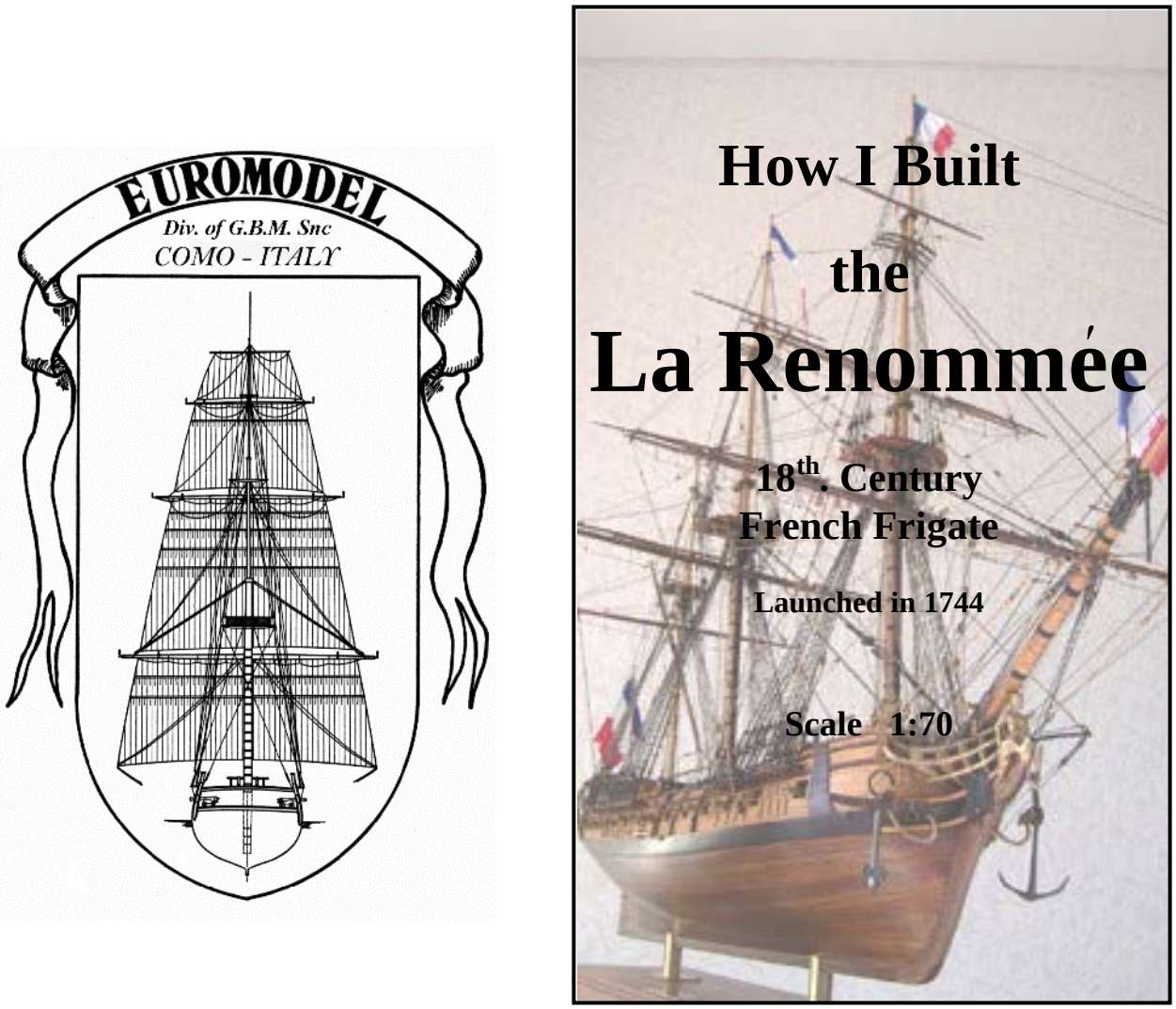


Figure 1: Model of LaRenommee

Manual 1 of 7 (version 2)

Hull Structure, Armament & Accessories (version 2)

(inc. first & second planking)

This manual is incomplete and is part of an editing review process so should be considered as a 'WORK IN PROGRESS'. Any changes made in subsequent versions will be shown at the start of that revised manual.

This build manual 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. Neither the author or Euromodel have any commercial interest in this manual and it is published on the Euromodel web site in good faith for other persons who may wish to build this ship. Euromodel does not accept any responsibility for the contents that follow.

To my friend, Massimo

Whose untold generosity as owner of Euromodel G.B.M. Snc
inspired me to translate his plans and instructions.

Who opened his family to my family
and maintained a long relationship via the Internet
between Adelaide, South Australia and Como, Italy.

Who also inspired me whilst building a kit model of the La Renommee
to create a documented manual of construction
for others to utilize.

To him I owe a great debt of gratitude

Contents

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

Ilustrations

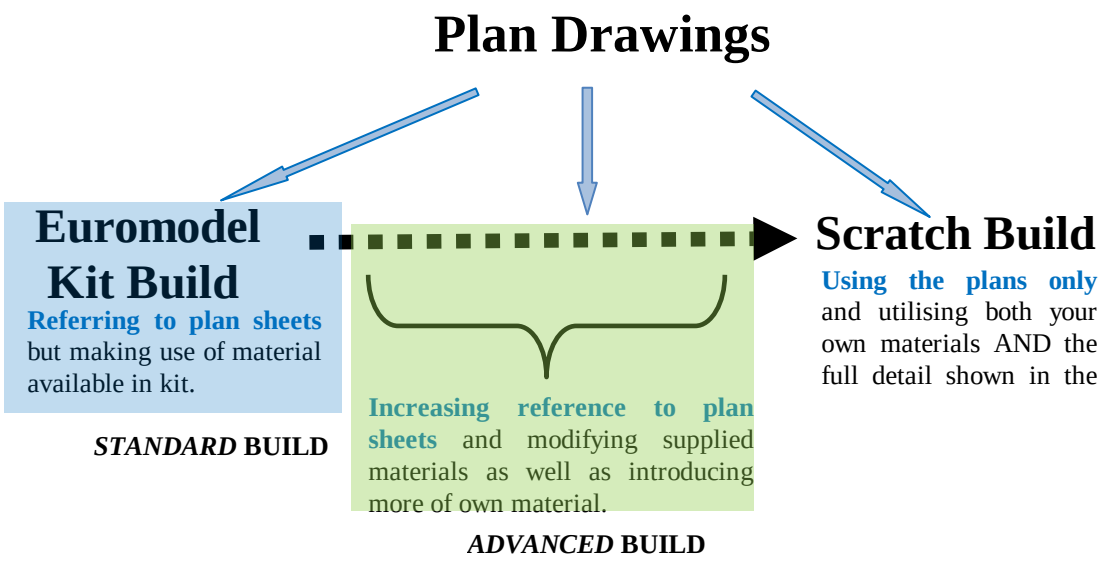
[These figures are not hyperlinked]

RECENT CHANGES TO MANUAL

(i.e. 'WiP' December 15, 2011 to version 1)

- page numbering
- contents & illustration numbering

Euromodel Preview



Euromodel kits are based on sets of drawings by a naval architect and contain a comprehensive amount of detail that would be a challenge to the most serious ship modeler. This is in contrast to most other kits that whilst they also contain excellent plans, the intention there is to achieve a build similar to the plans provided. Euromodel offers plans that can be interpreted at various levels of complexity. If the builder has limited experience in the craft of shipbuilding, then the plans can be read at a simplistic level.

Whilst *all* plan drawings are important to the construction of the Royal William, the builder is well advised to focus on three – Plan Sheets 2, 5 and 17

It could well be argued that *the 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 (refer to the diagram above).

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. Euromodel is aware of this challenge and so provides just the basic needs and leaves it up to the modeller to determine how far he will extend his skills.

In summary … my comments are not prescriptive and if the detail is sometimes a little too precise, please do not let this deter you. It will be up to you to take as much information as you wish and the rest to 'throw overboard'. It is your model, your creation, your handiwork.

Chapter 1: INTRODUCTION

Historical Notes

in

Figure 2: Model of LaRenommee; Rear View

There were two Renommee's built in France, one in the 17th Century and this one in the 18th Century. Launched 1744 at either Byrone or Brest, La Renomme'e was a one-off 40-gun ship designed by Antoine Groignard with 30 12-pounders and 10 8-pounder guns. She was captured by the British Navy (HMS Dover) 27 September, 1747 and converted into a 30-gun fifth-rate frigate as the HMS Renown and served until she was broken up in 1771. However, this type of frigate is very important in the evolution of ships of the British Navy because it inspired the development of a series of fifth-rate frigates equipped with only thirty guns of large calibre, all placed on the second deck.

Details for this ship have relied on Chapman's book, 'Architectura Navalis Mercatoria'

Figure 3: Model of LaRenommee; Front View

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Construction Philosophy

Euromodel have tried to simulate all the designs of the 'La Renomme'e 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.

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.

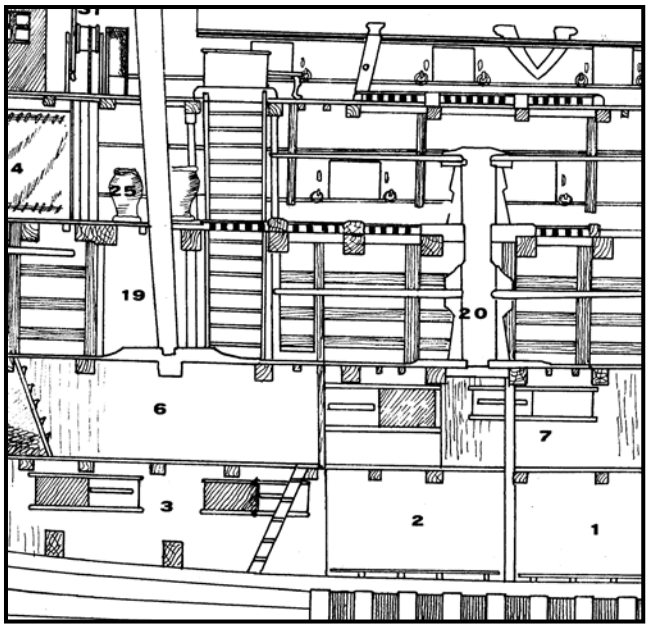


Figure 4: Sectional View of Decks from Plan Sheet

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 above shows the detail that *could* be included below decks if engaging in a full scratch build.

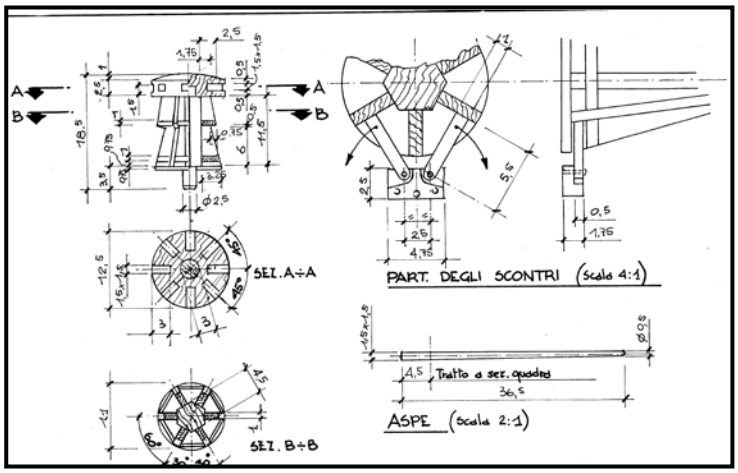


Figure 5: Capstan, Scratch Detail

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 **'LaRenommee Notes'**. 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 some words or heading that by ustilising 'control+click' will allow you to navigate directly to that area of ***ADVANCED NOTES*** at the rear of this document. Try control+ clicking on the words 'advanced notes' in the previous sentence.

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 non-publication-type photographs show the raw work as it is being done .

Kit Variations

The serious modeller, of course, can make a myriad of changes and material substitutions.
The choice is theirs. As an illustration, here are a number of changes possible – but the list could go on and on ...

1. The gun carriages supplied do not really match the dimensions or shape shown in the plans. Whilst labour intensive and time consuming, there is much you can do to alter these gun carriages. What a challenge !

2. The anchor piece dimensions could be altered to more suit the diagrammatic dimensions.

3. 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.

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

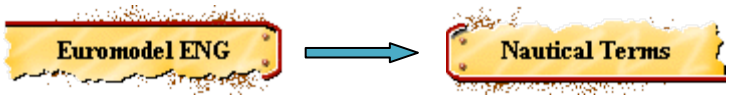
Text References

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 and 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 the rigging would have been difficult.

Chapter 2: 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.

Hull Construction & Fittings *(shown also in Manuals 2 & 3)*

(a number of terms shown on the Plan Sheets but not included in the lists below can be located on the Euromodel website where a translation of 'Nautical Terms' exists)

Tavola 1 VISTA DI ASSIEME	Plan Sheet 1 OVERALL DRAWING

Tavola 2 VISTE ESTERNE SCAFO E SPACCATO	Plan Sheet 2 HULL – OVERALL & CROSS SECTION
SEZIONE LONGITUDINALE DA TRIBORDO	**LONGITUDINAL SECTION OF THE HULL ON STARBOARD SIDE**
Listello mm. 2x2 rete non compressa nella scatola	Timber 2x2mm not included: modeller may choose to include the net (not provided) to produce a better finish.
SPACCATO LONGITUDINALE	**LONGITUDINAL (INTERNAL) DETAIL (OF HULL)**
SPECCHIO DI POPPA	**DETAIL OF THE TRANSOM**
VISTA DI PRORA	**VIEW OF THE BOW, WITH BOW WORKS & FIGUREHEAD**

Tavola 3 CHIGLIA E ORDINATE	Plan Sheet 3 KEEL & FRAMES
SEZIONE LONGITUDINALE SULLA & DELL'OSSATURA DELLO SCAFO	**LONGITUDINAL SECTION OF RIGHT SIDE OF HULL SHOWING FRAMES**
Spessore mm. 1	Thickness 1 mm.
ASPORTARE LA PARTE TRATTEGGIATA DOPO AVER ... ETC	**SHADED AREA TO BE CUT AWAY FROM THE FRAME**

Tavola 4 **SCHIZZI FUORI SCALA BANDIERE**	**Plan Sheet 4** **PERSPECTIVE DRAWINGS OF EXTERNAL VIEWS; FLAGS**
SCHIZZO DELLO SPECCHIO DI POPPA	**SKETCH SHOWING STERN ORNAMENTATION**
SCHIZZO DEL GIARDINETTO	**SKETCH OF QUARTER GALLERY**
PARTICOLARE DELLA FINESTRATURA ...	**WINDOW DETAILS OF QUARTER GALLERY**
PARTICOLARE DELLA FINESTRA	**WINDOW DETAIL**
SCHIZZO DELLA POLENA	**SKETCH OF FIGUREHEAD**
PORTELLI DEI CANNONI	**CANNON GUNPORT DETAIL**
DETTAGLIO DELLA SISTEMAZIONE .... Il cavo di grippia e le gomene delle ancore devono essere tinti marrone scuro per simulare catramatura Cavo di grippa mm. 0.5 Serrabozze mm. 0.25	**ARRANGEMENT OF THE ANCHOR** 'The anchor support rope & anchor cable must be coloured dark brown to simulate tarring'. **My recommendation is NOT to colour the ropes in keeping with historical reality.** Anchor support rope, 0.5 mm. Anchor support rope 0.25 mm.
SCHIZZO PROSPETTICO PORTE .... Blochetti in 'cirmolo' da sagomare a cura del modellista – rivestire all'esterno con listelli di ... Ricavare da blochetto mm 25x28x120	**PERSPECTIVE: QUARTER DECK ENTRANCE** Block of obeche to be shaped with curves and then covered with 0.5x4 mm. walnut timber. Obtained from a block (of obeche) 25x28x120 mm.

Tavola 5 **PIANTA – SEZIONI E PARTICOLARI**	**Plan Sheet 5** **DRAWINGS – CROSS SECTION DETAIL**
PONTE DI COPERTA (compensata spess. mm. 2)	**MAIN DECK**, 2mm. thickness
PONTE DI BATTERIA (compensata spess. mm. 2) Listelli in tanganica (mm. 0.5x4)	**BATTERY DECK**, 2mm. thickness Deck planking (now from walnut timber) 0.5x4 mm.
SEZIONE AA / BB	**SECTION AA (OR BB)**
PONTE DI CASSERO (compensata mm. 2)	**QUARTER DECK**, 2mm. thickness
PEZZO DA 4 LIBBRE (fuori scala) Particolare cerniera (fuori scala) Paranco di rinculata Paranco del cannone Braca	**4-POUNDER GUN (not to scale)** Hinge detail (not to scale) Recoil block & tackle Gun block & tackle Sling
DETTAGLIO DELLA GRU DI CAPONE ... Paranco di capone mm.0.3 Amante della gru di capone (cavo 0.75, fasciato ...etc Nodo amante della gomena dell'ancora Bozzello tipo '3H' Stroppo e gancio in acc. Cicala dell'ancora	**DETAIL OF CAT-HEAD** (not to scale) Cat-head tackle Cat-head stopper Fisherman's knot attaching rope to anchor 3-hole block Tackle hook Showing 'puddening' the anchor ring with tarred cloth, rope & yarn

Tavola 6 PARTICOLARI ATTREZZATURE DI COPERTA	Plan Sheet 6 DETAIL OF MAIN DECK EQUIPMENT
ARGANO Part. degli scontri Tratto a sez. Quadra Aspe	**CAPSTAN** Ratchet detail This is a square cross section Capstan arm
SCIALUPPA	**LIFE BOAT** Refer to Euromodel 'nautical terms' for translations
POMPA DI SENTINA Non compressa nella scatola di montaggio Da realizzarsi a cura del modeller	**BILGE PUMP** Not included in the kit. To be made by modeler
ARAGANO DI TONNEGGIO	**MAIN CAPSTAN**
CANOTTO * non compressa ...etc_	**DINGHY** * Not included in this kit). Refer to 'nautical terms' for translations
RUOTA DEL TIMONE	**SHIP'S WHEEL**
CHIESUOLA DELLA BUSSOLE Scala 2:1 Lato ruota del. Timone Lampada, cassetti, ripostigli Bussole con snodo cardanico Da realizzarsi a cura del modellistista	**COMPASS BINNACLE** Scale 2:1 Adjacent to ship's wheel Refer to Euromodel 'nautical terms' Universal joint supporting compass To be made by the modeler
ARTIGLIERIA DA 12 LIBRE Totale pezzi per scatola di montaggio Canna Affusto tipo "A" Cuneo di alzo Base del cuneo Aggiustare di montaggio in modo che la canna rimanga orizzontale e di centro del sabordo Tutte le quote non indicate sono identiche a quelle dell'affusto Tipo "A"	**12-POUNDER GUNS** List of total pieces need for assembly of gun carriages Gun barrel Gun carriage type "A" Wedge to lift cannon Base of wedge Fix assembly in such a manner that the cannon remains horizontal and in the centre of the leading edge All dimensions not indicated are identical to those of carriage Type "A"
PORTA PROIETTLI Pullini di plumbo	**CANNONBALL RACKS** Lead cannon balls, 1 mm. diameter
SCALE Ricavare in scala dai boccaporti della TAV. H da determinare a montaggio	**STAIRS** Derive in scale from the hatchways on Plan 6 Determine height on assembly & fitting
ARTIGLIERIA DA 4 LIBRE	**4-POUNDER GUNS**
ANCORA Ancora di speranza/ posta	**ANCHORS** Refer to Euromodel 'nautical terms'

Tavola 7 **BOMPRESSO ALBERI E PENNONI ETC**	**Plan Sheet 7** **BOWSPRIT, MASTS, YARDS, ETC.**
A. BOMPRESSO Lamierino mm. 0.1 *Definire a montaggio Tratto d sezione quadra Aggiustare al montaggio. L'asse del bompresso deve arere und inclinazione di 29° rispetto id linea di galleggiamento Mastra	**A. BOWSPRIT** Metal band, 0.1 mm. thickness *Refer when installing Square out end Shape this end to match when assembling. The centerline of the bowsprit must be placed on an angle of 29o referring to the waterline Bowsprit collar/ coaming
A1. ASTA DI FIOCCO Tratto d sezione ottagonale	**A1. JIB BOOM** End is octagonal
A2. ASTA DI BANDIERA DI BOMPRESSO	**A2. BOWSPRIT FLAG POLE**
A3. TESTA DI MORO DI BOMPRESSO	**A3. BOWSPRIT CAP**
A4. PENNACCINO	**A4. JUMPER STRUT**
A5. PENNONE DI CIVADA Marciapiede del p. di civada mm. 0.5 Particolare tipico del marciapiede del ... etc	**A5. SPRITSAIL YARD** Footrope of spritsail yard, 0.5 mm. diameter Detail typical of footrope for a yard (not to scale)
B. ALBERO DI TRINCHETTO Lamierino mm. 0.1 Determinare d montaggio strollo di maestra Tratto d sez. Quadra Determinare d montaggio controstrollo di maestra Altezza dal ponte di coperta	**B. FOREMAST** Metal band, 0.1 mm. thickness Position of main stay to be determined on assembly Squared-off section Position of main stay to be determined on assembly Height above main deck
B1. COFFA DI TRINCHETTO Particolari da realizzarsi a cura del modellistista Legno compensato sp. 1mm.	**B1. FOREMAST TOP** Detail to be created by modeler Plywood, thickness 1mm.
C. ALBERO MAESTRA Cuoio sp. 0.1mm Squadra a disegno/ opposta N.B.L'albero di maestro deve risultare inclinator di 2o verso la poppa rispetto la perpendicolare alla linea di galleggiamento… etc.	**C. MAIN MAST** Leather, 0.1mm. thickness Each of two pieces is squared on opposite sides N.B. Main mast must have a 2o incline towards stern referring to the perpendicular at the waterline. The mast top, the mast caps and topmast crosstree must be parallel to the waterline.
C1. COFFA DI MAESTRA La coffe si realizza ritagliando la tavoletta di compensato da mm. 1 e rivestendo la stessa con listelli di noce da mm. 0.5x3	**C1. MAIN MAST TOP** The top created by cutting out 1mm. thickness plywood by reference to plan and covering with walnut strips 0.5 x 3 mm.
C1.A. FANALE DI COFFA	**C1.A. TOP NAVIGATIONAL LIGHT**

Tavola 8 **MANOVRE CORRENTI DEI PENNONI**	**Plan Sheet 8** **RUNNING RIGGING OF YARDS**
PARTICOLARE DEI PARANCHI DI DRIZZA DEI PENNONI DI TRINCHETTO E DI MAESTRA (fuori scala) Barre costiere della coffa (per maggior chiarezza la coffa non e stato rappresentata)	**DETAILS OF THE HALYARD TACKLE FOR THE MAIN & FOREMAST YARD ARMS (not to scale)** Mast top trestle tree (for better clarity, top is not fully drawn)
PARTICOLARE DELLA DRIZZA DEI PENNONI DI PARROCCHETTO E DI GABBIA (fuori scala)	**HALYARD DETAILS OF THE YARDS FOR THE FORE & MAIN LOWER TOPSAIL YARDS (not to scale)**
PARTICOLARE DELLA TROZZA DEI PENNONI DI PARROCCHETTO E DI GABBIA (fuori scala) TOTALE n° 27 PEZZI No 7 per trozza asto di mezzane No 10 per pennone di parracchetto No 10 per pennone di gabbia Steretto in legno 1; forate; oppure perline in vetro dd bi jiotterid dipinte color legno	**PARREL DETAILS OF THE YARDS FOR THE FORE & MAIN LOWER TOPSAIL YARDS (not to scale)** Total of 27 pieces 7 pieces for mizzen mast gaff 10 pieces for the fore topsail yard parrel 10 pieces for the main topsail yard Wood balls 1 mm in diameter drilled with hole or glass beads painted like wood
PARTICOLARE DELLA TROZZA DEI PENNONI DI TRINCHETTO, MAESTRA E MEZZANA (fuori scala) Bozzelli fissati sotti ie barre traverse delle coffe Salsicciotto di cavo intrecciato (0.4) e rivestifo in cuoio sp. 0.1 Cuoio non e compresso nella scalola di montaggio	**PARREL DETAILS OF THE YARDS FOR THE FORE, MAIN & MIZZEN YARDS (not to scale)** Blocks fixed underneath crosstree of top A 'dolphin' made of interwoven rope and covered in leather 0.1mm thickness Leather not supplied in kit
PARTICOLARE DELLA TROZZA DELL'ASTA DI MEZZANA (fuori scala)	**PARREL DETAILS FOR THE MIZZEN YARD (not to scale)**
DETTAGLIO 'A' (fuori scala) Anello in filo acc. ... etc Filo acc. 0.5mm	**DETAIL OF RING 'A'** Steel wire ring, diam. 1mm. (exterior diam. 8mm) Steel wire ring, 0.5mm. diam.

Tavola 9 **VELE DI TAGLIO**	**Plan Sheet 9** **STAY SAILS**
La corda della vela di strallo di controvelaccio (6) deve passare in un bozzello di tipo "L" fissato all'interno dell'ultima sartia di dritta dell albero di parrocchetto e scendere lungo l'albero ed essere legato ad una galloccia fissata all'interno dell'ultima sartia di trinchetto all'altezza della terza grisella ... etc. Le due corde della vela di strallo di velaccio(5) devono passare in due bozzelli di tipo "L" e fissati uno a destra e l'altro a sinistra nell interno dell'ultima sartia verso poppa dell' albero di parrocchetto, scendere lungo l'albero ed essere legata a due gallocce fissate all'interno della penultima sartia di maestra (verso poppa) all'altezza della terza grisella. Le due corde della vela di strallo di contromezzana devono passare (una a destra e una a sinistra) in una bigotta tipo "E" fissata all'interno della prima corda of main mast verso prora ed essere legate a una galloccia fissata pi in basso all'interno della stessa corda. Per i vari simboli rappresentati sulla presente vedere la legenda di Tav	The lead of the main royal staysail No. 6 passes through a block of type "L" which is tied on the inside of the right shroud of the fore topsail mast. This lead goes down along the mast to a cleat on the inside of the last shroud of the foremast at the height of the third ratline beginning from the bottom The two ropes of topgallant staysail No. 5 passes through two blocks type "L" which are tied one on the right and one on the left on the inside of the last shroud (towards stern) of the fore topsail mast.The leads run down alongside the mast are tied to two cleats installed on the inside of the next to last shroud of the main mast (towards stern) at the height of the third ratline. Two two leads of the mizzen topgallant staysail must pass through (one on the right and one on the left) of the deadeyes type "E" installed on the inside of the first of the main shroud towards the bow of rope and will be tied at a cleat installed on the same shroud but lower. For the list of symbols used on this plan, refer to Plan Sheet 1
DETTAGLIO DELLE SCOTTE DEI PIOCCHI E VELE DI STRALLO (fuori scala) Lato di barbordo Lato di tribordo	**DETAILS OF JIB SHEETS & STAY SAILS (Not to scale)** Port side Starboard side
DETAGGLIO DELLE ESTRIMATA DEI FIOCCHI E DELLE VELE DI STRALLO ...etc Anelli esterno 4 in filo di acc 0.4	**DETAILS OF RIGGING FOR JIB AND STAY SAILS (not to scale)** 4 mm. ring seized with 0.4 mm. thread
La '6' passa nella cavatoia superiore a destra dell'albero. La '7' passa dallo stesso lato nella cavatoia inferiore. La '8' pass nelle due ... etc. La '1' pass nella cavatoia con puleggia superiore sul lato sinistro dell albero. La '3' passa dallo stesso lato nella cavatoia inferiore. La '2' passa nelle due cavatoie a destra dell'albero.	Rope 6 passes through upper hole on right side of mast. Rope 7 is inserted on same side of mast through lower hole. Ropes 8 pass through hole on the left side of mast. Rope 1 passes through upper hole (over pulley) on right side of mast. Rope 3 is inserted on same side of mast through lower hole. Rope 2 passes through the hole on the left side of the mast.

Tavola 10 & 11 **ALBERI, PENNONI E PARTICOLARI** **Tavola 12 – VELE ALBERO DI**	**Plan Sheets 10 & 11** **MAST & YARD DETAILS**

MAESTRA E PARTICOLARI **Tavola 13 – VELE DI TRINCHETTO E MEZZANA**	**Plan Sheet 12 – DETAILS OF MAIN MAST SAILS** **Plan Sheet 13 – FORE & MIZZEN SAILS** Refer to Euromodel web site ... 'Nautical Terms'

Tavola 14 **PIANTA MANOVRE; BOZZELLI E BIGOTTE**	**Plan Sheet 14** **LOCATION OF BELAYING PIN RACKS & CANNON BALL RACKS; DEADEYES & BLOCK** Refer to Euromodel web site ... 'Nautical Terms'
BIGOTTE A CANALI (Scala 2:1)	**GROOVED DEADEYES (Scale 2:1)**
DETTAGLIO DELLO STROPPO IN ACC. DEI BOZZELLI	**DETAIL OF METAL STRAPPING AROUND BLOCKSS**
BOZZELLI (Scala 2:1) **Errata Corrige: I bozzelli tipo Y/H e 2Y72H sono di eguali dimensioni e non Y/L e 2Y/2L.** **I bozzelli tipo M/L sono di eguale misura** Incollare N° 4 bozzellie da mm. 4 Nella scatola hanno ugual misura i bozzelli	**BLOCKS (Scale 2:1)** **Error Correction: The blocks type Y&H, 2Y&2H, are of the same size and not type Y&L and 2Y&2L.** **The blocks type M&L are of the same size.** Need to glue 4 blocks together, each of 4mm. Blocks Y & L/ 2Y & 2L are of the same size
LEGENDA Indica il n'progressinto della caviglia o galoccia a cui deve essere data rolta la manovra rolante Indica che alla manovra deve essere data rolta sulla bitta contrassegnata dal no nel cerchio Indica che manovra ra legata all'anello dei corrispondenite bozzello fisso.	**LEGEND** Shows the number of the belaying pin or cleat where the running rigging must be tied. Shows where the running rigging must be tied to the bitt marked by the number in the circle Shows where the running rigging is tied to the strap of the corresponding block.
SIGLATURA DEI BOZZELLI La sigla tra virgolette identifica il tip di bozzello. Il no dopo la sigla e il progressito relativo a ciascum tipo bozzello. Esempio: "2L" ... bozzello a 2 passaggi del tipo "L" 4 ... block N.4 of shown code	**DETAIL OF THE BLOCK CODES** Code markings of the blocks – the letters in between " " identify the types of blocks – the number after the code in between " " indicates the progressive type of block. Block with 2 holes, type "L" Block No. 4 of shown code
DA REALIZZARE A CURA DEL MODELLISTA Le sigle tra parentesi indicano il corrispondente bozzelle sol lato opposito a cui e mostratto ... etc Indica il punto di passaggio di una manovra volante (bozzello, passaggio a murata etc.) prima ... etc. Indica il no. Progressivo del punto fisso...etc	**TO BE CREATED BY THE MODELLER** The code in brackets indicate the corresponding block on the opposite side of view shown in the plan. Indicates the passage of running rigging (block or pass-through bulwarks, etc.) before being fastened. Indicates the sequential order of fixing of the rigging.

Tavola 15	**Plan Sheet 15**

MANOVRE	FIXED RIGGING Refer to Euromodel web site ... 'Nautical Terms'
PARTICOLARE DELLE CROCETTE (fuori scala)	**CROSSTREE DETAIL**
PARTICOLARE DELLO STRALLO ... etc Cuoio sp. 0.1mm Non compressa nel scatola di montaggio	**DETAIL OF THE MIZZEN STAYS** Leather, 0.1mm. thickness Not included in this kit
PARTICOLARE 1	**DETAIL 1**
PARTICOLARE DELLE RIGGIE DELLE BIGOTTE DELLE COFFE E DELL ... etc	**DETAILS OF THE DEADEYE STRAPS FOR THE CROSSTREES AND TOPS (not to scale)**
PARTICOLARE DELLE LANDE DELLE BIGOTTE DEI PARASARTIE (fuori scala)	**DETAILS OF THE STRAPPING FOR THE CHANNEL DEADEYES (not to scale)**
PARTICOLARE 2 (fuori scala) Cavo 2 fasciato con cavo 0.1	**DETAIL 2 (not to scale)** 2 mm. thread covered with 0.1 mm. thread
PARTICOLARE DELLE GRISELLE(fuori ... etc)	**DETAIL OF THE RATLINES (not to scale)**
PARTICOLARE DEGLI INCAPPELLAGGI DEGLI STRALLI (fuori scala)	**DETAIL OF THE TOP OF THE STAYS (not to scale)**
PARTICOLARE DEGLI INCAPPELLAGGI DELLE SARTIE (fuori scala)	**DETAIL OF THE TOP OF THE SHROUDS (not to scale)**

Tavola 16 MANOVRE	Plan Sheet 16 DETAILS OF FIXED RIGGING Refer to Euromodel web site ... 'Nautical Terms'
PARTICOLARE 1 (scala 2:1)	**DETAIL1 (scale 2:1)**
PARTICOLARE DELL'ATTREZZATURA DEL BOMPRESSA E DELL'ASTA DI FIOCCO ...etc Travergini in legno mm. 0.5x1.5x14.5 Cuoio sp. 0.1mm	**DETAIL OF THE BOWSPRIT & JIB BOOM RIGGING (2:1 scale)** Wooden strips 0.5x1.5x14.5 mm. Leather, 0.1mm. thickness
PARTICOLARE IN PIANTA DELL'ATTREZZATURA DEL ... etc N.B. Escluso gli arridatoi delle bigotte e i tiranti die bozzelli che sono color corda naturale, tutte le altre manovre de vono essere tinte color ... etc.	**HORIZONTAL VIEW OF THE BOWSPRIT & JIB BOOM RIGGING** N.B. Except for the deadeyes & block rigging which is of natural colour rope colour, all the other rigging must be painted dark brown to simulate the tarring of them.
PARTICOLARE DELLE COFFE DI TRINCHETTO E MAESTRA (fuori scala) N.B.Nella vista laterale delle coffe sono state omesse le bigotte e le sartie per maggior chiarezza. Le parti indicate con linea e punto sono relative al solo albero di maestra. Il diametro delle manovre e il tipo di bozzello al di sopra della linea sono relativi all'albero do maestra; quelli al di sotto della linea all'al ... etc Rete di filo 0.1 maglia Romboidale 2x1mm; colore: marrone Non compressa nella ... etc	**DETAILS OF THE FOREMAST & MAINMAST TOPS (not to scale)** N.B. On the side view of the tops, the deadeyes and the shrouds have been omitted for better clarity. Parts indicated with dot and dash lines refer only to the mainmast. The diameters of the rigging above the line refer to the mainmast and those under the line refer to the foremast. Thread netting 0.1mm. diameter Diamond-shaped netting 2x1mm; brown colour Not supplied in kit
CAVALLETIO DI SOSTEGNO (da eseguinsi in legno pregiato)	**DISPLAY STAND (made from good quality wood)**
NOTE	**NOTE**

Tutte le superfici delle coffe, le barre costiere, le barre traverse, le teste di moro, le crocette, i tratti di albero trale coffe e la teste di moro e tra le crocette e la teste di moro, sono di color nero semilucido. Per la legenda dei simboli usati sulla presente, perle bigotte i bozzelli edi particolari indicati ner due cerchi concentrici vedere la Tav 14	The surfaces of the tops with their crosstrees and trestle trees plus the caps, the crosstrees and pieces of mast between the caps and the tops and between the crosstrees and the caps are semi-gloss black. For the list of symbols used in this table for the deadeyes, the blocks and the details indicated in the double circles, see Plan 14

Tavola 17 **PIANO DI COSTRUZIONE E PARTICOLARI**	**Plan Sheet 17** **BUILDING PLAN**
PIANO LONGITUDIANLE	**LONGITUDINAL DRAWING**
PIANO ORIZZONTALE (linee d'acqua)	**HORIZONTAL DRAWING (water lines)**
PIANO TRASVERSALE (ORDINATE)	**OVERALL DRAWING (FRAME CAMBER)**
Curvatura del bozone Linea retta del baglio	Deck curvature Imaginary line used to detect curvature of deck
CHIGLIA – Materiale: legno pregiato Contrallare la lunghezza sullo scafo finito e ... etc. Lasciare mater in piv. Eseguire a montaggio P.27	**KEEL DETAIL : Special wood** Check length of the hull with part 27 Leave extra material Make this cut when matching with part 27
DRITTO DEL TIMONE Materiale: legno pregiato Profilo corrispondente a quello della chiglia Tagliare dopo il montaggio	**RUDDER POST DETAIL** Material: special wood The shape must be the same as the keel Cut out after installing
TIMONE – Materiale: legno pregiato	**RUDDER DETAIL – Material : special wood** This cut follows the line of the keel Hinges detail (scale 2:1) – male hinges Pin 0.5 mm diameter (make from a pin) Metal strip of burnished brass 0.1 mm. thickness, inside diameter 0.75 mm. Detail of female hinges (not to scale)
BARRA DEL TIMONE – Materiale: legno pregiato	**RUDDER BAR DETAIL – Material: special wood** This angle is determined when installing so that the bar is in a horizontal position. Install the pin so that the bar is fastened to the rudder.

Chapter 3: THE KIT

Drawings

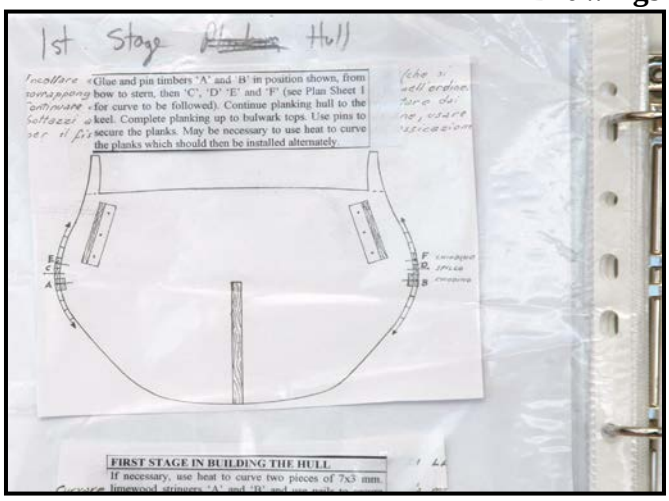


Figure 6: Organisation of Plan Sheet Material

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 (Fig. 6). The photo does not show LeRenommee detail but gives the idea !

The diagrams are beautifully drawn and 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. The drawing opposite depicts a composite collection of timbers forming the stem (bow) post. The kit supplies one laser-cut stem post without any detail whatosever. So you can decide to produce all the component parts (a big task) or simply go with the blank piece as it is supplied. What you could do is to carve all the joint lines onto the surface to simulate the individual pieces.

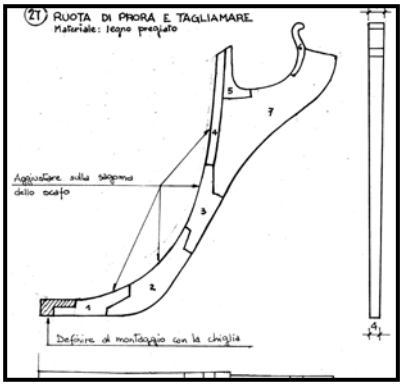


Figure 7: Stem Post Detail Which You Might Use

Figure 8: Identification of Metal Parts

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 manual 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.

Component list

Wood – Laser-cut

Hull:

Keel (1) – Chiglia

Transverse Frames (14) - Ordinate

Decks:

Gun Deck (1) - Ponte di batteria

Main Deck (1) - Ponte di coperta

Quarter Deck (1) – Ponte di cassero

Stern:

Stern Balcony Supports (4) - Supporti di balconata No. 16

Stern Balcony/ Transom (1) - Particolare N°17

Rudder (1) – Timone

Posts:

Stem (Bow) Post (1) - Ruota di prua

Stern Post (1) – Ruota di poppa

Support Base (1) - Invasatura anteriore + posteriore

Wood – Limewood – listello tiglio

35 x 35 x 100 mm.	**Filler Blocks for Bow** - Blocchetto di riempimento di prua -
25 x 28 x 120 mm.	**Blocks for Quarter Deck Entrance** - Blocchetto per porte cassero
2.0 x 6 x 650 mm. (60)	**First Planking** - 1° Fasciame

Plywood- compensata

1 x 60 x 200 mm.	**Mast Tops** - Coffe

Wood – Ramin - ramino

3 x 20 x 200 mm. (1)	**Mast Cheek** - Maschette
2 x 7 x 300 mm. (1)	**Stiffener Main Mast** - Rinforzi albero di maestra
2 x 6 x 250 mm. (1)	**Stiffener Fore Mast** - Rinforzi albero di trinchetto

Wood –Walnut – listello noce

1.0 x 6 x 650 mm. (60)	**Second Planking** - 2° Fasciame
0.5 x 4 x 600 mm. (45)	**Deck Planking** - Rivestimento ponti
10 x 10 x 200 mm. (1)	**Cradle Support Cross Pieces** - Traversa invasatura
6 x 7 x 590 mm. (1)	**False Keel, Rudder Post** - Sottochiglia , Dritto del timone
1.5 x 3 x 500 mm. (1)	**Poop Rails, Bulwark** - Balaustra
1x 1.5 x 500 mm. (1)	**Poop Rails, Bulwark** - Balaustra
4 x 4 x 300 mm. (1)	**Rudder Bar,Stern Support**:Barra timone,Sostegno specchio di poppa
0.5 x 3 x 500 mm. (6)	**Mast tops** - Coffe
2 x 2 x 390 mm. (1)	**Crosstrees, Mizzen Lower Mast** - Barre traverse albero di mezzana
3.5 x 5 x 110 mm. (1)	**Top Ribs Main Mast** - Barre costiere albero di maestra
3 x 3 x 300 mm. (3)	**Bulwarks & Crosstrees of Main Mast & Foremast** - Balaustra , Barre traverse albero di maestra e albero di trinchetto
3 x 4.5 x 100 mm. (1)	**Top Ribs Foremast** - Barre costiere albero di trinchetto
2 x 3.5 x 70 mm. (1)	**Top Ribs, Mizzen Mast** - Barre costiere albero di mezzana
2 x 11 x 500 mm. (1)	**Channel –** Parasartie
1 x 6 x 500 mm. (1)	**Pin Rails** - Cavigliera
5 x 5 x 300 mm. (2)	**Pin Rails & Catheads** - Pazienza e Gru di capone

1 x 2 x 200 mm. (1)	**Ratlines** - Griselle
2 x 2 x 600 mm. (2)	**Cap Rail** - Capodibanda
2 x 12 x 630 mm. (2)	**Wale** - Incintoni
1.5 x 2 x 600 mm. (4)	**Quarter Deck reinforcement of bulwarks** - Rinforzi di murata
1.5 x 5 x 600 mm. (2)	**Cap rail base** - Base capodibanda
1.5 x 11 x 400 mm. (1)	**Gun Port Hatch** - Portelli cannoni
1 x 8 x 400 mm. (1)	**Gun Port Lining** - Battuta portelli cannoni

Accessories

Anchor 50mm with stock & ring (2) - Ancora da mm. 50 con ceppo ed anello(Art.11/131)
Anchor 40mm with stock & ring (2) - Ancora da mm. 40 con ceppo ed anello(Art.11/009)
Barrel (1) – Botte (Art.22/112)
Belaying Pins, 8mm. (156) - Caviglia da mm. 8 (Art.22/144)
Bell (1) – Campana (Art.11/107)
Binnacle (1) - Chiesuola campana (Art.11/363)

Blocks:

N.B. The plan sheet shows a larger variation of block sizes than that provided in the kit. This kit has amalgamated a number of blocks with similar sizes together – e.g. G, Y and H all use the same sized block.

G/Y*/H*:	**3mm., 1 hole(178) -** Bozzelli da mm. 3 a 1 foro (Art.22/026)
34/2L/2Y*:	**4mm., 2 hole(123) -** Bozzelli da mm. 4 a 2 foro (Art.22/031)
M:	**5mm., 1 hole (40) -** Bozzelli da mm. 5 a 1 foro (Art.22/028)
2M:	**5mm., 2 hole (2) -** Bozzelli da mm. 5 a 2 fori (Art.22/032)
3M/ 3L*:	**5mm., 3 hole (37) -**Bozzelli da mm. 5 a 3 fori (Art.22/113)
N:	**7mm., 1 hole (9) -** Bozzelli da mm. 7 a1 fori (Art.22/030)
2N:	**7mm., 2 hole (8) -** Bozzelli da mm. 7 a 2 fori (Art.22/034)
F*:	**Violin, 6 mm. (4) -** Bozzelli a violino da mm. 8 (Art.22/083)
34*:	**Heart, 7 mm. (6) -** Bozzelli a cuore da mm. 7 (Art.22/157)
35*/36:	**Heart, 10 mm. (3) -** Bozzelli a cuore da mm. 10 (Art.22/085)

* Not available commercially 37* + 38* not enclosed in kit

Brass Rod, 1mm., support for rails(34) & tops main mast & foremast(8) - Tondino ottone mm. 1
Buoy (4) - Gavitello (Art.22/145)
Capstans:
Basic : 11x16 mm. (1) - (Art.22/135); **15x20 mm. (1) –** Argano (Art.22/134) **Capstans**
Advanced : 15x20 mm. (1) - (Art.22/134); **20x25 mm. (1) –** Argano (Art.22/133) **Advanced Capstans**
i.e. 3 capstans included, using two depending on skill level
Chain Plates:
3mm.,(8)- Landra da mm. 3 (Art.11/358)
5mm.,(8)- Landra da mm. 5 (Art.11/313)

Cleats (67) - Galloccia (Art.11/048)

Deadeyes:
E/33: 3mm.(1-hole) (3) - Bigotte da mm. 3 (Art.22/136)
C: 3mm.(3-hole) (50) - Bigotte da mm. 3 (Art.22/018)

D: 5mm.(1-hole) (2) - Bigotte da mm. 5 (Art.22/137)
X: 5mm.(2-hole) (2) - Bigotte da mm. 5 (Art.22/138)
B: **5mm.(3-hole)(128) -** Bigotte da mm. 5 (Art.22/020

Eye Pins (50) - Anellino con gambo (Art.11/022)
Flag set (1) - Serie completa bandiere (Art.13/035)

Armament

Full Cannons - Cannoni:
30mm. (12) (Art.11/119)
40mm. (30) (Art.11/120)

Gun Carriages-Affusti per cannoni **19mm. (12)** (Art.22/001); **27mm. (30)** (Art.22/125)

Gun Door Hinges (30) - Cerniere portelli cannoni (Art. 11/129)

Wheels - Ruote per cannoni **diam. 4mm.(24)** (Art.22/148); **diam. 5mm. (84)** (Art.22/149); **diam. 6mm.(60)** (Art. 22/150)

Axles (carriage wheels)
wooden rod 2 x 200mm (3)**-** Tondini di kotò diam.mm. 2 per assali affusti
Axles (cannons)
brass rod 1.5 x 130mm. (3) **-**Tondino ottone da mm. 1.5 per spine cannoni
brass rod 1 x 130mm. (6) **-**Tondino ottone da mm. 1 per spine cannoni

Grating Strips 1.0 x 1.0 x 33mm (290) **-** Elementi per paiolato da mm. 33 (Art.22/056)
Lantern, Topsail (1)**-** Lanterna di gabbia (Art.55/005)
Mast Caps – Testa di moro ...
Main Mast (di maestra) (1) (Art.22/139)
Mizzen Mast (di gabbia e mezzana) (2) (Art.22/140)
Foremast (di trinchetto) (1) (Art.22/141)
Fore Lower Topsail Mast (di parrocchetto) (1) (Art.22/142)
Bowsprit (di bompresso) (1) (Art.22/143)
Metal Decorations Set - Serie completa decorazioni fuse (Art.11/357)
Plaque (1) - Targa invaso (Art.12/008)
Rigging yarn

0.25 mm. (Art. 77/025)	0.80 mm. (Art. 77/080) /
0.40 mm. (Art. 77/040)	1.00 mm. (Art. 77/100)
0.60 mm. (Art. 77/060)	1.50 mm. (Art. 77/150)

Rings, Brass (50) – Anellino (Art.11/019)
Rudder hinges (4) - Cerniere timone complete (Art.11/122)
Sail Boat Hull, 80mm. + 120mm. (1+1) - Scialuppa da mm. 80 (Art.88/003) /Scialuppa da mm. 120 (Art.88/002)
Sail Cloth, 450 x 900 mm. - Serie tela per vele mm. 450 x 900 (Art. 15/008)
Stairs - 9 steps (3) - Scala (Art.22/069)
Stanchion Cleats (e.g. 'staghorns') (10) - Tacchetti (Art.11/271)
Wheel, Ship's (1) - Ruota timone (Art.22/099)
Set of Plans (18 sheets) - Serie disegni (No 18 Tavole) (Art.66/00
Instructions - Istruzioni

Masts & Spars

10 x 330mm. (1), 10 x 520 mm. (1) ; 8 x 650 mm. (1);8 x 490mm.(1); 6 x 510 mm. (1); 6 x 240 mm. (1); 5 x 560 mm. (1); 5 x 600 mm. (1); 5 x 160 mm. (1); 4 x 450 mm. (1); 3 x 600mm. (1); 3 x 470mm. (1); 3 x 310mm. (1); 2 x 580mm. (1); 2 x 360mm.(1)

A: BOWSPRIT

A: Bowsprit Mast – Albero di bompresso (10 mm.)
A1: Jib Boom- Asta di fiocci (5 mm.)
A2: Bowsprit Flagpole - Asta di bandiera di bompresso (3 mm.)
A4:Dolphin Striker – Pennaccino (3 mm.)

Bowsprit Yard

A5: Spritsail Yard – Pennone di civada (4 mm.)

B: FOREMAST

B: Fore Mast – Albero di trinchetto (10 mm.)
B3: Fore Topmast- Albero di parrocchetto (8 mm.)
B6: Fore Topgallant Mast – Albero di velaccino (5 mm.)

Foremast Yards

B7: Fore Yard - Pennone di trinchetto (8 mm.)
B8: Fore Topsail Yard – Pennone di parrocchetto (5 mm.)
B9: Fore Topgallant Yard – Pennone di velaccinno (3 mm.)

C: MAIN MAST

C: Main Mast - Albero di maestra (10 mm.)
C3: Main Topmast – Albero di gabbia (8 mm.)
C6: Main Topgallant Mast – Albero di velaccio (6 mm.)

Main Mast Yards

C7: Main Yard – Pennone di maestra (6 mm.)
C8: Main Topsail Yard – Pennone di gabbia (6 mm.)
C9: Main Topgallant Yard - Pennone di velaccio (3 mm.)

D: MIZZEN MAST

D: Mizzen Mast – Albero di mezzano (8 mm.)
D3: Mizzen Topmast – Albero di contromezzano (5 mm.)

Mizzen Mast Yards

D4: Mizzen Yard – Pennone di mezzana (5 mm.)
D5: Mizzen Upper Topsail Yard - Pennone di contromezzana (4 mm.)
D6: Lateen - Asta di mezzana (5 mm.)

E: STERN

Stern Flag Pole – Asta bandiera di poppa (4 mm.)

F: SAILBOAT

Masts – Alberi scialuppa (3 mm.)
Yards – Buttafuori pennone di maestra e gabbia e trinchetto e parrocchetto e velaccino (3 mm.)
Yards – Pennone e bandiera e asta bandiera scialuppa; pennaccino (2 mm.)
Oars – Remi scialuppa (2 mm.)

Chapter 4: HULL FRAME & DECKING

It is best to formulate your OWN method of assembly before starting. This applies to all stages and especially includes mast & rigging construction. The following text is prioritised to make the construction process as simple as possible. Keep in mind that they are only ***suggestions.*** The text highlights only the major steps for construction.

Dimension Difficulties

It is unfortunate to have to comment on a problem that I discovered 'down the track' but one that is best discussed at this point. This does not detract from your having purchased a 'kit' which will prove to be a very challenging exercise and one that will quickly divert you into developing your own 'scratch' model. There are just so many twists and turns ... but I digress.

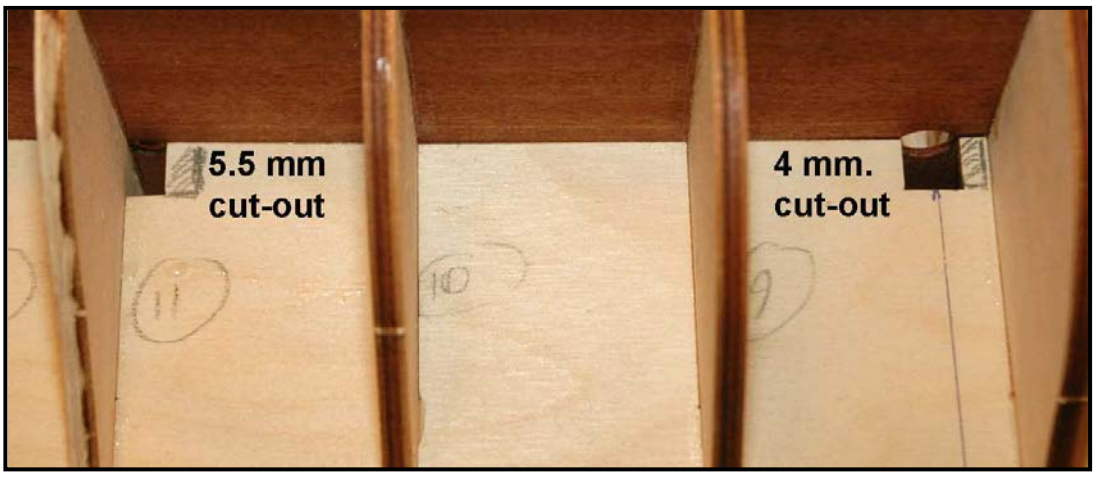


Figure 9: Mast Step Repositioning

Euromodel had a production problem which nobody commented on until I began work on this kit in mid-2011. There is a mis-alignment with the holes in two decks and the keel provided for the three masts and to produce the correct angle relative to the deck, some corrections need to be made. However, since people have ignored this error until inserting the masts, it is clear that this has not been a major concern to most people.

This problem can easily be corrected but **to tell if you have to make any alterations, examine Figure 9**. In my kit the mast step for the Mizzen Mast was immediately adjacent to Frame 11 and needs to be shifted as indicated. The mast step for the Main Mast was approximately 4 mm. back from Frame 8 and needs to be re-located as far as possible towards that frame. The Fore Mast needs similar attention as the other two with an adjustment of about 3 mm.

Figure 10: Elongated Gun Deck Hole

Coupled with that, the Gun Battery Deck holes for the above masts need to be elongated and whilst that is not very appealing to say the least (as shown in the photograph of the Main Mast passing through), I plan to construct a central set of boards down the centre of the ship which will hide all of this.This is indicated in Plan Sheet 5 by an absence of planking in the centre of two drawings (ponte di coperta e batteria). See diagram below.

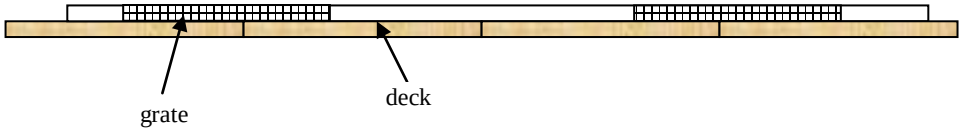


Figure 11: Raised Planking & Grates Along the Deck

If you choose not to go the 'scratch extent' of laying down these central boards – and from the photographs I have seen of many other La Renommee models, many builders do not – these areas will not be readily seen underneath the Main Deck. The simple alternative is to create a small square around the mast on top of the Gun Deck planking and this would be a reasonable, authentic alternative.

Results of Mast Adjustments

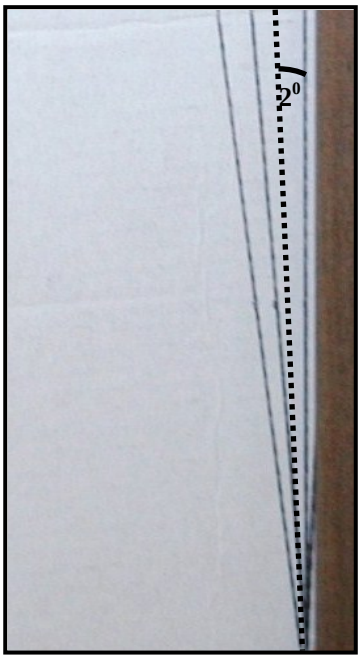


Figure 13: Main Mast Inclination

Main Mast has an inclination backwards of 92^0 (relative to Main Deck surface)

Mizzen Mast has an inclination of 95^0.

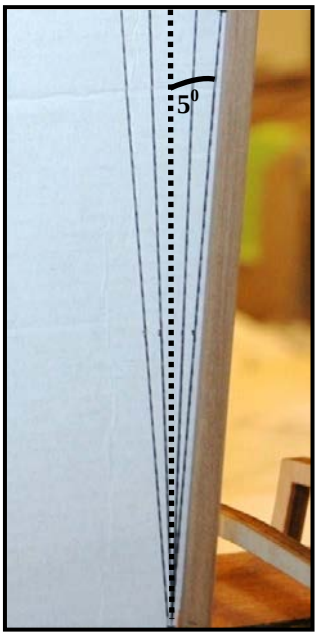
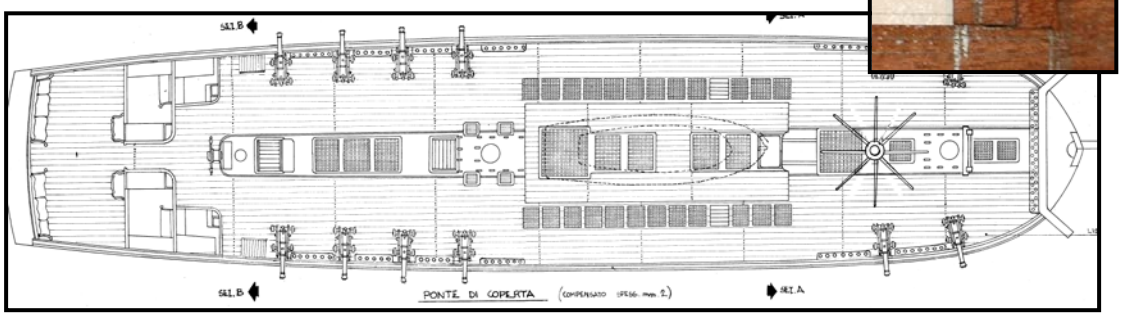


Figure 12: Mizzen Mast Inclination

Main Deck Correction

In order to correlate the correct position of many deck features, I decided to correct the position of the central opening down to the Gun Deck. This basically involved shifting the opening approx. 5 mm. towards the stern. This did not take long to do and was certainly worth the trouble as now the three mast holes ***and*** the opening all match on the one diagram … this now becomes the **standard reference diagram** for all other measurements.

... unfinished, but you get the idea



Basic Frame

Frame Assembly

Thirteen of the fourteen transverse pre-cut 'bulkheads' (i.e. Nos. 1-13) are slotted into the false keel as a dry run to determine which joints are too tight and which are too loose. All the joints were an excellent fit with no cleaning up of the fitting surfaces required. Include the two full-length decks (4 pieces) in this dry run.

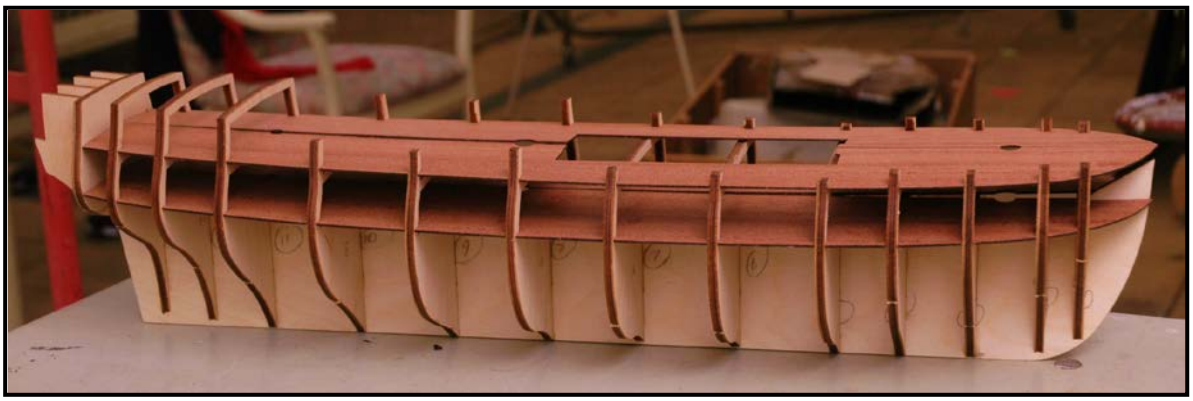


Figure 14: All Transverse Frames in Position

Alignment of the beams supporting the decks was good but some adjustments would still have to be made. All thirteen frames and the deck pieces were then removed from the false keel.

PVA is the adhesive of choice and frames '1' and ' 7' were glued in first using a set square to check their alignment with the false keel whilst at the same time the diagonal distance between them was also checked . These two frames were allowed to dry before proceeding any further.

Frames were then put in place at alternate ends ('2' and '8') and so on **EXCEPT FOR FRAME 14**. Do not put this frame into position until the lower deck has been inserted through the stern end frame (Frame 13). Square & diagonal measurements and central alignment were constantly checked to ensure the correct overall alignment. These combined factors should provide for good symmetry through the ship. The ***diagonal measurements*** were checked in all sorts of point combinations along the ship and this was absolutely critical in getting the alignment correct.

'Be diligent and do the diagonals'

At this stage the *Gun Battery Deck is NOT glued in place* !

Stern Frame 14

Again this proved to be a good fit. The four pieces (No. '16') were glued in position as shown on the plan sheet. The stern filler block (30 x 30 x 100 mm.) was somewhat generous in size but this was marked out to correspond in size to the four No. 16 pieces. The wood was cut to these outlines and further cut to relate to the curved shape of the frame. The two fillers were then glued in place ready for final shaping.This assembly is glued in place after the lower deck is in position.

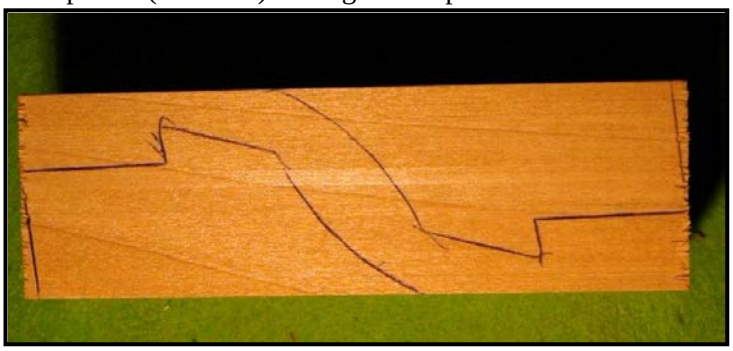


Figure 15: No. '16' Pieces Ready for Cutting

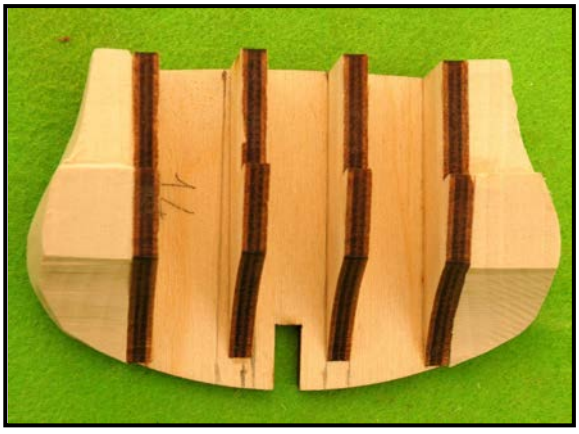


Figure 17: Filler Blocks in Position on Either Side but not Carved

Figure 16: Filler Blocks partially Carved

Carving almost complete – viewed from beneath. The block on the left needs to be tapered more to match the block on the right.

View looking down on top over one side.

Figure 18: Final Carving; Side View

Stem Post

Stem Post (ruota di prora)

Deck Planking

Points to consider include the wood type, width, length, nailing, caulking & texture

The decking in the 18th century was usually constructed with a very light coloured timber but there is a limit to what a kit can supply and the same wood (walnut) is used for both the hull & deck second planking in this model. In this time period, the **width** of decking timber was 8-14 inches (3-5 mm.). *The kit supplies 4 mm. walnut which really is fine but I chose to go with some lighter-coloured tanganika planks that I happened to have which were 5mm. wide.*

From European forests, the **length** of timber varied between 20-24 feet. Now … at even 24 feet (288 inches), the length of planks for this ship at a 1:72 scale would be approximately 102 mm. The drawings such as Plan Sheet 5 only show planking as continuous from stem to stern which is unrealistic!

Having determined what length you are going to use, it is best to set up a jig. I settled on using the French version of a **five plank shift** (Fig. 19). Following on from the first line of planks, there will be five lines of planks NOT having their butt joints lining up. The next following line WILL have a butt joint lining up with the butt joint from the first line.

To create this style of planking, I used six different lengths – the actual 90 mm + 15/30/45/60/75 mm lengths.

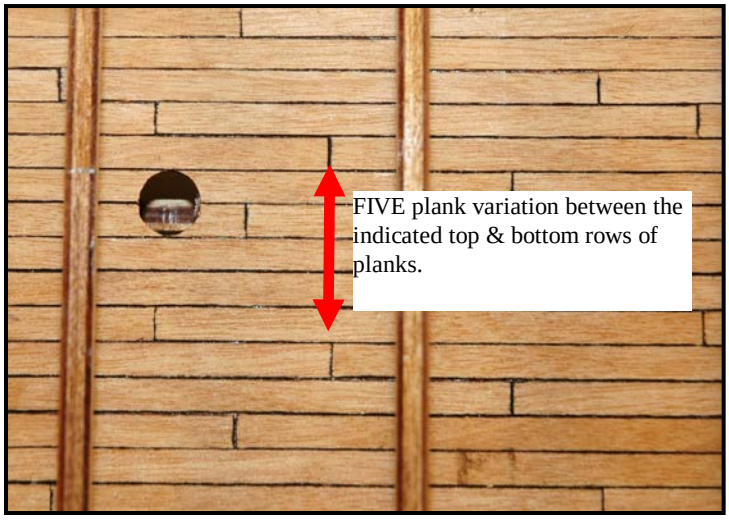


Figure 19: Five Plank Variation

However, since the Gun Deck was the length of the ship, I just planked this with 90 mm. lengths.

Gun Battery Deck Planking

The two halves were planked away from the ship leaving one central row to cover the joint after installation. Once I got into it, this five plank shift was straightforward and the final effect interesting.

Confession: I actually glued this deck in position ***before*** planking it. The final result was the same but the procedure much more laborious as I manipulated each plank into position by negotiating the spaces between the frames with forceps. Since much of this deck will not be seen in the end result, I did not create 'nail holes' in the planks. It would have been far easier if the two deck halves were on my bench. I live and learn!

After final installation of this deck, the positions for each cannon were marked – some minor adjustments were necessary to accommodate tight fits against some of the frames.

Nailing & Caulking

'**Nailing**' with nails or a marked black spot? Actual nails used in planking of real ships had a head diameter of about 5/8 inch. which converts to 0.22 mm. with the 1:72 scale. The nails typically supplied in kits have a head of approx. 1.3 mm. which converts to a head diameter of 3.69 inches. Far too big. So at the best, you are left with attempting to create very small black marks or do nothing at all.

A tried technique ……." is to utilize a hypodermic needle squared off at the tip that is heated in a smokey candle flame. Carefully applied to the timber, the nailed effect is produced." I experimented with this method but found the correct sized needle was of such a small mass that there was no way that I could maintain the heat in the needle long enough to mark the deck

In the end, therefore, I chose not to put nail head marks on the deck.

The gap between the plank lines in the actual ships was '**caulked** with oakum and paid with tar'. To simulate this, first carefully sand back the edges which are usually very sharp & rough. Then apply a black marking pen with a broad, flat tip quickly and lightly to colour all the edges. Some builders only do this to *one of the adjacent edge*s to avoid too much 'bleeding' from the marking pen. You will need to make your own choice in this matter. *The end grain is very porous and so some use an HB pencil (or pencil block available from art supplies) instead of the black marking pen. Again, experiment and make your own choice*

The deck of a real ship would have great variation in the appearance of the timber and so a common error is to just plank away without any thought to the grain. A trick here is to check the grain and keep reversing it as you work along a length. This creates a subtle **variation in texture**.

Deck Support

Whilst most decks have cross-support with the beams, they lack support (apart from the Gun Battery Deck) down the mid-line where the two halves meet. So before the decks are glued in place, it is necessary to glue in short sections of some scrap wood material under one of the two halves. So when fixing the other half in place, there is now a common structural support for both halves down the mid-line. The photo above (but actually not the LaRenomme'e) illustrates this point.

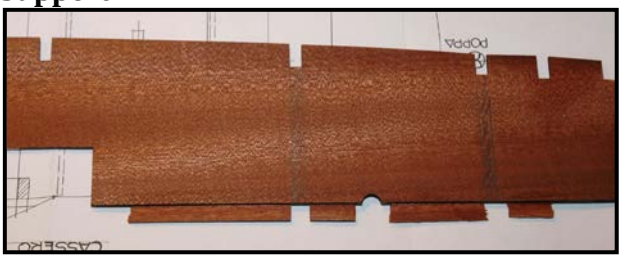


Figure 20: Supporting Joint for Half Deck Mid-Line

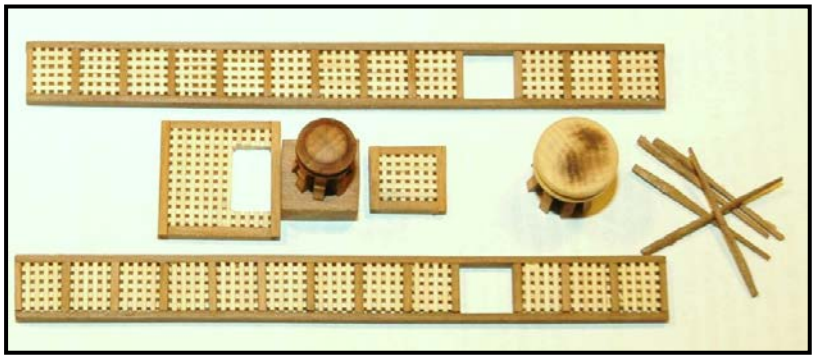
It was necessary to cut sections out of Frames 6 and 7 and insert supporting beams underneath either side of the Main Deck opening.

Two longitudinal deck support beams in place after cutting through Frames 5 & 6. As evident from the photo, I had to trim down the surface of the remaining side arms of Frame 5 on either side.

Figure 21: Longitudinal Deck Beams

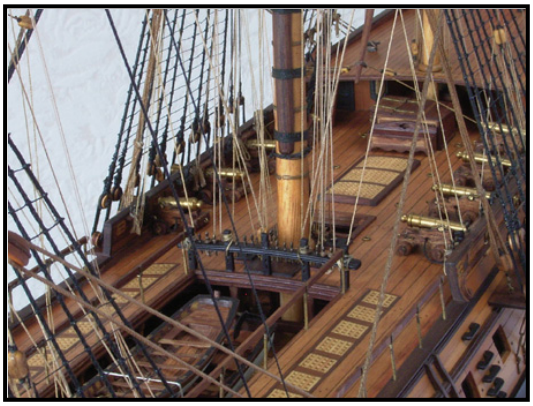
Gratings

From the outset, it was clear that the commercial grate strips provided would cause some slight variance to what is indicated in the plan sheets. I just needed to be flexible in the size that I actually generated.



Some of the grates (and Capstans) to be constructed. The grates are not necessarily complete yet as the corners may be rounded off.

Figure 22: Grating Variation



Either side of the opening down to the Gun Battery Deck there are 24 grating pieces, each 11 x 9 mm.(refer to the photos above and to

Figure 23: Main Deck View of Gratings

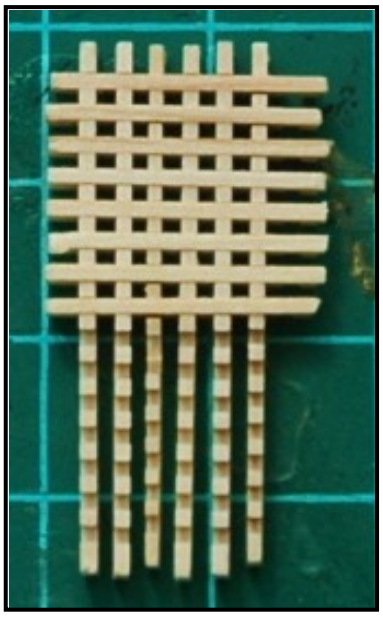


Figure 24: Assembling Mimimum Number of Grating

The gratings were assembled from sufficient strips taking care not to waste any. A completed square (15 x 15 strips) was not necessary in most cases to achieve the desired outcome. The kit provided sufficient strips for all grates but was dependent on my utilising the minimum number to achieve any outcome.

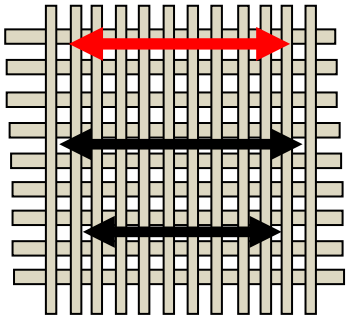
Grate Dimensions Example ...

A grating, 17 x 13 mm. is required.

Four lengths of grate pieces are cut into halves = 8 pieces of 13mm.

Six full lengths are used = 17 mm. (cut-offs can be used elsewhere)

It is important to realise that there are small variations between the plan view showing the grates on the two decks and the plan sheet drawing showing the different grates. The final size is determined by the dimension of the grate pieces themselves. When the raw grates are assembled, the modeller will finish off the sides of the grates allowing a suitable distance between the outer length of the last grate and the wood length used to frame it.



The red arrow shows the required dimension.

The blacks arrows show a slightly larger dimension (middle) or smaller dimension (lower) that the modeller would have to choose from

Figure 25: Judging the Nearest Grate Size

For example, '11.5' would produce grate pieces hard up against the edges. To make it look realistic, you would have to either increase or decrease the size. I chose to change the '11.5' down to 10.6. The diagram opposite will explain what I mean. Once the 'squares' were assembled, they were individually immersed in a 1:1 PVA – water mixture and allowed to dry. Some careful sanding along the edges provided a grating with the desired dimensions and uniform 'openings' around the edges – although this did take some time to do.

Main Deck Grate Dimensions **(sizes that I finished up using are governed by the width/ spacings of commercially available grating strips).**

Overall Dimensions (mm. x mm.)	**Units**	**Part strips seen in plan view**	**No. 33 mm. strips required per unit**	**Total no. 33 mm. strips required = 188**
12.8 x 16.54	**3**	**6 x 8**	**6 + 4 = 10**	**30**
9 x 11	**24**	**4 x 6**	**2 + 2 = 4**	**100**
22.7 x 22.7	**1**	**11 x 11**	**11 + 11 = 22**	**22**
12.8 x 11.2	**1**	**6 x 5**	**3 + 3 = 6**	**6**
9.14 x 9.14	**2**	**4 x 4**	**3 + 3 = 6**	**18**
6.8 x 6.8	**4**	**3 x 3**	**3 + 3 = 6**	**12**

Gun Battery Deck Grate Dimensions **(as above, sizes that I finished up using are governed by the width/ spacings of commercially available grating strips).**

Overall Dimensions (mm. x mm.)	**Units**	**Part strips seen in plan view**	**No. 33 mm. strips required per unit**	**Total no. 33 mm. strips required = 74**
23 x 23	**1**	**11 x 11**	**11 + 11 = 22**	**22**
13.2 x 18.7	**4**	**6 x 9**	**4 + 9 = 13**	**52**

Main Deck Gratings

The following diagrams illustrate the main grates that were created for the Main Deck along with their overall dimensions that I used.

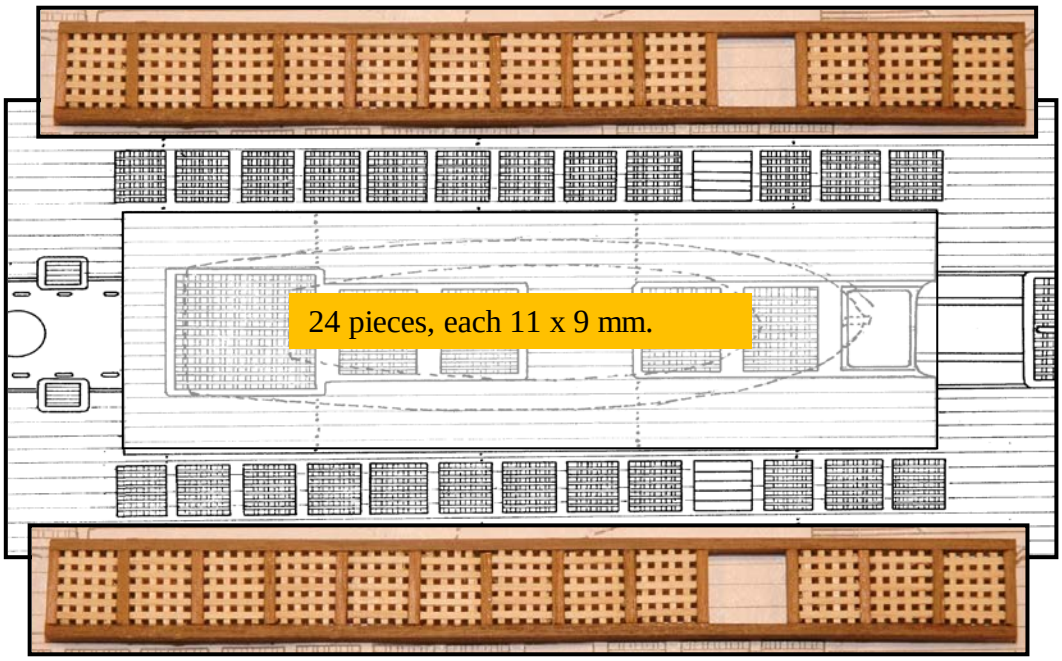


Figure 26 : Main Deck Gratings

My dimensions for these grating strips were:
Individual Grates: 9 x 11.0 mm
Gangway Opening: 11.2 mm.
Total Length: 143.22 mm.
Overall Width: 14.8 mm.

Gun Deck Gratings

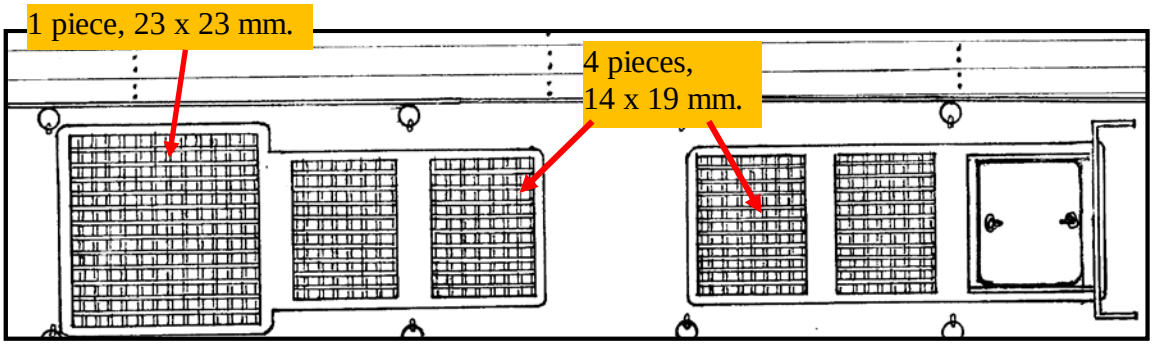


Figure 27: Gun Deck Gratings

NOTE:Again, the actual grate sizes I finished up with are described in a table a few pages back.

The above diagram shows what is VISIBLE on the Gun Battery Deck from above ... but there are other grating peices that could be included should you choose to do so !

Main Deck gratings adjacent to the Foremast

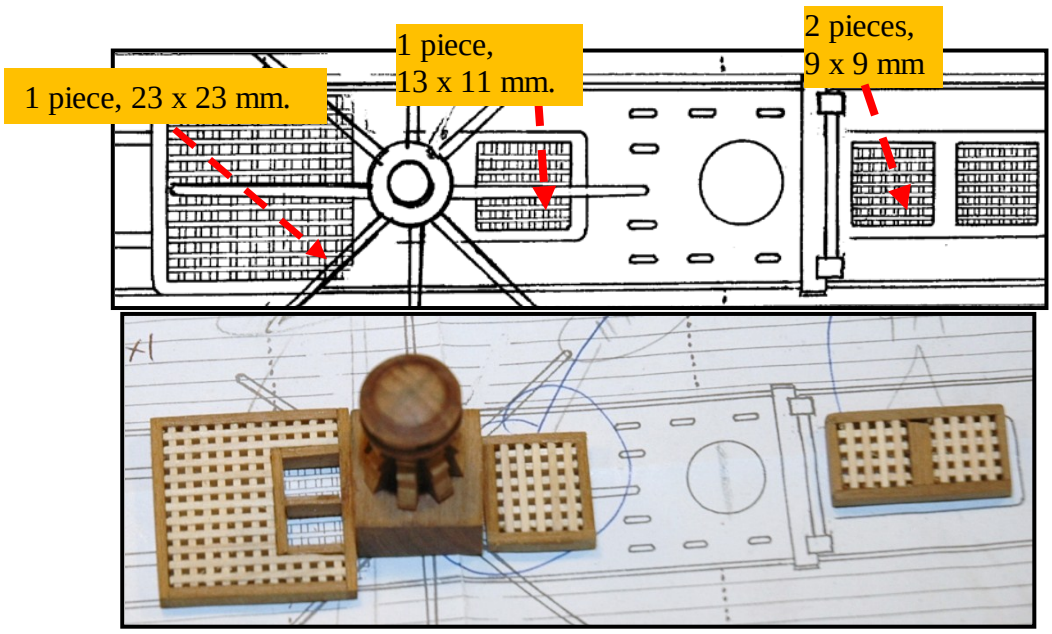


Figure 28: Main Deck Gratings Adjacent to Foremast

Galley Stove

The 23 x 23 mm. grate has two openings for chimneys from the galley stoves ('one from the officers & one from ordinary seamen'). However, like so many other builders before me, there seems to be no strong evidence for such a combination. The approach adopted by many favours the construction of just *one* chimney. The basic approach to be adopted here is the construction of just that part of the chimney that extends through and above the grate.

The 13 x 11 mm. grate will have a handle because it has a stairway immediately below.

Main Deck Gratings adjacent to the Main Mast

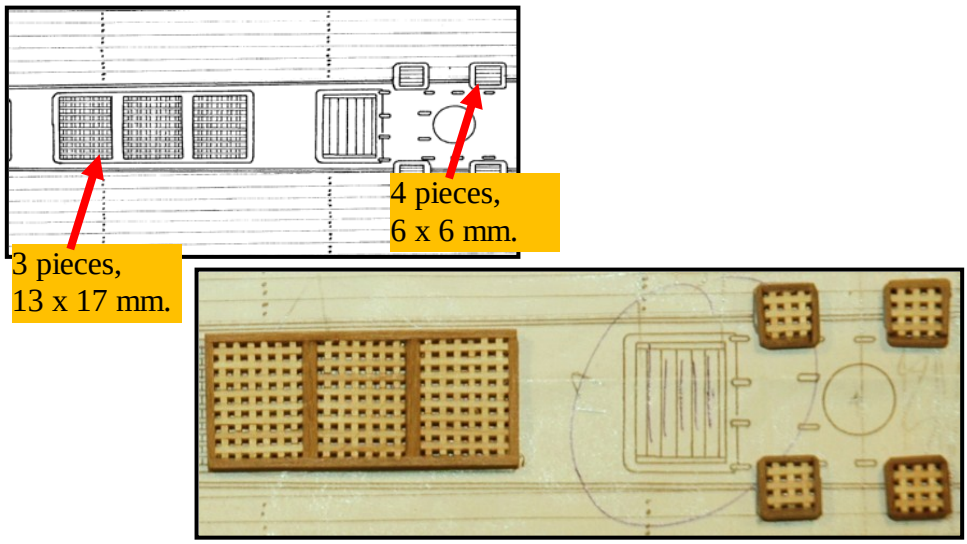


Figure 29: Main Deck Gratings Adjacent to Main Mast

Chapter 5: STEERAGE, ANCHORAGE & HAULAGE

Steerage

At the beginning of the 18th century, the ship's steering wheel appeared and with a rope system wrapped around its barrel it was connected through a to the rudder blade via a horizontal beam termed the tiller.

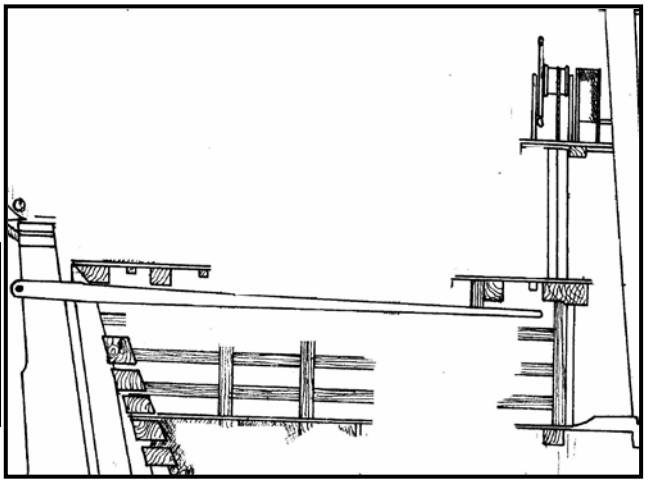


Figure 30: Ship's Wheel, Tiller & Rudder

Rudder

The supplied blade is already laser-cut to shape including that required for the fitting of the pintles ('rudder irons') attached to the hull.

The blade was tapered from **7 mm. to 2 mm. on the aft edge 9.5 mm.** from the top (and **7 mm. to 5 mm. on the inner edge** leaving the head intact to allow for the tiller housing. Thus the maximum taper is at the bottom on the aft edge [Fig. 31 illustrates the tapering by increasing darkness].

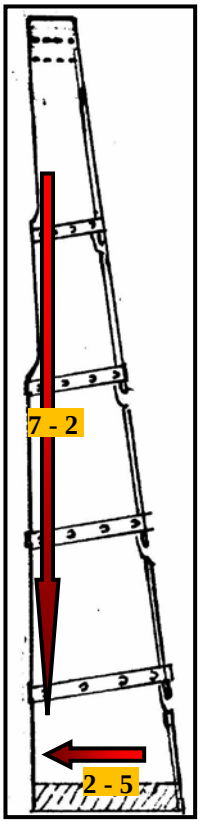


Figure 31: Rudder Tapering

There are other choices that could be made such as illustrating the use of separate timbers in the rudder and the presence of the tiller arm ['advanced' section].

Rudder Pendants

No indication of pendants were evident on these sheet plans but I decided to include what was typical on French ships of this time ['advanced' section].

Ship's Wheel (ruota del timone)

Compass Binnacle

You may decide that the ship's wheel and compass binnacle need not be constructed as they are not readily visible underneath the Quarter Deck. However, detail is shown in the 'Advanced' section.

Anchorage

The larger **sheet anchor** (ancora di speranza) and the smaller **bow anchor** (ancora di posta) are to be found on each side at the bow end. The attached ropes are connected to a nearby capstan. Buoys floating on the water surface indicate the vertical position of each

Figure 32: Typical Anchor Assembly

Anchor Assembly

Some time needs to be spent on the metal components filing the surfaces to remove raised casting edges. At this stage, the top of the shank (above the wooden stock) will need to be very carefully drilled through to accomodate the anchor ring. There may well be an impression of a hole, but this will need to be re-located further up the metal shank due to the thickness of the stock. This fits in well given the diameter of the anchor ring. The metal is fragile and and drilling must be done by hand ***very slowly*** to avoid breakages. [I had to reduce the thickness of the stock slightly before doing all of this!].

Of interest, the ring would have a series of puddening – strips of tarred cloth followed by rope and finally some fine yard applied at each end of the rope and also in the middle. At this scale, it is reasonable to only apply the rope (0.25 mm.). This is something you could quite easily add to the ring to increase its authenticity.

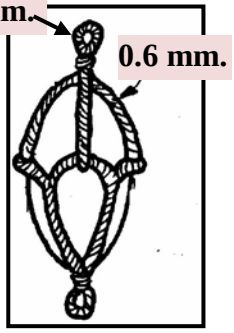


Figure 33: Buoy Rigging

Anchor Buoy (gavitello)

They consisted of a light-weight wood or cork covered in tarred rope. The buoy rope was clove hitched to the crown of the anchor with its end stopped to the shank. Most builders will just take the wooden buoys as supplied, paint them a suitable colour and add the buoy slings to complete this piece using 0.6 mm. and 0.25 mm. ropes. There are different ways of rigging the buoy but the easiest is the one shown in Fig. 33.

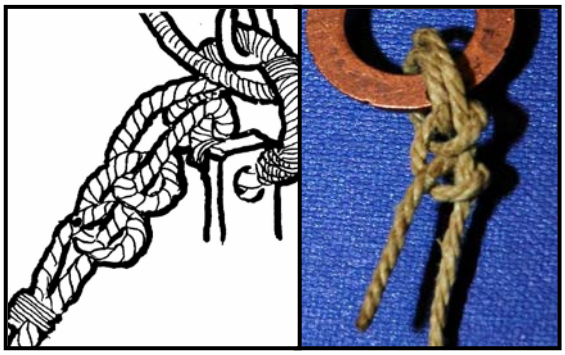


Figure 34: Fisherman's Knot

Anchor Cable (gomene delle ancora)

At sea, the cable was often unreeved ('unrove' or 'undone') from the anchor ring and secured along the deck. During the 18th. century, the cable was secured to the ring with a 'fisherman's knot'- some references confirm its use on Mediterranean vessels during this time. The 'fisherman's knot' is an easy knot to create and I decided to keep with this style of anchor knot.

Do not colour the rope to simulate tar. Historically, these ropes were not coated with tar – handling would be difficult and in any case the ropes readily dried out after immersion.

So ...
sheet anchor cable = 1.5 mm.
bow anchor cable = 1.0 mm.

Figure 35: Fisherman's Knot Completed

seizing rope = 0.25 mm.

Haulage

The **cathead** was a heavy beam extending well out from the hull to allow the lifting of large metal anchors without damaging the wooden hull.

Hauling of the ropes was done by movement of the rotating **capstan** – from the 17 century one was located abaft the Main Mast for general lifting and the other abaft of the Foremast on or under the Forecastle Deck for lifting the anchors.

Cathead (gru di capone)

This heavy wooden beam carries three sheaves ('pulleys') at its outboard end. The anchor tackle is reeved through these sheaves and belayed to a cleat or timberhead on the forecastle.

In its construction, I followed the drawings but for the sheave ('pulley') on the side of the cathead beam as shown I could have simplified things by just inserting a brass rod or even a thinned-down small deadeye instead. The six holes passing through the cathead that simulate the three sheaves I produced by using a very fine drill. The hole drilling must be done slowly and care taken that the bit is at right angles to the surface. Even so, I started each hole from both sides and with some patience, the holes were drilled and channels carefully cut into the surface between each pair of holes.

Figure 36: Cathead (completed)

Cathead Stopper (amante della gru)
This rope (0.8 mm. + 0.25 mm.) is anchored with a knot above the vertical hole extending through the cathead. It then passes through the anchor ring of the bow anchor, over the cathead sheave on the side of the cathead and hence to a timberhead or similar fixing point on the nearby bulwark.

Cathead Block (bozzello tipo '3H')
The block available for this is a 3-hole, 5 mm. piece.

Cathead Tackle (paranco di capone)
0.25 mm. rope starts from a ring on the side of the cathead, through the block and cathead above and then to a timberhead of similar fixing point on the nearby bulwark.

Cathead Tackle Hook (stroppo e gancio in acc.)
The hook and the strap around the block are both made from brass wire.

Capstans

The **main capstan** (argano di tonneggio), located abaft the Main Mast, was principally used to raise yards and the small boats, whilst the **anchor capstan** (argano a salpare – in the plans it is simply 'argano') located forward of the Main Mast was used to raise the anchors.

Figure 37: Main Capstan, Basic Version

Main Capstan (argano di tonneggio)
This capstan is actually a double-capstan design with two barrels fitted on the same spindle situated on two decks thus allowing double the number of men to operate it. Whelps were arranged around the barrel to help prevent the rope from slipping and strengthening chocks were fitted between the whelps. The diagram for this capstan shows the top barrel with the extended spindle underneath but not the lower barrel –most modellers will build just the top portion.

The plans give detailed data for the enthusiast to construct capstans typical of this era but for the mainstream of ship modelers, the supplied capstan (**15 x 20 mm. height**) is of a suitable size. After fixing in the whelps, the 40 mm. long bars were made from 2.0 x 2.0 mm. wood. You may choose to create square (2 x 2 mm.) holes out of the rounded holes to accommodate the bars. The diagram shows ten but the supplied piece only has six holes so unless you are building the capstan from scratch, that is the way to go!

The six whelps were then glued in place and the six bars were produced. A common mistake is to permanently install the bars into the capstan head. In practice, these present a definite obstruction to the operations that occur on a deck and are only installed when required for raising the anchors. Otherwise, they are stowed to one side of the deck.

Figure 38: Anchor Capstan, Basic Version

Anchor Capstan **(argano a salpare)**

The plans give detailed data for the enthusiast to construct capstans typical of this era but for the mainstream of ship modelers, the supplied smaller capstan (**11 x 16 mm. height**) is of a suitable size. After fixing in the whelps, the 36 mm. long bars were made from 1.5 x 1.5 mm. wood. With this small capstan size, it would be better not to attempt squaring out the holes. As stated before, the bars are not installed in the capstan, so this is one area not demanding a high degree of precision. It you do opt for the square holes, do not drill the holes as this process will readily fracture the surrounding wood but carefully utilise a fine blade - beware that this will cut into the upper and lower 'lips' on the head of the capstan.

Chapter 6: ARMAMENT

Now seems a suitable time for an important deviation from constructing the hull. Before doing the first planking & cutting out the gun ports, it seems appropriate to construct the complete gun carriages with barrels mounted for the two different sized carriages to check the height of the opening above the deck. *Even more important is the fact that the **carriages will need to be fixed** in position on the Gun Battery Deck before the Main Deck is installed since many gun positions will then be inaccessible. The gun barrels will then be inserted through the gun port opening.*

Sizing of Guns & Round Shot ('cannon balls')

Research based on the dimensions given for barrel length & internal barrel diameter along with a knowledge of cannon ball diameters allowed me to make conclusions about the type of guns used (I have not described below whether they are 'long' or 'short'). The reason for doing this was to satisfy in my mind what would be the appropriate sized round shot to use. How far you take this is up to you but the two commercial sizes I am aware of are 1 mm. and 2 mm.

The kit provides two different gun carriage types – 27 & 21 mm.

- **Gun Deck** - 30 x 12 pounders: 43 mm. cannons/ 27 mm. carriages
  appropriate cannon ball calibre – 1.7 mm. **(see table below)**
- **Main Deck** - 18 cannons x 4 pounders: 28 mm. cannons/ 19 mm. carriages
  appropriate cannon ball calibre – 1.1 mm. **(see table below)**

Cannon Composition

In the 1700's, it seems that the material of choice for the cannon was cast iron since it was less than half the cost of using bronze. However, its structural integrity was very poor and accidents frequently happened. Another disadvantage of using cast iron was that after use it only had minimal scrap value whereas bronze could be re-cast multiple times. So, bronze became the material of preference until the advent of steel. In painting the cannons in this model, I had to make a decision of whether to choose an 'iron' appearance by using a silver wash over the black paint or a 'bronze' appearance by using a gold/bronze wash. Based on the correlation in the table below between what size is described in the plan sheets and supplied in the kit and what material best corresponds, I felt unable to accurately determine which metal was used but went with bronze !

Gun Calibre (lbs.)	Ball Diam. (in.) [actual]	Ball Diam. (mm.) [actual]	Ball calibre (mm.) [model]	Barrel length (mm.) [model]	Barrel Length if iron (mm.) [model]	Barrel Length if bronze (mm.) [model]
4	3.05	77.47	1.1	28	38	-
12 (long)	4.64	111.86	1.7	43	57	35

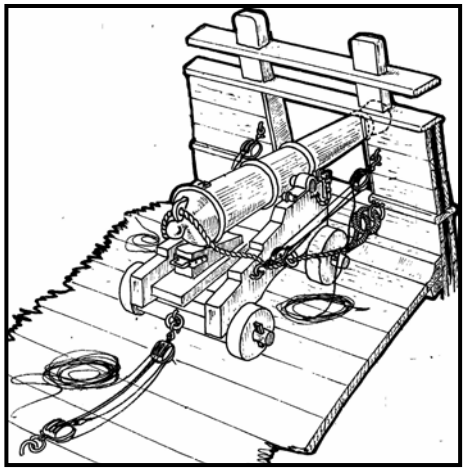
Gun Carriages

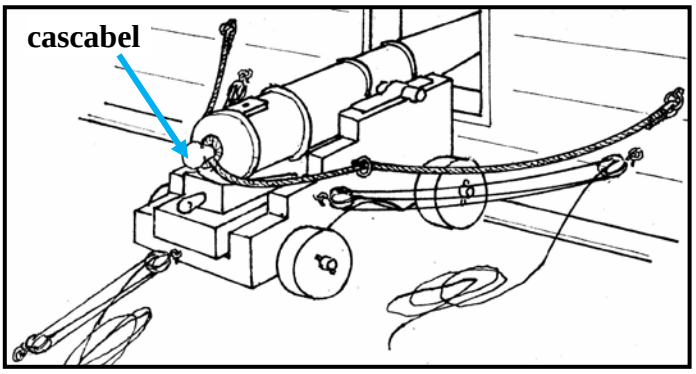
Some scratch builders will become involved in the extensive dimension measurements for the gun carriages shown in Plan Sheet 6 and a few will decide to construct 'scratch' carriages. The reason for the latter comment is that this kit – and in fact for all other kit manufacturers – simplifies the building of these carriages enormously.

It might be likely that some builders will go with the carriages without any alteration whatsoever as they are supplied. The carriages in fact differ markedly from that shown in the plan sheets and if some research is done, you may well decide that after all the effort in building the hull so carefully, far more time should be spent in creating a more authentic carriage.

Of great significance is that many of the 'completed' guns will not be visible at all. Unless you are an avid builder of ships, much time & effort can be saved by leaving the gun carriages as they are supplied in the kit.

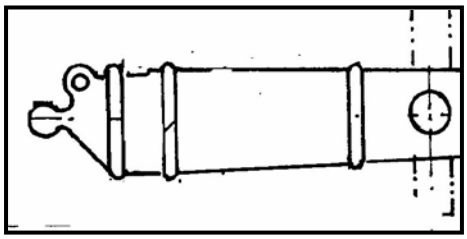
Plan Sheet 6 allows for the gun carriages that are not visible on both the Main Deck & Gun Battery Deck by using 'block' carriages designed to support the cannons. You can elect to construct these or just make the completed gun carriage whether it is visible or not. To simplify this issue, the kit *does* contain the necessary carriage forms, trucks, axles to build all the carriages in their 'complete' form. How 'complete' you wish to make them is indicated in the following diagrams.





The breech rope was clinched to large ring bolts on the bulwarks and taken around the cascabel. The cascabel refers to the area at the back – the rope was often spliced around the knob but later passed through a hole cast above the knob . This latter form of the cascabel is shown in Plan Sheet 6.

It also was not an uncommon practice on the Continent for the breech rope to be passed through the carriage and not around/ through the cascabel.



The rear end of a cannon from Plan Sheet 6 showing the cascabel

Figure 39: Gun Carriages Illustrating Breech Ropes & Cascabels

Gun Battery Deck

The diagram opposite gives an immediate view of the task that faces the modeler with converting the gun carriages! For many modelers, the task is simple – **utilize the gun carriages as they are provided in the kit**. Far more detailed notes are available in the 'Advanced Notes' section in the back section of this document.

Whatever approach you use, *check the dimensions from the 1:1 scale Plan Sheet 6.*

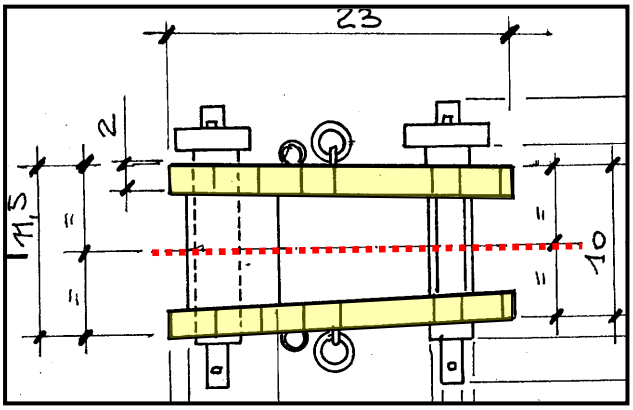


Figure 40: Gun Battery Carriage

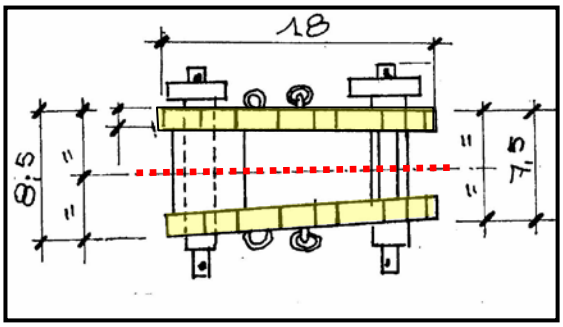


Figure 41: Main Deck Carriage

Main Deck (4-pounder guns)

There are a smaller number of guns complete with carriages that must be placed onto the Main Deck again involving obviously a great deal of time and labour. This time the gun structure is totally visible. So therefore much effort could be put into creating the gun carriages and associated ropes. For many modelers, the task is simple – **utilize the gun carriages as they are provided in the kit**. Far more detailed notes are available in the 'Advanced Notes' section in the back section of this document.

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Chapter 7: FIRST PLANKING

Framework Tapering

Towards the bow & stern, the longitudinal keel of 10 mm. thickness must be tapered to obtain a breadth of 8 mm. – so that with the second planking of 1.0 mm. thickness walnut, the final planked surface of the hull will be continuous with the 10 mm. false keel. Now is the time to check the uniformity of flow of the chamfered edges of each of the frames before planking begins.

First Planking

Bulwark

This is step where a decision must be made as to whether the bulwark is to be planked on the inside *and* the outside. An examination of the plan sheets will show planking on the inside as well with the overall width through both sets of planking being **+/- 6.0 mm**.

The frames provided in this kit alone show an approx. width of +/- 6.9 mm.

Some modelers choose to reduce the thickness of the side frames by 1-2 mm. Not a good move as this reduces the hull integrity. Others I have seen either had double planking on both inside and outside or double planking on the outside and a thin planking of the 1 mm. walnut on the inside. The former example would then have a combined width of '3.0' + 6.9 + '3.0' = ***'12.9'*** mm. whilst the latter would be '3.0' + 6.9 + '1.0' = ***'10.9'*** mm. [in both cases, surface finishing will reduce the thickness slightly]. If the builder is to give some recognition to the accuracy of the plan sheets, then any of these approaches should be discarded.

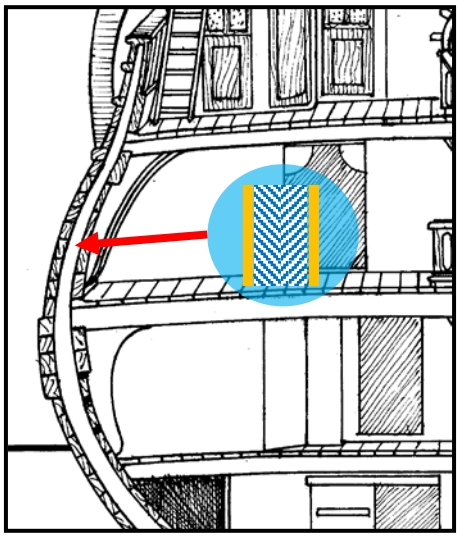


Figure 42: Double Layer of First Planking Inside Double Layer of Second Planking

Rather than hide the frames, some thought should be given to the fact that these were visible on the interior more accurately as 'standard' and 'hanging' knees.

So ... what to do ? Along with the double planking on the outside, I placed an extra two strips between adjacent frames on the inside - another strip of the 2.0 mm. limewood first planking overlain by the 1.0 mm. walnut. Combined, this produced the 6.0 mm. thickness shown by the drawing in the plan sheet. Refer to the diagram opposite.

Down from the Gun Deck level

The majority of planks were able to be fixed WITHOUT tapering and here I found the use of brass nails driven half way in with a 'nail nailer' a useful technique. Sometimes the nails were

more effective bent over flat with a small hammer. Either way, after the glue had set, I had no trouble withdrawing these nails with a pair of small long-nose pliers.

Drying out of the wet planks will result in significant gaps. However, when the planks are removed and re-set with glue, these gaps will be removed.

Figure 43: First Planking Shrinkage

Following the line of the *lower* surface of the Gun Deck, the first dry plank was set in place on each side of the hull and using a 'plank bender', the curves required around the bow posed no problems at all In total, I planked five timbers down from the deckline holding them in place by small brass nails

Obviously the planks will have swollen with immersion in the water so I allowed 24 hours for the timber to dry (and used a hair drier as well). After this time there were significant gaps between the planks (Fig. 44) but when they were removed from the frames and finally glued back in place, this proved to be of no consequence,

The usual approach here is to now start planking upwards from the mid-line of the remaining space between the five planks and the keel. As this is the first planking, I decided to follow my 'line of sight' for best fit and whilst the above guideline was not followed, it was not too far from being correct. Planking proceeded quite easily and some detail in the following photos will assist. The planks visible are the ones that have dried and are now glued in place. I made no pretence at this first planking stage but still felt that the finished planking provided a sound base for the more exacting second planking. The planking though will require the use of a filler before finishing off. (***There are some obvious gaps in my handiwork*** but it is the uniformity of the surface that will be important. Do not be too judgemental !)

My method of soaking planks – length of 90mm. storm water pipe sealed with a cap at the bottom & then filled with water. The width makes is easy enough to get my fingers in the top to retrieve the timbers being soaked.

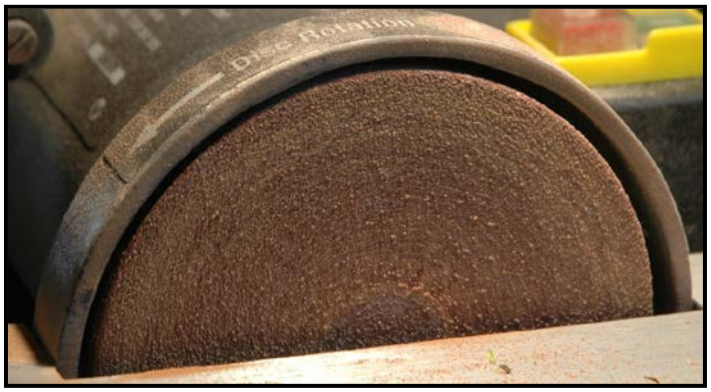
Figure 44: Soaking Planks in Water

Chapter 8: ADVANCED NOTES

La Renommee

Tools

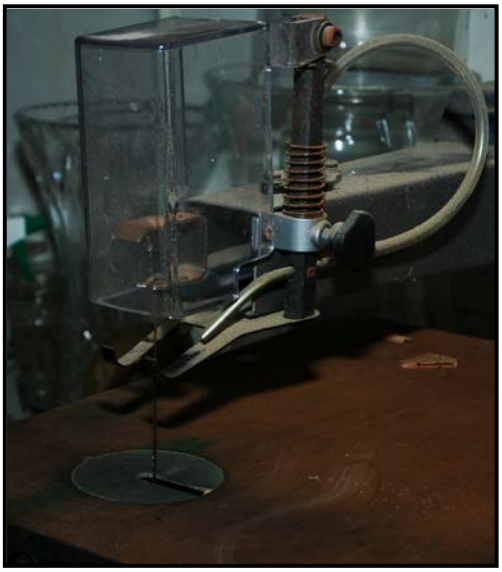
Apart from the normal range of cutting blades, cutting mats, fine metal files, large soldering iron (plank bending) etc., the following tools were essential or at the very least *useful*….



Vertical belt sander with attached sanding disc – absolutely

Dremel tools (high speed cutter tool, sanding drum & other bits; flexible drive attachment; along with a mini **drill**

Digital vernier calipers – how could you do without these



Jig saw – fine blade. No way I could have done without this work horse.

Lathe – for those masts & yards, etc. Not shown but also useful is an electric **min-plane (below)**.

One of my most valuable tools will always be the glue syringe. Used with care, it can deliver just one very small droplet glue to the task in hand. Alternatively, it can deliver a constant stream. The advantage of this device is that it has a very small opening at the external tip which easily seals over after use where it comes in contact with the air. When next required, a pin prick through the small pocket of solidified glue at the tip allows the syringe to come back into use. I can leave the tool for months without use and it is always ready to use. I would not be without it.

Stem Post (ruota di prora)

The exposed edge of the stem post is very dark due to the laser-cutting process and it is necessary to sand this back to the original wood colour. The plan sheet shows the post tapered 7 mm. at the top down to 4 mm. at the bottom. However, the average width of the supplied laser-cut piece was 4.7 mm. so I left it un-tapered.

The plain surface of the stem post can be much enhanced with timber lines being carved onto the surface (as per Plan Sheet 17) to make it appear more authentic. The stem post will need a little adjustment to fit the line of the hull and to fix it in place I used two long glued nails as posts to form a solid linkage between the two.

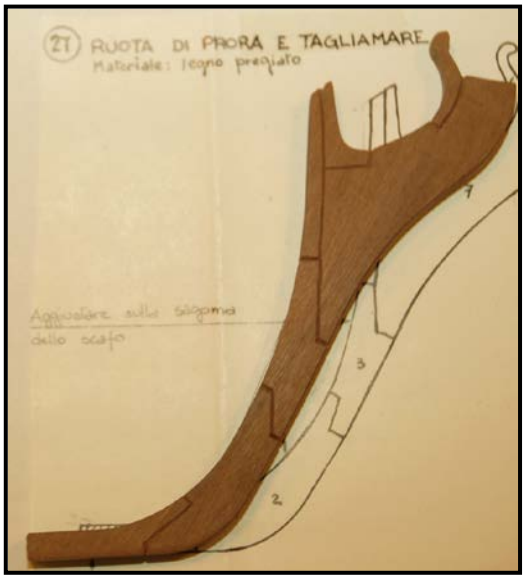


Figure 45: Stem Post Detailing

Rudder

The rudder was made up with three or four lengths bolted together, each one stepped down in a "hance" to the rudder post. So deep lines were cut down either side of the blade to simulate the use of three timbers in creating the rudder blade.

Figure 46: La Renommee Rudder

The tiller arm passes through a 3 x 3.2 mm. hole in the rudder post – readily produced. The projection I made 2.0 mm. and also inserted a horizontal locking pin through the projection directly against the rudder.

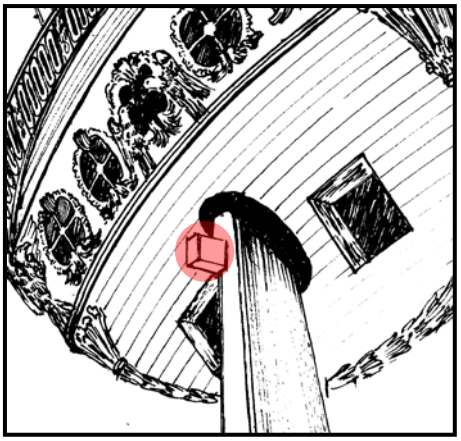


Figure 47: Tiller Arm Projection

Rudder Pendants

Ropes and/or chains were utilised as a precaution in the event of damage to the rudder. On French ships the pendants typically consisted of two chains extended upwards from the rudder and attached to a horizontal rope extending across the stern. No indication of the pendant rope system was evident on these sheet plans but I decided to include a pendant system. In Fig. 49, the red rigging is rope; the blue are chains.

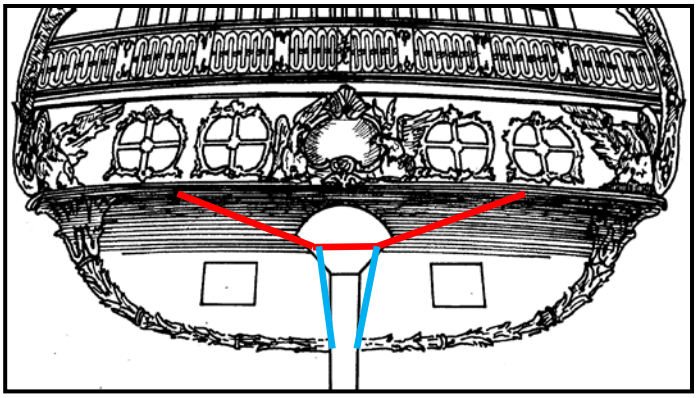


Figure 48: Rudder Pendant System

The eye pin + ring that attached the pendant rope to the rudder frequently is anchored throught the metal pintle for added strength and just the wood. Plan Sheet 1 does not appear to show this; I drilled through the second pintle (from the top) – Fig. 50

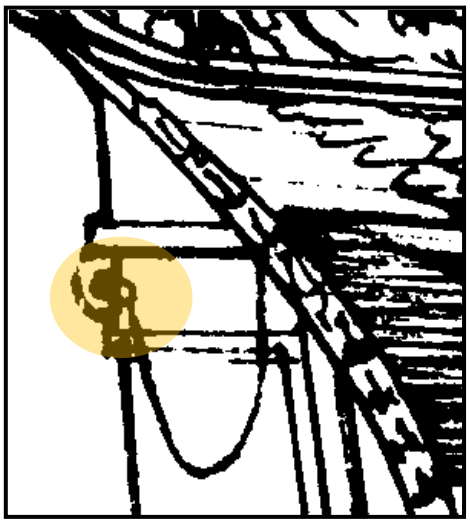


Figure 49: Pendant Rope - Rudder Attachment

Anchor Assembly

Euromodel must be congratulated for including ***four*** anchors – the majority of ship model kits contain only two! The variation in anchor sizes is very limited from the commercial sources available and with the diversity in scale for various models it is highly unlikely that the anchor supplied in a kit will be of the correct proportion. That is the case here. The metal castings approximated very close in length to the drawings but the other dimensions were markedly different. The wooden stocks were also different in their dimensions when compared down to the described size and appearance. In his build, Keith Julier (The Period Ship Handbook 2, 1995) also discusses these dimensional problems and what he did to partially overcome them. From my own observations, some of the La Renommee models that have been built do not appear to have bothered with this aspect of size difference but I felt it a pity not to attempt some modification to the items supplied ...

Sheet Anchor (ancora di speranza)

Stock (ceppo dell'ancora)

64.5 x 5.6 x 8.0 mm. could be decreased to drawing size of **48.0 x 5.0 x 5.0 mm.** The problem with this is the size of the square shank passing through the stock. The pre-formed hole in the stock is far too large since the shank needs to be reduced in size from approx. 4.2 mm. to 2.0 mm. So, the hole should be much smaller. In the end, I decided to produce the stock from scrap timber. **Reducing the stock** in size totally improves the appearance. **The stocks were created in two halves** creating the appearance of the two ***baulks*** that make up the stock. For this, I utilised some scrap 5 mm. mahogany left over from some of the laser-cut pieces. Using this gave me stronger pieces that were less liable to break.

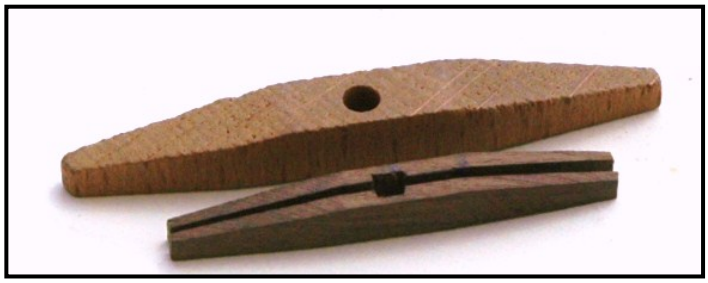


Figure 50: Creating Stock Baulks

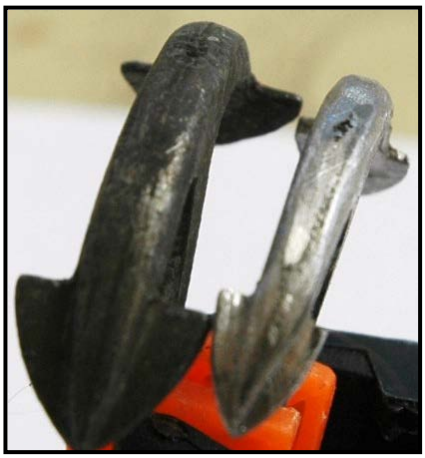


Figure 52: Reducing Fluke Size & Overall Width of Anchor

Figure 51: Reducing Shank Size

Anchor

Having created a stock of the plan dimensions, there was little choice but to reduce the dimension of the metal anchor. Severe (but careful) filing of all aspects of the casting did create an anchor that was much more in proportion to the stock (Fig. 33). Most significant changes were in the width of the shank, the fluke size and the fluke-to-fluke dimensions (Fig. 32). The latter I reduced from 41.5 mm. to 36.0 mm. – larger than the described 30.0 mm., but still much better !

Bow Anchor (ancora di posta)

Stock

44.0 x 7.3 x 6.0 mm. could be decreased to drawing size of **40 x 3.5 x 3.5 mm.** I used some1.0 x 6.0 mm. planking glued together to make a strip approx. 1.7 mm. thick [the '1.0' was very dry and approx. 0.89 mm. thick!].

Anchor

Again, similar comments. The most significant change was in the width of the fluke-to-fluke dimensions. The latter I reduced from 31.0 mm. to 28.0 mm. – much nearer to the described 25.0 mm.! The flukes were reduced in size to approximately 5.0 mm.

Metal Hoops

These bands hold the baulks together and for these I created some timber strips that were 0.5 x 1mm – a little thick (and also a little wider) but some careful sanding afterwards reduced the thickness. I found it easier to glue these on rather than use metal such as brass. I painted each piece black before applying to the stock. I applied each 'hoop' in four pieces working around the four faces in that order.

Figure 53: Metal Bands & Puddening

Anchor Ring (cicala delle ancora)

The four brass rings were all approx. 6.5 mm. in diameter but I decided to work from the diagrams and created rings from some 0.81 mm. brass rod I had – 9 mm. diameter for the sheet anchors and 8 mm. for the bow anchor. The ring would have a series of puddening – strips of tarred cloth followed by rope and finally some fine yard applied at each end of the rope and also in the middle. At this scale, it is reasonable to only apply the rope (0.25 mm.) – Fig. 34.

At this stage, the top of the shank (above the stock) will need to be very carefully drilled through to accomodate the anchor ring.

Anchor Buoy (gavitello)

The immediate problem again was one of proportion but again it is a matter of 'your choice'. The diameter of the pieces supplied was 8.4 mm. at the widest point which needed to be reduced to 7.0 mm [even **less** if covering with rope] with a much more significant taper towards each end. The length was 13.3 mm. which needed to be reduced to 11 mm. Decreasing the width was best achieved by holding each buoy against a belt sander but they were too small to hold without damaging my scarred fingers any more! Solution ... a spindle was glued through a central hole to make this task very simple (Fig. 52).

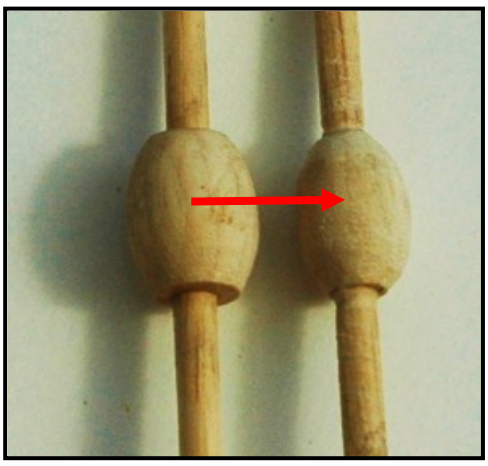


Figure 54: Inserting a Spindle into a Buoy

As mentioned previously, the buoy is roved in rope – and that became my approach. A spindle then came into its own as I wound the rope around the buoy surface (Figs. 53 & 54).

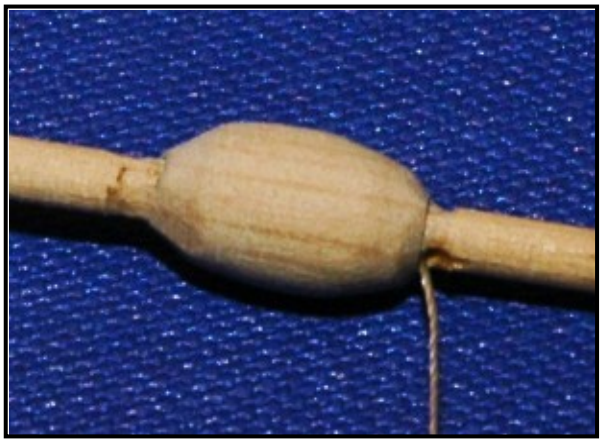


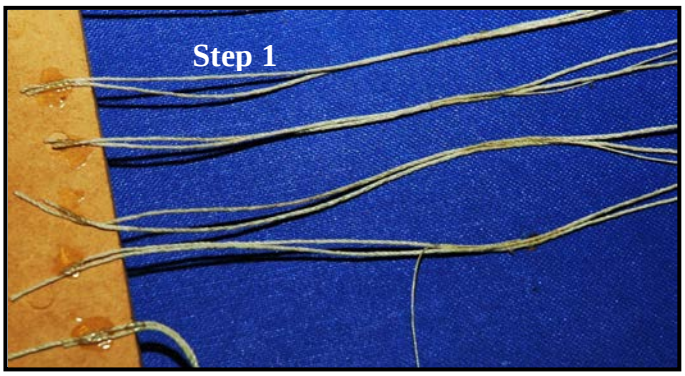
Figure 55: Fixing the Rope into the Buoy

Figure 56: Buoy Roved in Rope

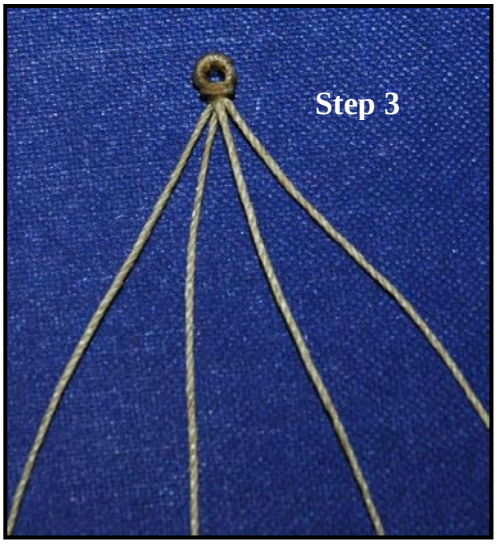
When this was almost completed, I broke off the spindle at each end and covered the exposed ends with coiled rope (Fig. 54).

Buoy slings

The following photos rather than the text better explain how I made these slings. I used 0.60 mm. rope and there were six pieces of rope to handle. Two ropes folded and seized drape over each end and extend well past the maximum diameter position of the buoy. This has the effect of creating four ropes extending down from each end. These are then tied to two other ropes that circle the buoy either side of the maximum diameter. The method of using two circling ropes is a little different to that shown in the plan sheet diagram but is one that I believe was commonly used!



STEP 1: Two strands of 0.6 mm. rope are glued with PVA in the centre along with one strand of 0.25 mm. rope (approx. 12 mm. in length is glued). One end is glued onto a piece of wood. This latter point allows one hand free to carry out the seizing (refer to the photo in Step 2).



STEPS 2 & 3: Whilst one hand is holding the free end, the other hand can be used to seize the 0.25 mm. rope around around the other two strands. The effect of this step is seen in the photo below. Once folded over, the seized section is then seized to produce a loop (opposite photo) which will then be seated at each end of the buoy(see Step 4 on next page).

Figure 57: Steps in Rigging a Buoy

When viewing the above photographs, a reasonable representation of a typical buoy has been achieved and yet with more skill & time, there is ample room for improving the knots and rigging that surround the buoy. How far do you want to go ?

Cathead (gru di capone)

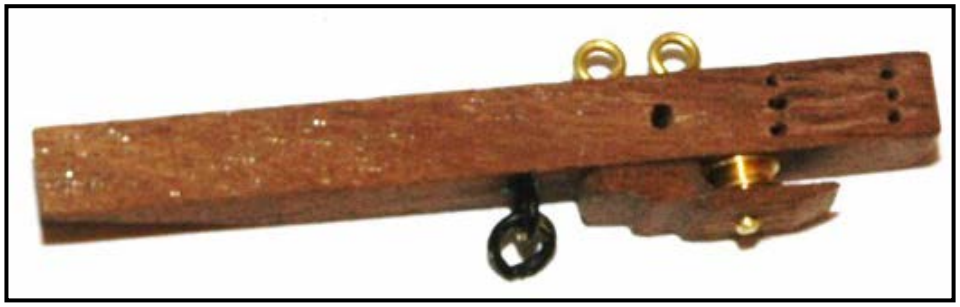


Figure 58: Cathead Complete with Fourth Sheave

This heavy wooden beam carries three sheaves ('pulleys') at its outboard end. The anchor tackle is reeved through these sheaves and belayed to a cleat or timberhead on the forecastle.

In its construction, I followed the drawings and utilised a 4 mm. brass sheave on the side of the cathead beam as shown. The six holes that simulate the three sheaves I produced by using a very fine drill. The problem here was that because the drill is so thin & fragile, the hole drilling must be done slowly and it then follows that the wood grain the bit encounters easily forced the drill off on an unwanted angle. Still, with some patience, the holes were drilled and channels carefully cut into the surface between each pair of holes.

Cathead Tackle & Rigging

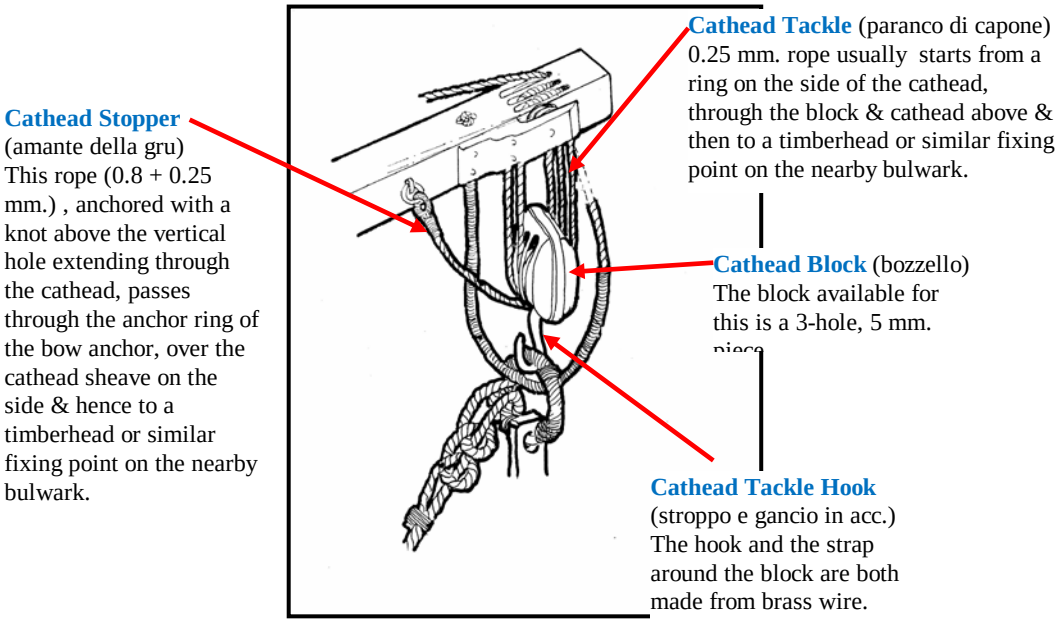


Figure 59: Cathead Tackle & Rigging

Capstans

Main Capstan (argano di tonneggio)

The task that should be done first is to create square (2 x 2 mm.) holes out of the rounded holes to accommodate the bars. The diagram shows ten but the supplied piece only has six holes so unless you are building the capstan from scratch, that is the way to go! The supplied 20 mm. capstan compares favourably with the height and base dimensions but the width at the top is approx. 3.2 mm. shorter. However, short of making the capstan from scratch, this capstan should be utilised.

Capstan utilised was 25 mm. height

Dimensions

The drawing shows:

width at top = 16.5 mm.
width at base = 15.1 mm.
overall height = 19.0 mm.

Capstan supplied :
width at top = 18.1 mm.
width at base = 20.1 mm.
overall height = 25.3 mm.

The obvious capstan to use would be one that is 20 mm. in height but this gives a very narrow width. So, for this capstan I used one that was **25 mm.** and then set about reducing the dimensions down to what is shown in the drawing. I completely removed the 'domed' top to a flat surface which was then given a gentle curvature towards the top edge. I reduced the top width by sanding away the two 'lips' whilst the base was reduced in thickness from 3.9 mm. to 1.5 mm. by sanding off the wider 'lip' at the base - and a bit more. All of these operations gave three better dimensions ...

Capstan on the left was created out of the piece on the right; bar holes still to be finally squared and chocks not yet in position between the whelps.

Figure 60: Converting a 25 mm. Capstan

width at top = 16.3 mm. (i.e. **– 1.8 mm.**)
width at base = 16.3 mm. (i.e. **– 3.8 mm.**)
overall height = 20.1 mm. (i.e. **– 5.2 mm.**)

The six whelps were then glued in place and the six bars were produced. Just for a 'bit of fun', I also decided to introduce the six chocks as well. A common mistake is to permanently install the bars into the capstan head. In practice, these present a definite obstruction to the operations that occur on a deck and are only installed when required for raising the anchors. Otherwise, they are stowed to one side of the deck.

Anchor Capstan (argano a salpare)

The obvious capstan to use would be one that is 16.0 mm. in height but this gives a very narrow width. So, for this capstan I used one that was **20.0 mm.** and then set about reducing the dimensions down to what is shown in the drawing.

Capstan utilized was 20 mm. height

Dimensions

The drawing shows:

width at top = 12.0 mm.
width at base = 11.0 mm.
overall height = 16.0 mm.

Capstan supplied :
width at top = 13.7 mm.
width at base = 15.35 mm.
overall height = 20.2 mm.

The task that should be done first is to create square (1.5 x 1.5 mm.) holes out of the rounded holes to accommodate the bars.

I was not happy with the supplied dimensions, so ... the 'domed' top was partially removed to give it a gentle curvature towards the top edge. The top width I reduced by sanding away the two 'lips' and the base was removed completely. These operations gave three better dimensions ...

The 20 mm. capstan reduced to an overall 16 mm. height; 'lips' removed, curved dome reduced & base removed. NOTE – holes not yet squared !

Figure 61: Converting a 20 mm. Capstan

width at top = 12.2 mm. (i.e. **– 1.5 mm.**)
width at base = 12.3 mm. (i.e. **– 3.05 mm.**)
overall height = 16.0 mm. (i.e. **– 4.2 mm.**)

With the detail finished, the assembly was then glued onto a 17 x 17 mm. block (Fig. 42). The depth of this block is immaterial since it will be lowered into a hole cut into the deck so that its top surface will be flush with the deck finish.

The six whelps were then glued in place and the six 36 mm. long bars were produced. As stated previously, these bars are not put in place in the capstan.

Capstan sitting loosely on block; finishing off needed e.g. holes still not squared !

Figure 62: Finishing the Anchor Capstan

Ship's Wheel (ruota del timone)

The wheel is underneath the Quarter Deck and to the majority of observers, its presence will not be easily seen. **You may, therefore, feel that it is not necessary to build this structure.** Having said that, Euromodel has been generous in supplying a wheel which would be appreciated by the avid modeller. It closely resembles the overall dimensions and I was more than happy to go along with that piece. How far you go in creating the wheel support detail is up to you.

Figure 63: Completed Wheel & Barrel

Figure 64: Completed Barrel

Construction seemed like a daunting task with the 3 mm. diameter **spindles** at each end and the **barrel** with varying dimensions of 5, 6 and 8 mm. in between. I considered using my wood-working lathe but decided against that in preference to a very simple technique that would allow the formation of some very fine widths of 0.5 and 0.75 mm. without fracturing. The supporting **pedestal** columns mounted on **platforms** were easily created. A final touch on assembly will be the addition of **tiller rope** around the barrel and the creation of **tiller rope slots** in the deck.

Barrel requirements - wooden rods of 8, 6, 5 & 3 mm. [a reasonable alternative would have been to utilise a section of 6 mm. wooden rod as the total barrel].

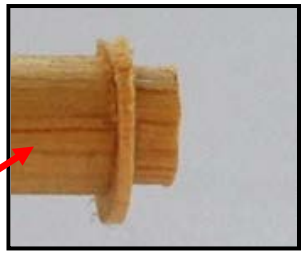


Figure 65: Representation of Method for Producing Barrel

Representation of what I did, but not the actual piece – **photo was taken as an afterthought** to help explain my handiwork. Working from the left of the photo, this shows the 6 mm. rod of the central barrel, a thin (0.75 mm.) 'slice' of an 8 mm. section added and sanded back and a 5 mm. section added ready for sanding back.

Step 1: Using a length of 6 mm. rod, I squared off one end against my bench sanding disc.
Step 2: After squaring off one end of an 8 mm. rod, I cut off a small section and glued this onto the 6 mm. rod from Step 1.
Step 3: After the glue was set, this 8 mm. piece was ground back to 0.75 mm. thickness – sanding on the bench disc creates a large amount of heat which can easily cause the PVA glue to partially melt so do this slowly.
Step 4: This was then followed by adding 5 mm. and 3 mm. sections as per the diagram.
Step 5: The 6 mm. rod was cut back to its correct length of 6.5 mm. and then a 5 mm. section added to this end as well.
Step 6: The wheel supplied was too thick (according to the diagram) and this was reduced to approx. 3.2 mm. It was then glued onto the barrel so formed.
Step 7: On the other side of the wheel, sections of 5 and 3 mm. were then added.
Step 8: Pedestal columns were made from 6 x 1 mm. walnut planking – I found it better to work with a strip long enough for both pieces, drill the two 3 mm. holes, do any surface carving necessary and only then cut into two – one being 16 mm. and the other 15 mm. in length.
Step 9: The wheel & barrel were of a very light timber (as supplied) & the pedestals a darker colour – painting was necessary to create a uniform colour. See Figure 46.

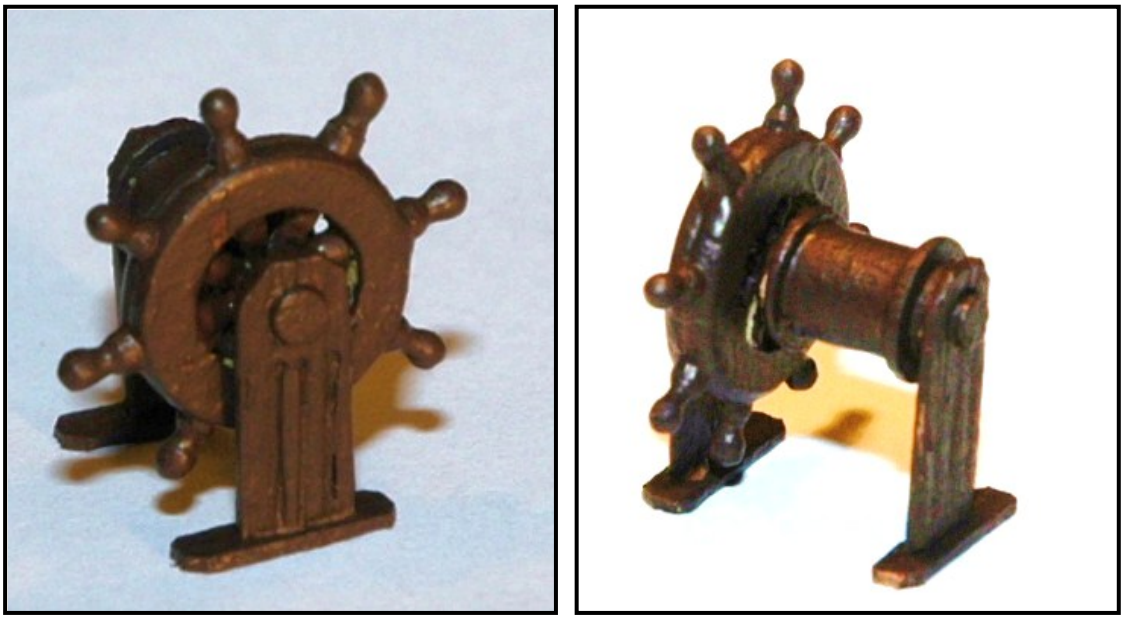


Figure 66: Completed Ship's Wheel

Photo (left) – foot of support appears to be not level but this is due to the paper sheet underneath. Photo (right) gives a good overview of steering gear. Lesson to be learnt here is to examine objects under a good magnifying glass - some painting needed to finish this off which was not obvious at first glance.

Compass Binnacle

The compass is underneath the Quarter Deck and to the majority of observers, its presence will not be easily seen. **As with the ship's wheel, you may feel that it is not necessary to build these compasses and the wooden cabinet (binnacle) that contains them.**

The wooden cabinet, typical of warships in the 17th/18th centuries, contains:

2 upper drawers,
2 lower cupboards;
2 compasses in the central section with a lamp in between for illumination at night.

This structure was easily created from scrap pieces of timber. I was careful enough to produce an opening in the central vertical support to allow for positioning of a lamp which I created from portion of a spare stanchion. The door and drawer handles were created from small brass nails which I painted over with silver paint. The two compasses were formed from 6 mm. rod.

Figure 67: Ship's Binnacle

Incomplete – compasses still to be inserted; door & cupboard handles & eye pains to be painted. Both the 'drawers' and 'cupboards' are solid pieces of scrap timber. **N.B. eye pins too large !**

Gun Carriages

Postscript Comments

My goal was to create gun carriages utilizing the material supplied. The following comments show the steps & changes that I carried out to make a structure similar to that shown in the plan sheets. However, I must admit to having some doubts about the wisdom of doing all of this and at times wondered whether it would have been better to start from scratch or in fact just use the original carriage. In the end, I remained faithful to my philosophy of adhering to working from the kit and only modifying & adding to what Euromodel supplied for the carriage. In the diagram above you can clearly observe that the typical carriage consists of two vertical sides ('***cheeks***') joined by two horizontal ***axle trees*** as well as the ***quoin*** used for adjusting the inclination of the cannon seated on a '***bed***'. Then, you should look at the use of ***ring & eye bolts.*** Carriages are hauled to and from the bulwarks via ***three tackle systems*** – these may or may not be included in the build. There are differences in the tackle systems utilized in England and those on the Continent and it is interesting to note that little information is shown in the plan sheets. A common variation adopted by the French was the use of ***two*** gun tackles at the rear instead of the traditional one typically shown in English ships.

The construction of the gun carriages is very rich in diversity and complexity and can demand a high skill level in its re-creation so there will be large differences created between the same model built by different persons.

Gun Battery Deck

The photo and diagram below given an immediate view of the task that faces the modeler with converting the gun carriages!

Left cannon:
Gun barrel lying in the carriage supplied (non-tapered, too long, too high & too wide)

Right cannon:
Gun barrel lying in a tapered carriage

Figure 68: Difference Between 'Square' and a 'Tapered' Gun Carriage

Whatever approach you use, *check the dimensions from the 1:1 scale Plan Sheet 6*. The dimensions shown opposite only serve to highlight some specific details you may wish to change on the supplied kit pieces.

NOTE:

- carriage cheek is 3.0 mm. (vs. 2.0 mm. in drawing)

After considering the plan dimensions, I chose to make certain alterations. You will need to make your own choices …

- ***length*** varied, 27.0+ mm.; I reduced this to 24.5 mm. (23.0 mm. was just a little too short using the gun carriage supplied),
- ***height*** (of the 'cheeks') varied, +/- 11.5 mm.; I reduced the height to approx. 8 mm. by lowering the top step at the front,
- ***width***: was altered to produce a taper of given the need to taper of 10-11.5 mm.

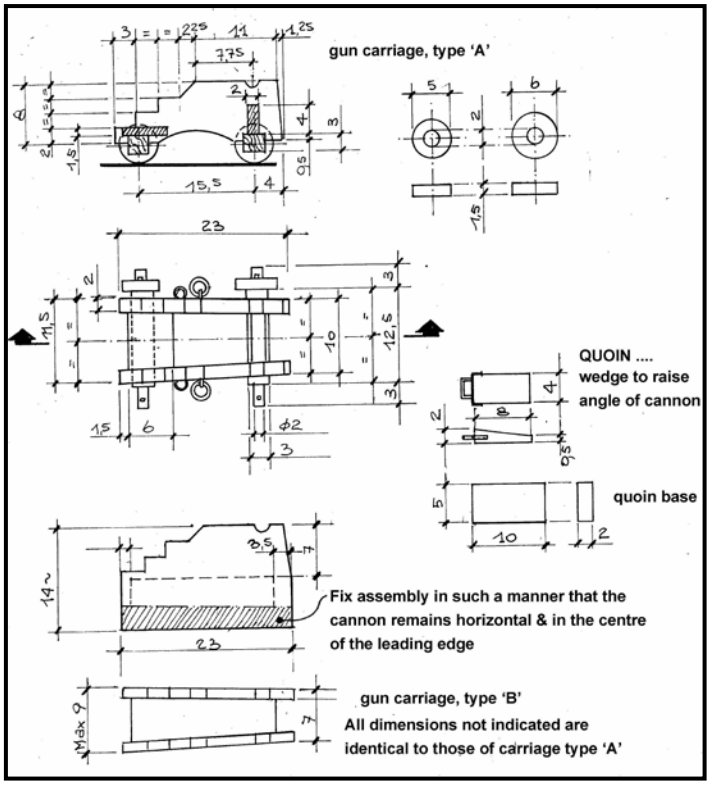


Figure 69: Carriage Detail from Plan Sheet 6

Figure 70: Quoins

Further to this, there are certain variations to the basic carriage configuration, some of which you may choose to ignore:

- angle for the ***leading edge of the cheek***
- construction of the ***quoins*** (cannon wedges) – see Fig. 50 - and supporting ***beds***
- construction of the axle and wheel assemblies (***axle trees*** and ***trucks***). Determination of length allowed for extension past the width of the wheels since cotter pins were inserted into the axles to hold the trucks in place. Diagram above shows a square cross-section axle tree, which is correct but for the kit build, the 'axle' is actually the axle tree and the axle projections either side.

Lengths to be cut will depend on the actual width of each carriage which given the process of tapering may show some variation …
for the front axle: carriage + wheels + projection = +/- 10.0 + 5.2 + 2.6 = +/- 17.8 mm.
for the rear axle: carriage + wheels + projection = +/- 11.5 + 5.1 + 2.6 = +/- 19.2 mm.

- addition of ***eye bolts*** and ***ring bolts*** could be carried out but ***trunnion bands*** cannot be used due to the insertion of the cannon barrels at a later stage through the gun ports. Note than none of these items are supplied in the kit.

Construction Details (Battery Deck carriages)

(based on kit material)

STEP 1: Reduce the gun carriage height down to 8 mm. causing you to reform the cut-out channels for the gun barrel trunchion. The internal height then becomes 6.0 mm. which conforms to the drawing. Make sure these channels are centred 6.5 mm. from the original front edge (this will actually be 4.5 mm. – refer to Step 7).

STEP 2: Reduce the thickness of the cheeks to approx. 2.2 mm. (2 mm. is getting a bit too fine)

STEP 3: Cut down the centre line of the carriage with a fine-bladed jig saw.

STEP 4: Sand the cut edges (see photo opposite) so that combined the ***internal dimensions*** of the carriage are 6.0 mm. at the front and 7.5 mm. at the rear.

STEP 5: Cut wheel axles of length +/- 19.2 mm. (rear) mm. and +/- 17.8 mm.(front) from supplied wooden rod (both lengths make an allowance for what would be cotter pin fitting). Slight chamfering of the ends of the axles prevents the wheels – which are a tight fit – from cracking.

STEP 6: Straighten the two axle channels.

STEP 7: Glue both half sections of the carriage down onto the two axles.

STEP 8: Reduce the carriage length to 23.5 mm. – by carefully sanding away 2 mm. from each end.

STEP 9: At the front, create an angled slant on each cheek.

STEP 10: Paint the carriage with the colour of your choice (e.g. dark red).

STEP 11: Glue on the two front 6 mm. wheels and the two 5 mm. wheels at the rear. **N.B. before sliding wheels onto the axle, test for a tight fit and, if necessary, utilize a round file to increase the wheel hole diameter**.

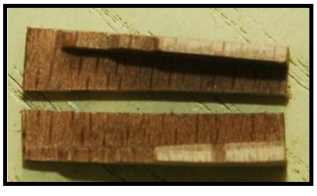
STEP 12: Create a quoin (wedge-shaped block) to support the rear of the barrel and glue in place. The interior maximum depth from the plan sheet is 6.0 mm. Using this figure, calculate the depth of bed.

STEP 13: Determine the inclination of the cannon required and utilize a template to maintain uniformity with all the carriages whilst gluing in the quoin (refer to photo below).

Step 1

Step 2

Step 4



Step 4

Main Deck (4-pounder guns)

There are a smaller number of guns complete with carriages that must be placed onto the Main Deck again involving obviously a great deal of time and labour. This time the gun structure is totally visible. So therefore much effort needs to be put into creating the gun carriages and associated ropes.

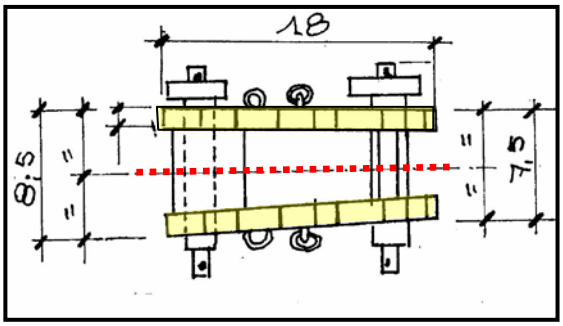


Figure 71: Main Deck Carriage Detail

Only very small adjustments need to be made to the wooden gun carriage supplied but I feel that it is still worth doing for the visual effect of creating especially a tapered carriage. Unlike 12-pounder gun carriages, these are on full view so to retain credibility, these must be modified. Also these carriages had the wood grain running longitudinally, so they were easy to split into halve

Lengths to be cut will depend on the actual width of each carriage which given the process of tapering may show some variation …
for the front axle: carriage + wheels + projection = +/- 7.4 + 4.5 + 2.6 = +/- 14.44 mm.
for the rear axle: carriage + wheels + projection = +/- 8.2 + 4.5 + 2.6 = +/- 15.30 mm.

Construction Details (Main Deck carriages)

(based on kit material)

STEP 1: Cut down the centre line of the carriage with a fine-bladed jig saw.
STEP 2: Sand the cut edges (see photo opposite) so that combined the ***internal dimensions*** of the carriage are 7.8 mm. at the front and 9.1 mm. at the rear. You may need to sand back a bit too far and then glue in a thin timber. **It would have been easier with a slightly larger gun carriage and/or a slightly thinner gun barrel.**
STEP 3: Cut wheel axles of length +/- 15.30 mm. (rear) mm. and +/- 14.44 mm.(front) from supplied wooden rod (both lengths make an allowance for what would be cotter pin fitting). Slight chamfering of the ends of the axles prevents the wheels – which are a tight fit – from cracking.
STEP 4: Straighten the two axle channels.
STEP 5: Glue both half sections of the carriage down onto the two axles.
STEP 6: Reduce the carriage length to 19.0 mm. – by carefully sanding away 1 mm. from each end.
STEP 7: At the front, create an angled slant on each cheek.
STEP 8: Paint the carriage with the colour of your choice (e.g. dark red).
STEP 9: Glue on the two front 6 mm. wheels and the two 5 mm. wheels at the rear. **N.B. before sliding wheels onto the axle, test for a tight fit and, if necessary, utilize a round file to increase the wheel hole diameter**.
STEP 10: Create a quoin (wedge-shaped block) to support the rear of the barrel and glue in place. The interior maximum depth from the plan sheet is 6.0 mm. Using this figure, calculate the depth of bed.
STEP 12: Determine the inclination of the cannon required and utilize a template to maintain uniformity with all the carriages whilst gluing in the quoin (refer to photo below).
STEP 13: Cut 8.5 mm. section of the 1 mm. brass rod to form the cannon trunnions.
STEP 14: You may then wish to supplement what is in the kit by using trunnion straps as well as eye & ring bolts.

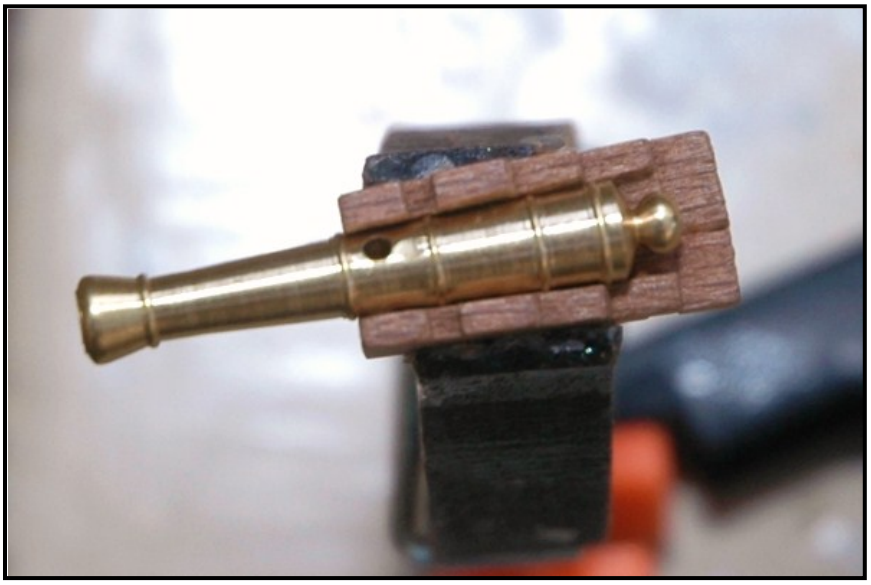


Figure 72: Comparing Cannon Barrel to the Carriage Width

Reasonably close fit – but the effect is satisfactory. Whilst the cannon is approx. the correct length (30 mm.), its diameter is larger at the trunnions than shown in the plan sheet meaning that the space is very limited.

End

of

MANUAL 1 OF 7

LA’RENOMMEE