TRANSLATION LINKS

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

Essential Resources for the Royal William

November 2017

This resource information was based on the original text supplied by Euromodel and then expanded in detail as the actual ship was constructed by MSW member piratepete007. [Additional & exceptional support was gratefully received from other MSW members **marktiedens, Vince P & Ken3335**. My sincere thanks to them and other MSW members]

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Figure 1: Royal William Model

Royal William

1st. Rate English Vessel

Launched 1719

Scale 1:72

RECENT CHANGES TO MANUAL

November 2017

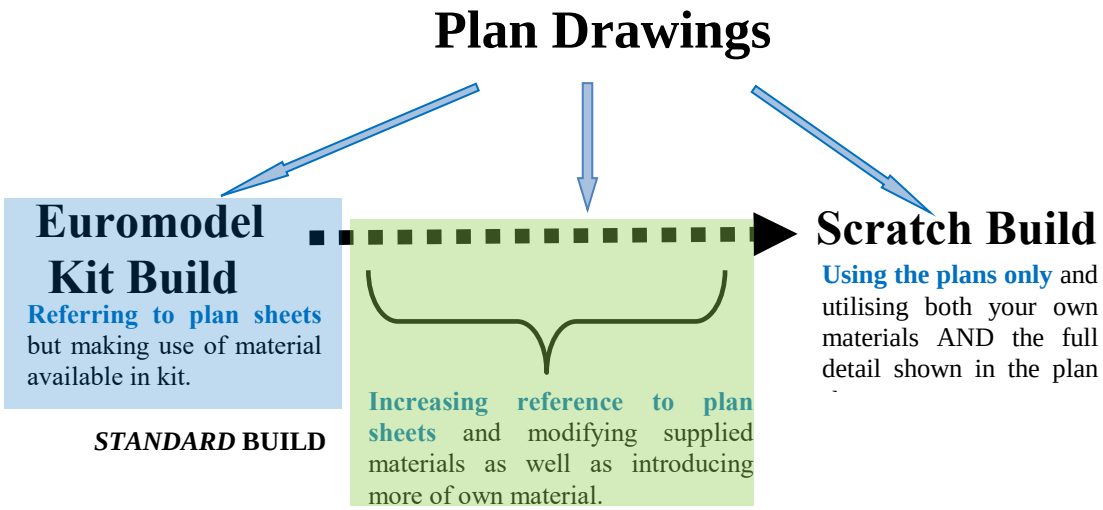
- Comments on staining & treating timber – Fig 21 added

Content

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

Illustrations

[The figures below are not hyperlinked]



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 1, 2, 4, 8 and 17.

When building individual components, *reference* and *comparisons* should be made between Plan Sheet 2 and the other drawings.

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 modeler 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

The original ship, built at the Deptford Dockyards and launched in 1670, was the 100-gun HMS Prince. She saw action in the Third Anglo-Dutch War but the resulting damage caused the ship to be re-built and launched in 1692 as the HMS Royal William. She was then directly involved in action at the Battle of Barfleur during the War of the Grand Alliance and was the first ship to break the French line.

The Royal William was finally re-built at Portsmouth between 1714 and 1719. The ship was involved in the war against France in Canada and took part in the operations that led to the capture of Quebec. In 1782, the ship was involved in the salvage attempt of HMS Royal George, which overturned in Spithead during maintenance and causing the death of 900 persons. In the end it was assigned as anchor-watch at Portsmouth until 1813 and then demolished. Its survival for over a century compares strongly with the typical six-year life span of so many other ships.

Length: 68.58 m.

Width: 12.80 m.

Crew: 730

Draft: 6.10 m.

Displacement: 1600 tons

Armament :
1st.battery: 28 guns
2nd.battery:28 guns
Upper Decks: 44 guns

Figure 2: Model of Royal William

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22100 COMO (CO)
ITALY
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home page http://www.euromodel-ship.com

Construction Philosophy

Euromodel have tried to simulate all the designs of the 'Royal William' 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.

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.

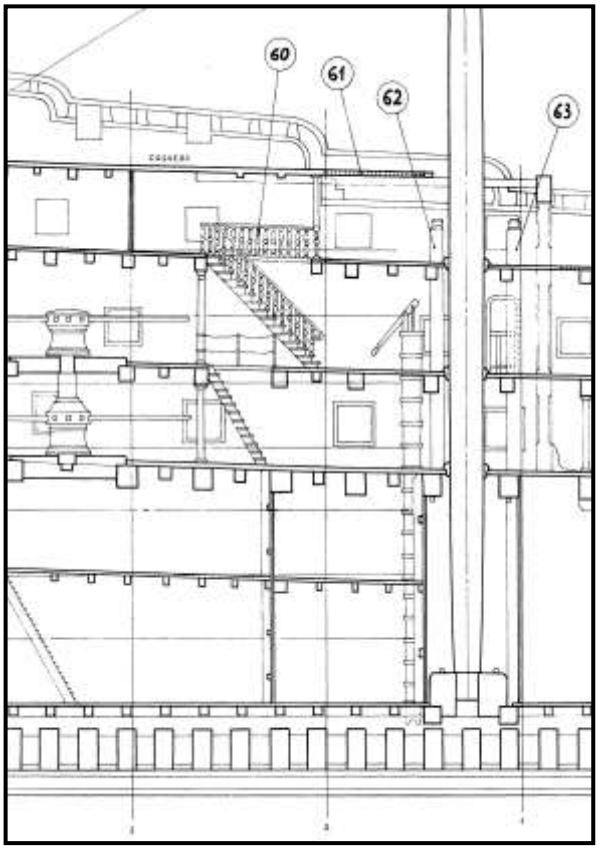


Figure 3: Plan Sheet Sectional View Illustrating Detail

Plan Sheet 8 contains a considerable amount of scratch information. This is a sheet that is very useful in interpreting the hull structure but does contain much that is outside the scope of this kit.

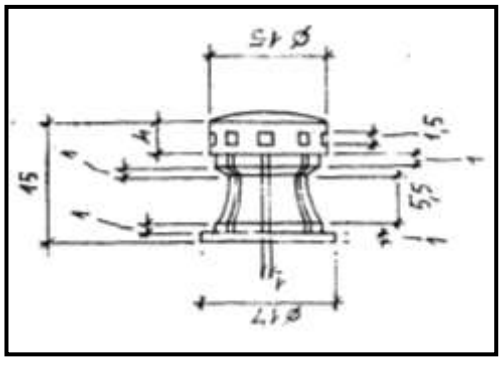


Figure 4: Anchor Capstan Detail

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 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/ Customer Assistance named '**Royal William 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 observe the heading 'Alternative 1' which uses a very straightforward and basic approach usually with the supplied material as it is whereas the heading 'Alternative 2' often shows the method that I used which probably involved modifying the supplied pieces and/or using extra material

A good example is shown by the ship's anchor capstan on Plan Sheet 9 (the main capstan is totally hidden below the Gun Deck and not being visible, it is not constructed). The immense detail provided will enable the construction of the capstan 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.

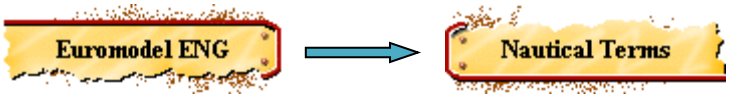
Construction Manual

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 !

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 Translations

Tavola 2 SCAFO-VISTE-PIANTE E PARTICOLARI	Plan Sheet 2 HULL-DRAWINGS & SHEETS
VISTA LONGITUDINALE Ornamenti e figure in bassorilievo dorato su ... etc NOTA: I portelli dei cannoni in corrispondenza delle ossature F-E-D-A-O-3-5-6 e quelli all'estrema prora ... etc	LONGITUDINAL VIEW Ornaments and carvings are gold on black NOTE: The gun ports next to the frames F-E-D-A-0-3-5-6 and those on the bow must be closed.
Capodibanda 2 x 5 mm.	Cap Rail/ Roughtree Rail (2 x 5 mm)
Ponti :listelli di 0,5 x 4 mm. in colore legno ... etc	Deck planking: natural light wood (0.5 x 4 mm)
VISTA DA SINISTRA DELLE FIGURE DI POPPA.	VIEW OF THE CARVING ON THE LEFT SIDE OF TH STERN
VISTA DELLA POPPA.	STERN VIEW
PARTICOLARE DELLE FIGURE DI CORONAMENTO.	DETAILS OF THE STERN BADGE CARVINGS
VISTA DELLA PRUA.	VIEW OF THE BOW
PARTICOLARE PARATIA DI POPPA.	DETAIL OF THE STERN BULKHEAD
DETTAGLIO PROSPETTICO DELLA POLENA.	PERSPECTIVE DETAIL OF THE FIGURE-HEAD
CODICE DEI COLORI. Quercia naturale Nero. Oro antico. Acc. brunito =Tutte le parti in metallo ad ... etc Rosso vivo=Lato interno delle murate, dei portelli delle batterie,affusti dei cannoni, vericelli ... etc	COLOR CODE Natural oak Black Antique old gold Burnished steel: all metal except the gun barrels Bright red: inside of bulwarks, gunport covers, gun carriages, winches, bitts, pinrails, cleats.

Per le sezioni longitudinali e trasversali vedere ... etc	Longitudinal and beam sections see Plan Sheet 17.

Tavola 4 SCAFO , ASSIEME PROSPETTICO DELLE OSSATURE.	Plan Sheet 4 PROSPECTIVE DRAWING OF THE FRAMES ASSEMBLY
CASSERETTO	POOP DECK
CONTROCASSERO	UPPER QUARTERDECK
CASSERO	QUARTER DECK
PONTE DI COPERTA.	MAIN DECK
CASTELLO	FORECASTLE DECK
Ponti rivestiti con listelli di tiglio da mm. 4 x 1	Deck planking with lime strips (4mm x 1mm)
Blocchetto di riempimento (destra e sinistra).	Filler blocks (right and left).
NOTA:	NOTE:
1. Per i particolari dal 2 al 18 vedere Tav. 6	1. Details from 2-18 inc. refer to Plan Sheet 6.
2. Per i particolari dal 19 al 37 ed il ... etc	2. Details for 1 & from 19-37 inc. refer Plan Sheet 5.
3. Le mastre dei boccaporti vanno dipinte di colore noce (o rivestite con impiallacciatura di noce)	3. Hatchway covers will either be walnut stained or planked with walnut strips.
4. I ponti devono essere verniciati con vernice trasparente semi-lucida dopo l'avvenu ...etc	4. Decks with flat varnish after all fittings added, such as winches, guns, pin rails, etc.

Tavola 5 SCAFO , OSSATURA LONGITUDINALE PONTI E PARTICOLARI	Plan Sheet 5 HULL, FRAMES & DECKS
pezzo compensato	piece of plywood
pezzo a disegno.	piece as shown by drawing
pezzo opposto a disegno	another piece opposite the drawing
rifilare a misura dopo il montaggio.	file to match after assembling (i.e. after glueing)
rifilare durante il montaggio.	shape to match
I paricolari # 30-33-34-35-36 non sono compresi nella scatola ... etc	No details for # 30-33-34-35-36 are given because they are pre-cast in metal.

Tavola 6 Scafo – Ossature	Plan Sheet 6 HULL – FRAMES
B) Asportare la parte tratteggiata sino al ponte di coperta dopo avere eseguito il fasciame.	Remove shaded area to main deck after planking.
Castello - ponte di coperta - 2° ponte batteria ... etc	Forecastle/ main/ 2nd gun/ 1st gun decks
C - D - E - F come B	C - D - E - F as B
17) Bagli.	Beams (part of frame since intro. of laser cutting)
1 - 2 - 0 - A) Ponte dicoperta - 2° ponte ... etc	Main/ 2nd gun/ 1st gun decks
5,6,7. Controcassero - Cassero - Ponte di coperta.	Poop/ quarter/ 2nd gun decks
3,4.Cassero - ponte di coperta - 2° ponte di ... etc	Quarter/ main/ 2nd gun/ 1st gun decks
8. Controcassero - cassero - ponte di coperta ... etc	Poop/ quarter/ main deck/ 2nd gun decks
18. N° 2 pezzi del 18 . Incollare ed inchiodare in	2 pieces as fig. 18; glue & pin in the place shown in

questa posizione a proravia dell'ordinata.	front of this Frame 8.

Tavola 7 SCAFO:PARTICOLARI DELLO SPECCHIO DI POPPA E FINESTRATURE LATERALI	Table 7 STERN & SIDE ORNAMENTATION
NOTA: I pezzi con la lettera "A" sono uguali ma opposti a disegno. Esclusi i particolari 47-51-52-53-54-55-56, tutti gli altri non sono compresi nella scatola di ... etc Sistemare dopo il montaggio dei pezzi 54-55-56. Colonnine : N° 6 pezzi di cui N° 3 a disegno ... etc Colonnine delle porte-finestre: N° 14 di cui 6 come disegno , 6 opposti e 2 centrali. Modo di applicazione delle colonnine in posizione. 54. Cirmolo - da aggiustare al montaggio. 56. Cirmolo da 2 mm. di spessore. Modo di costruire le finestre.	NOTE: The pieces numbered with the addition of "A" are equal but complementary Pieces No. 47-51-52-53-54-55-56 are wood, all the other pieces are cast metal. Install after the assembly of pieces 54-55-56. Columns: 6 pieces; 3 as in drawing & 3 opposite. Columns for door with windows: 14 pieces ; 6 as in drawing , 6 opposite and 2 in the middle. Method of installing the columns. Balcony - to shape when assembling. Balcony of 2 mm. thickness. A system to make windows.

Tavola 8 SEZIONE LONGITUDINALE E SEZIONI TRASVERSALI	Plan Sheet 8 LONGITUDINAL & TRANSVERSE SECTIONS
SEZIONE LONGITUDINALE SULLE MEZZANA. SEZIONE VERSO POPPA , SULL'OSSATURA N° 5. SEZIONE VERSO POPPA , SULL'OSSATURA MAESTRA. SEZIONE VERSO POPPA , SULL'OSSATURA "B". DETTAGLIO DELLA SISTEMAZIONE DELLE ANCORE. DETTAGLIO DELLA GRU DI CAPONE . Paranco di capone . Cicala dell'ancora. Nodo amante dell'ancora. * = da realizzare a cura del modellista. ** = non fornito con il Kit	LONGITUDINAL SECTION ALONG THE CENTER LINE. HULL SECTION LOOKING TOWARD STERN CORRESPONDING TO NO. 5 FRAME. HULL SECTION LOOKING TOWARD STERN, ON THE CENTRE FRAME. HULL SECTION TOWARD BOW, ON THE NO. B FRAME. DETAIL OF THE ANCHOR RIGGING. DETAIL OF THE CAT HEADS. Cat Head tackle. Anchor shackle. Two half hitches for the anchor rope. * = To be made by the model builder. ** = not supplied with the Kit.

Tavola 9 PARTICOLARI DAL N° 57 AL N° 81	Plan Sheet 9 No index entries found.
57. Scale - N°2 pezzi.	Ladders - # 2 pieces.
58. Guardacorpo del controcassero.	Upper quarter deck storm rail.
59. Scale - N° 1 pezzo a disegno e N° 1 pezzo opposto.	Ladders - 1 piece as in drawing & 1 piece opposite.
60. Scale - N° 1 pezzo.	Ladders - one piece.
61,65,69. Paiolato - N° 1 pezzo.	Gratings - one piece.
61 Particolare terminale del cassero.	Detail of the forward end of the quarter deck.
62. Pazienza - N° 2 pezzi - Partic. N° 4.	Pin rail - two pieces - Detail # 4.
N.B.) I particolari sono nella tavola N°10	The details are in Plan Sheet 10.
64) Scialuppa - N° 1 pezzo - 140 mm.	Lifeboat - one piece - 140 mm.
66. Argano - N° 1 pezzo.	Winch - one piece.
67. Chiesuola della campana - N°1 pezzo	Belfry - one piece.
68. Cucina - N° 1 pezzo - * e **	Gallery - one piece - * and **
72. Particolari ingranditi - Scala 2:1 per N° 72 e N° 73.	Enlarged guns - Scale 2:1 for # 72 and # 73.
72. Bozzelli del paranco di rinculata.	Recoil tackle blocks.
Bozzelli del paranco del cannone.	Gun carriage tackle blocks.
Braca.	Gun carriage sling.
72. Artiglieria - 14 pezzi e 6 mezze canne	Gunnery - 14 pieces and 6 dummy guns.
74. Artiglieria - 28 pezzi mezze canne	Gunnery - 28 pieces dummy guns.
Particolare cerniera. *	Detail of gun carriage *.
Cannoni:	Guns
1° Ponte di batteria	1° Main deck
N° 28 mezze canne da mm. 23	N° 28 dummy guns 23 mm.
2° Ponte di batteria	2° Main deck
N° 30 mezze canne da mm. 21	N° 30 dummy guns 21mm.
Ponte di coperta	Upper deck
N° 16 mezze canne da mm. 18	N° 16 dummy guns 18 mm.
N° 12 cannoni con affusto da mm. 35	N° 12 Guns with carriage 35 mm.
Cassero	Poop deck
N° 14 cannoni con affusto da mm. 26	N° 14 Guns with carriage 26 mm.
Cannoni di ritirata	Retreads guns (Only port lids)
N° 4 da mm. 35. Non compresi nel kit.**	N° 4 35 mm. **Not included in the kit.
76 - 77) Gavitello - N° 2 pezzi	Buoy - two pieces.
78) Ancora di speranza - N° 2 pezzi.	Sheet anchor - two pieces.
79) Ancora di posta – N° 2 pezzi.	Bow anchor - two pieces.
80) Timone - N° 1 pezzo.	Rudder - one piece.
81) Barra - N°1 pezzo.	Jack - one piece.
Dettaglio delle femminelle (fuori scala)	Rudder hinges detail (not in scale)
* = Da realizzare a cura del modellista.	* = To be made by model builder.
** = Non fornito con il kit.	** = Not supplied with the kit.

Tavola 16 CHIGLIA - BARCA - PARANCHI - LEGATURE - ECC.	Plan Sheet 16 KEEL - BOAT - TACKLES - TIES - etc.
Parti della chiglia (1) sottochiglia (2) ruota di prua (3) e dritto di poppa (4) fuori fasciame (5) sottochiglia per la scatola di montaggio - a seguito della Tav. 5.	Keels parts (1) false keel (2) stempost (3) stern post (4) outside planking, false keel from the kit (5) Additions to Plan Sheet 5.
Tagliare longo la linea tratteggiata , dopo il... ecc	Cut along dotted line after assembly.
Lo spessore della chiglia è 8 mm.	The keel thickness is 8 mm.
Paranchi e pennoni di maestra e di trinchetto.	Halyard of the main and fore lower yards.
Paranco di pennone di gabbia.	Halyard of the main topmast yard.
Passaggio in cavatoia della drizza dei pennoni di parrocchetto e di velaccino.	Mast sheave arrangement of the halyards for the main topmast and main topgallant yards.
Il tipo di legatura è uguale sia per gli arrivi alle pazienze che al capodibanda.	Tie is same for pin rail as for capping rail ropes terminals.
Dettaglio dalla Tav. 11	Detail from Plan Sheet 11
Nodo parlato per griselle.	Clove hitch for ratlines.
Posizione della barca e degli alberi di rispetto.	Setting of the lifeboat and spare mast.

Tavola 17 PIANO DI COSTRUZIONE	Plan Sheet 17 BUILDING PLAN
Piano longitudinale.	Longitudinal plan.
Piano orizzontale (linee d'acqua).	Horizontal plan (water lines)
Piano trasversale (ordinate).	Gross plan (frames).
Bolzone	Deck camber.
Curvatura del bolzone.	Bend or curve of the deck camber.
Linea retta del taglio	Straight line of deck beam.
Nota : I profili dei ponti sono riferiti alla mezzeria della nave (CL) ; per determinare esattamente il profilo a murata usare la sagoma del bolzone sopra illustrata.	Note : The deck profiles are drawn in reference to the ship's center line (CL) ; in order to determine exactly the profile at bulwark line , use the deck camber pattern drawn as shown.

Chapter 3: THE KIT

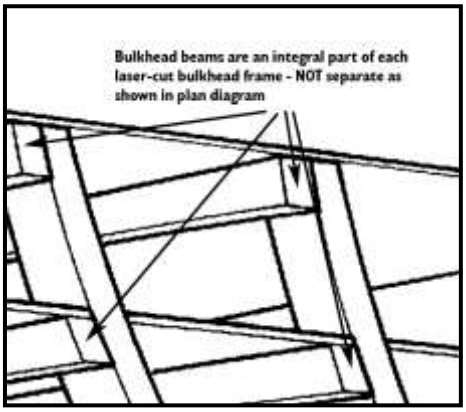


Figure 5: A Difference Between Plan Sheet Drawings and the Kit

Drawings

The drawings are based on the 1980's concept of 'jig-saw' cutting and thus the drawings show some components that are no longer individual pieces but now included in the laser cut-outs. Such an example are the beams that support the decks.

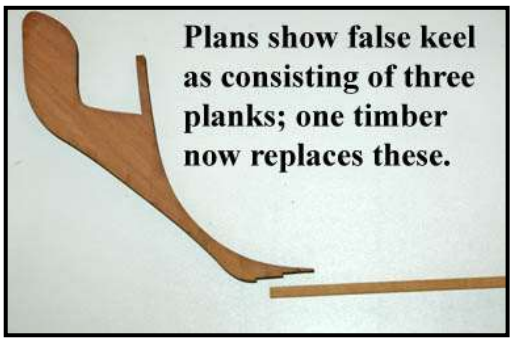


Figure 6: Another Difference !

The diagrams are beautifully drawn and readily separate the kit from the The drawings timbers to form book describes have ONE piece elaborate bow would allow a scratch-built kit to be developed. The difficulty is to essential detail necessary to build the other more seriously accurate detail. depict a 'sandwich' of THREE a false keel and Keith Julier in his this method – however, in this kit we of timber 6 x 7 mm. The base of the post that is pre-cut allows for these three timbers in a stepped configuration so the modeller must cut a complementary housing into the stem post supplied to accomodate the single piece.

Figure 7: Metal Identification

Metal Decorations

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

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

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

Scrap Material

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

Component list

Wood - Laser-cut

Hull: Keel (1) – Chiglia Transverse Frames (15) - Ordinate

Decks: Gun Deck (2) - Ponte di batteria Main Deck (1) - Ponte di coperta
Quarter Deck (1) – Ponte di cassero Upper Quarter Deck (1) – Ponte di contro cassero
Poop Deck (1) – Ponte casseretto Forecastle Deck (1) – Ponte castello

Bulkheads A, B & C (3) – Paratia A, B & C

Stern: Transom Supports (2) - Supporti di poppa Transom (1) : Specchio superiore
Rudder (1) - Timone

Posts: Stem (Bow) (1) - Ruota di prua Stern Post (1) – Ruota di poppa

Support Base: (1) - Invasatura anteriore + posteriore

Wood – Limewood – listello tiglio

40 x 70 x 220 mm.	**Filler Blocks for Bow** - Blocchetto di riempimento va fatto di prua
1.5x 6 x 880 mm. (100)	**First Planking** - 1° Fasciame
4 x 4 x 840 mm. (6)	**Longitudinal stringers** - Correnti lunghezza
12x12 x 750 mm. (2)	**Cannon supports** – Supporti cannoni a canna tronca
3x 25 x 200 mm. (1)	**Mast Cheeks** – Maschette

Wood – Walnut - listello noce

1 x 6 x 880 mm. (100)	**Second Planking** - 2° Fasciame
4 x 1 x 880 mm. (100)	**Deck Planking** - Rivestimento ponti
6 x 7 x 700 mm. (1)	**False Keel** - Sottochiglia
2 x 7 x 700 mm. (10)	**Wales (lower & middle)** – Incintoni
2 x 3 x 840 mm. (4)	**Wales (upper)** – Incintoni
3 x 5 x 800 mm. (1)	**Frame Riders (Vertical reinforcements)**- Rinforzi esterni
2 x 5 x 800 mm. (4)	**Cap Rails** – Capodibanda
2 x 13 x 270 mm. (1)	**Channels** – Parasartie
2 x 12 x 300 mm. (1)	**Channels** – Parasartie
2 x 10 x 150 mm. (1)	**Channels** – Parasartie
3 x 3 x 300 mm. (1)	**Pin Rails** - Cavigliera
5 x 5 x 500 mm. (1)	**Pazienza** - Bitts
6 x 6 x 120 mm. (1)	**Catheads** - Gru di capone
1.5 x 11 x 200 mm. (1)	**Gun Port Hatch (closed, Main Deck)** - Portelli cannoni
1.5 x 13 x 400 mm. (1)	**Gun Port Hatch** – Portelli cannoni
1.5 x 14 x 500 mm. (1)	**Gun Port Hatch** (closed, First Gun Deck) – Portelli cannoni
1 x 1 x 800 mm. (1)	**Capstan Base**; Rigol (arc above gunport) – Base de aragano; Arco

Crosstrees & Trestle-trees & Top Battens -Crocette e barracostiere e serretta coprigiunto
1.5 x 3 x 800 mm. (1); 2 x 3 x 300 mm. (1); 5 x 10 x 200 mm. (1); 4 x 8 x 200 mm. (1); 3 x 5 x 150 mm. (1); 1.5 x 1.5 x 200 mm. (1); 3 x 4 x 150 mm. (1); 1 x 1 x 500 mm. (1)

4 x 4 x 500 mm. (1)	**External Cap Rail Supports** – Colonnine supporto capodibanda
3 x 3 x 500 mm. (1)	**Rail Supports** (e.g. over decks) – Colonnine supporto capodibanda
1.5 x 3 x 800 mm. (1)	**Internal Rails**

Plywood-compensata:

1 x 73 x 300 mm. (1) Mast top bases - coffe

Accessories

Anchors: 80 mm., stocks & rings (2) - Ancora di poasta da mm. 80 con ceppo (Art. 11/108)
70 mm., stocks & rings (2) - Ancora di poasta da mm. 70 con ceppo (Art. 11/109)

Barrel (1) - Botte (Art. 22/112)

Belaying Pins: 14 mm. (30) - Caviglia da mm. 14 (Art.22/088)

Bell (1) – Campana (Art. 11/107)

Bell Belfry (1) – Campana dei quarti (Art. 11/311)

Binnacle (1) - Chiesuola campana (Art. 11/311) (1)

Blocks

E1/F1:	3mm., 1 hole(160) - Bozzelli da mm. 3 a 1 foro (Art.22/026)
F2:	3mm., 2 hole(5) - Bozzelli da mm. 3 a 2 foro (Art.22/031)
Q1/ H1:	5mm., 1 hole (98) - Bozzelli da mm. 5 a 1 foro (Art.22/028)
Q2/H2:	5mm., 2 hole (8) -Bozzelli da mm. 5 a 2 fori (Art.22/032)
L1:	7mm., 1 hole (14) - Bozzelli da mm. 7 a1 fori (Art.22/030)
L2:	7mm., 2 hole (4) - Bozzelli da mm. 7 a 2 fori (Art.22/034)
L3:	7mm., 3 hole (16) - Bozzelli da mm. 7 a 3 fori (Art. 22/039)
M/N:	Fiddle, 7 mm. (4) - Bozzelli a violino da mm. 7 (Art.22/083)
P:	Fiddle, 11 mm. (1) - Bozzelli a violino da mm. 11 (Art.22/084)
S/T:	Heart, 10 mm. (2) - Bozzelli a cuore da mm. 10 (Art.22/085)

Brass Nails, box (1) – Chiodi di ottone

Buoy (4) - Gavitello (Art.22/145)

Capstans: 15 x 20 mm. (1) + 18 x 25 mm (1) [larger size is also supplied to allow greater choice in constructing the anchor capstan as described in RW.02.HULL CONSTRUCTION]]

Cleats (12) - Galloccia (Art.22/049)

Chain Plates:

3mm.,(12) - Landra da mm. 3 (Art.11/358)

5mm.,(12) - Landra da mm. 5 (Art.11/313)

7mm.,(28) with double ring links - Landra da mm. 7 (Art.11/306) (+ Art. 11/310)

7mm.,(16) - Landra da mm. 7 (Art.11/312)

Deadeyes:

A: 7 mm. (96) - Bigotta da mm. 7 (Art.22/022)

B: 5 mm. (78) - Bigotta da mm. 5 (Art.11/020)

C: 3 mm. (40) - Bigotta da mm. 3 (Art.11/018)

Eye pins, 2mm. (50) - Anelli diam. mm. 2 con gambo

Flag Set (1) - Serie completa bandiere (Art.13/033)

Grating Strips 1.0 x 1.0 x 33 mm (350) - Elementi per paiolato da mm. 33 (Art.22/056)

Armament Data & Placement

Full Cannons

25mm. (14) - (Art.11/362)
Forecastle Deck: 6 [3 per side]
Quarter Deck: 8 [4 per side inc. 1 under staircase]

35mm. (12) - (Art.11/305)
Main Deck: 12 [6 per side]
[N.B. Closed gun ports are shown in the drawings for the four stern guns - 'guns of retreat'. The guns are not supplied in this kit due to the difficulty in fitting them. This also applies to the two forward facing guns in the Prow Deck bulkhead].

Half Cannons

22mm. (38) - (Art.11/309)
Gun Deck 2 (upper): 18 [9 per side] + (five closed gun ports)
Gun Deck 1(lower): 20 [10 per side] + (four closed gun ports)
[N.B. Closed gun ports are due to frames at these points. Kit supplies only sufficient guns for the open gun ports]

18mm.(16) - (Art.11/308)
Main Deck - 4 under Forecastle Deck [2 per side]
Main Deck - 8 under Quarter Deck [3 per side behind bulkhead & 1 per side in front]
Quarter Deck – 4 behind bulkhead [2 per side]

Gun Carriages-Affusti per cannoni 21mm. (12) (Art.22/008); 19mm. (14) (Art.22/001)
Gun Door Hinges (90) - Cerniere portelli cannoni (Art. 11/289)
Wheels - Ruote per cannoni diam. 4mm.(28) (Art.22/148); diam. 5mm. (52) (Art.22/140); diam. 6mm.(24) (Art. 22/150)
Axles: wooden rod 2 x 200mm (3) **-** Tondini di kotò diam.mm. 2 per assali affusti
brass rod 1.5 x 130mm. (2) **-**Tondino ottone da mm. 1.5 per spine cannoni

Ladders - Scala (Art. 22/069) (4)
Lantern - Lanterna (Art. 55/006) (1) / Lantern (Art. 55/007) (2)
Long Boat Hull, 160mm. (1) - Scialuppa da mm. 160 (Art.88/01)
Mast Caps – Testa di moro ...
Bowsprit (bompressa) – (2)
Foremast (trinchetto) – (3)
Main Mast (maestra) – (3)
Mizzen Mast (mezzana) – (2)
Metal Decorations Set (1) - Serie completa decorazioni fuse (Art.11/303)
Name Base Plate (1) - (Art. 12/006) (1)
Plans Set (17) - Serie disegni (No 17 Tavole) (Art.66/006)
Rigging yarn
0.25 mm. (Art. 77/025); 0.40 mm. (Art. 77/040); 0.60 mm. (Art. 77/060); 0.80 mm. (Art. 77/080) ; 1.00 mm. (Art. 77/100); 1.50 mm. (Art. 77/150)
Rings (2mm.) (30) - Anelli diam. mm. 2
Rudder Hinges (5) - Cerniere timone complete (Art.11/293)
Sail Cloth 600 x 900 mm. (1) - Serie tela per vele mm. 600 x 900 (Art. 15/006)
Stanchion Cleats (e.g. 'staghorns') (6) - Tacchetti (Art.11/271)
Instructions - Istruzioni
Colour photo – Fotocolor

Masts & Spars [refer to Manual 4 for construction details]
12 x 445mm. (1), 10 x 700 mm. (1) ; 10 x 450 mm. (1) ; 8 x 650 mm. (1); 8 x 675 mm. (1); 6 x 550 mm. (1); 6 x 550 mm. (1); 6 x 420 mm. (1); 5 x 700 mm. (1); 5 x 650 mm. (1); 5 x 200 mm. (1); 4 x 350 mm. (1); 3 x 200 mm. (1); 3 x 660 mm. (1);1 x 580mm. (1)

Additional Laser-cut Plywood

The stern transom is created from three separate pieces of timber. Only Part No. 56 is shown below. The other two parts, 54 & 55 are not shown. These are pre-cut from 13mm and 18mm walnut respectively.

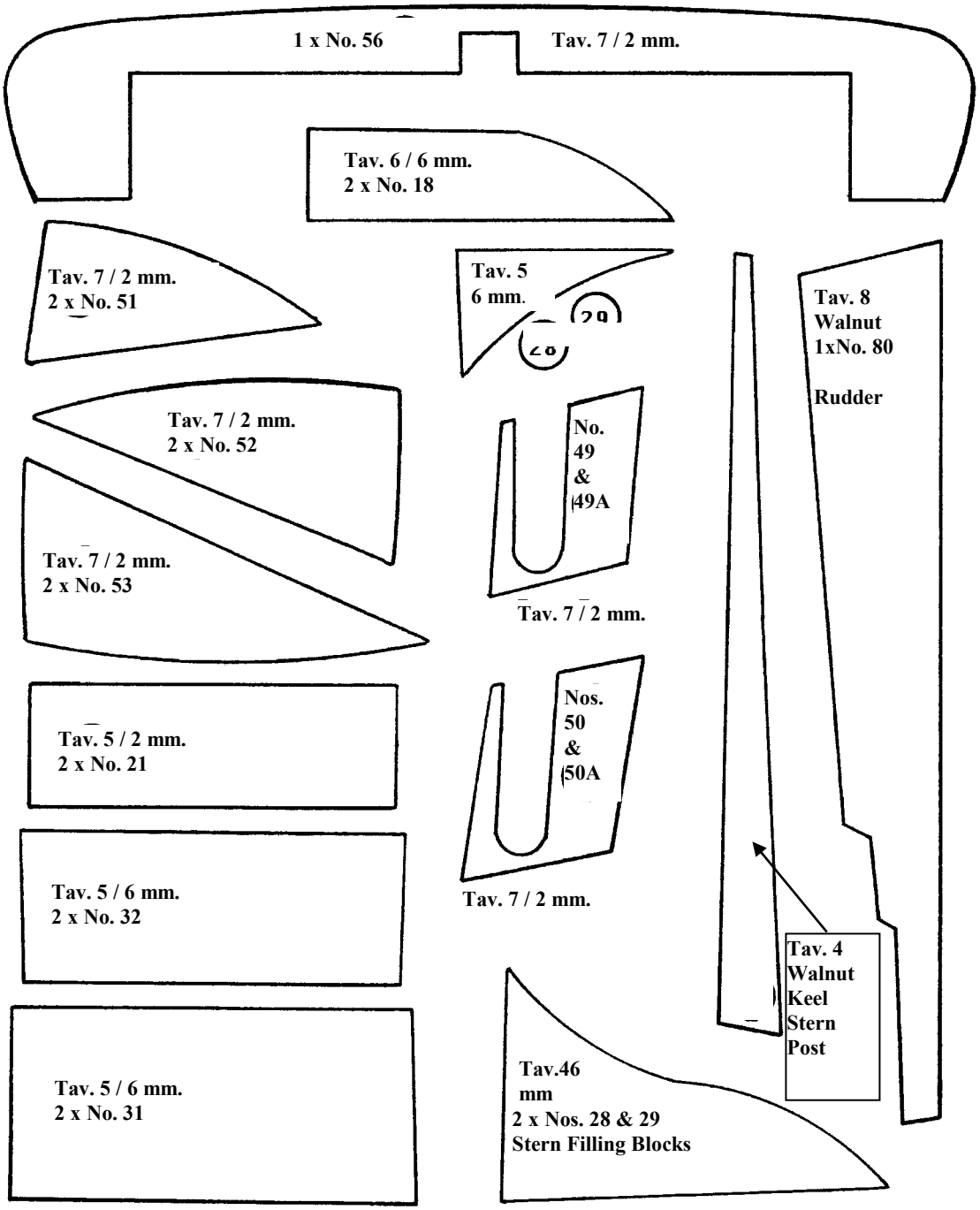


Figure 8: Laser-cut Plywood Shapes

Chapter 4: SOME USEFUL TECHNIQUES

Measuring Gun Ports Along the Hull

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

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

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

Fig. 9 indicates how the bottom edge position of the port might be determined.

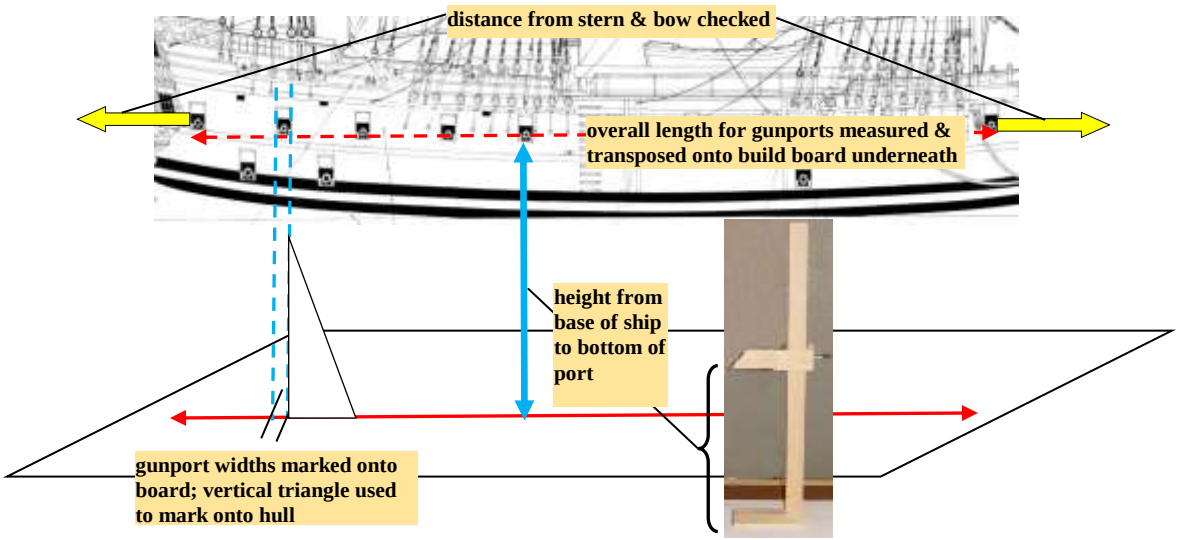
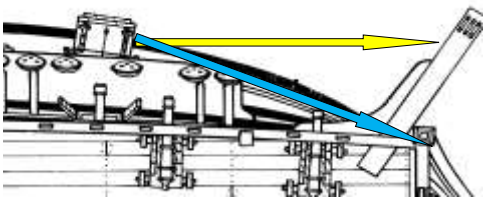


Figure 9: Establishing Gunport Positions



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

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

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

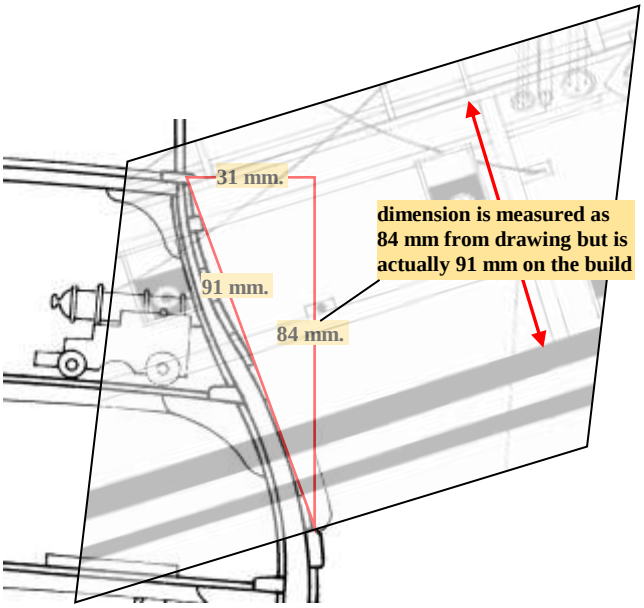


Figure 10: Making Adjustments for Three Dimensions

Fig. 10 illustrates a common problem faced by builders – the drawing illustrates what is *seen* but not what is *measured* … it is a three-dimensional view presented as a two-dimensional view. The figures shown in Fig. 10 were taken straight off the computer screen but the *ratio of figures will remain the same*.

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

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

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

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

Measuring Bulwark Height

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

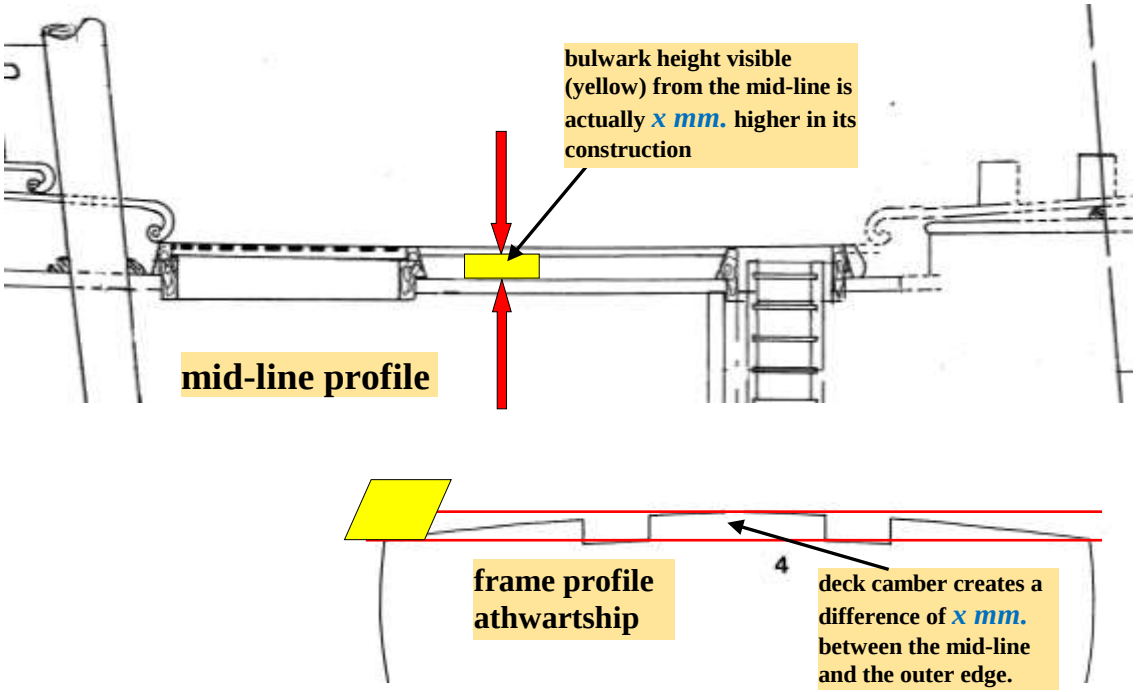


Figure 11: Bulwark Height Correction

Metal Bending

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

Figure 12: Heat Gun

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

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

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

Extra Eye Bolts

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

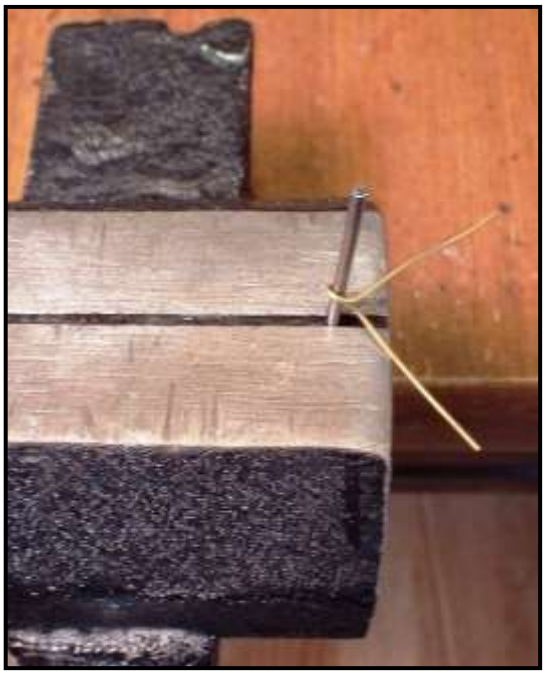


Figure 13: Drill or Nail in Vice

Figure 14: Twisted Tail of Eye Bolt

Transferring Plan Drawings Directly Onto Timber Surfaces

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

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

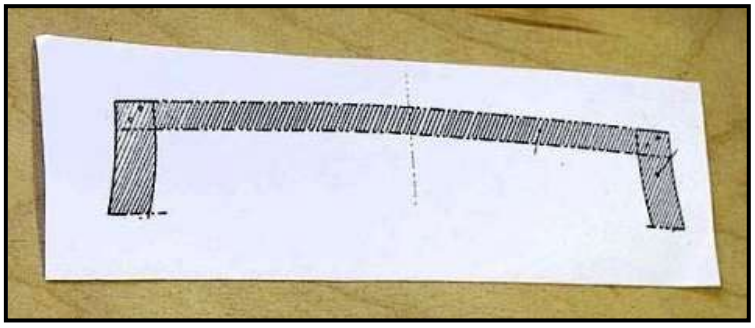


Figure 15: Laser Print Copy

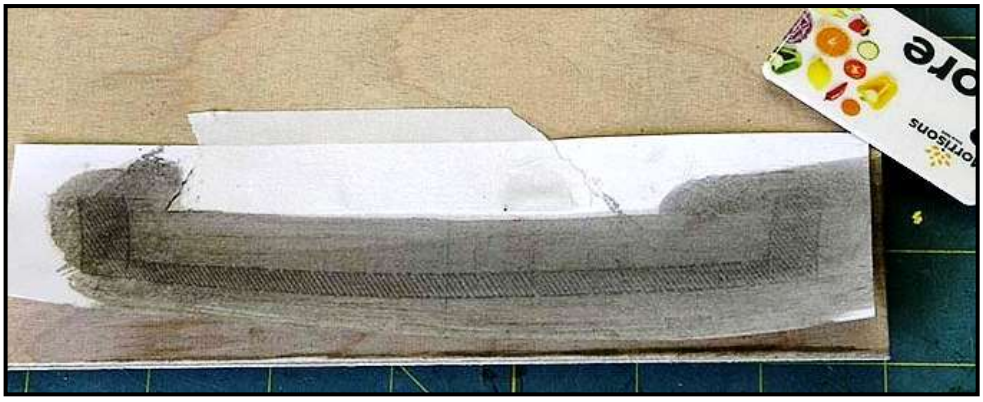


Figure 16: Reversed Side Wiped Over with Xylene

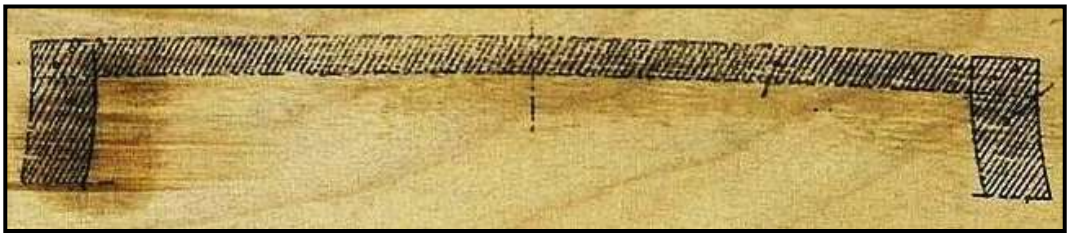


Figure 18: Print Transferred Onto Timber

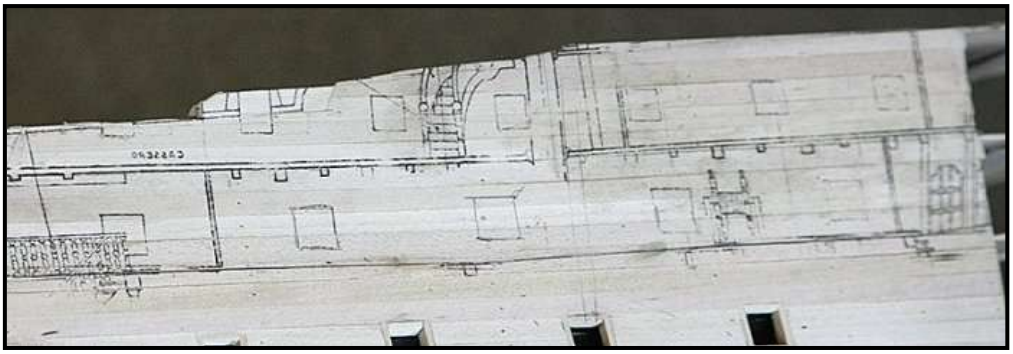


Figure 17: Example of a Larger Transfer

Suggested Colours

Bianco - white	**Rosso vivo – bright red**	**Lego noce – walnut**
Nero – black	**Giallo ocra – ochre**	**Verde marcio – green**
Oro – gold	**Azzurro scuro – dark azure blue**	**Azzurro pallido – pale blue**

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

Decks: natural colour finished with wax or varnish (matt)

Figure 19: Modeller's Colour Scheme A (not Royal William)

Gun barrels
These should be oxidized to produce an antique look.

White
Framework of side windows and stern windows; flags & ornaments

Non-ferrous kit items not covered by the colour of the detail they are attached to (e.g. gun door hinge) can be painted with a black & silver mixture to simulate steel.[black & gold for bronze].

Red
Bulwark inside surfaces, inside & sides of gunport covers, gun mounts & gun bgarrel plugs, cannonball racks, belaying pin racks, capstan, bilge pump.**[N.B. 'red' paints were manufactured using pigments such as red lead & iron oxides; the resultants paints were therefore a darker red & not a primary red colour].**

Walnut
Inside bulwarks, handrails, stairs, hatchway coamings, mast coamings, masts & yards, tops & crosstrees, winch stocks, inside of life boats & their stands, blocks, deadeyes & belaying pins.

Figure 20: Modeller's Colour Scheme B (not Royal William)

For painting use good quality brushes and build up the colour using thin layers.

Timber Treatment/ Staining

Some suggestions from Ken3335 (MSW member) …

- first make sure that there is no glue in the grain and wipe away [I use a damp cloth/ brush] any excess when using,
- a good sand mostly with a solid block with 120 grit attached,
- after this, always rub in a ***thin penetrating wood dye mostly a light oak*** which doesn't change the colour of the wood much but it makes it look richer and really brings out the grain. For contrast on rubbing strips (wales) etc. I'll use ***dark oak***,
- application of ***sanding sealer*** which dries quickly and after a few minutes a light rub with 180 grit just held by fingers,
- finish with a ***polyurethane satin varnish***. On the decks, acrylic matt varnish which dries quickly and is easily re-touched if marks are made on the deck.

Figure 21: Timber Finishes

Modifying the Supplied Blocks