Manual 1 of 5

Hull Structure (version 1)

(first planking; accessories)

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
Lyde
to create a
documented manual of construction
for others to utilize.

To him I owe much

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

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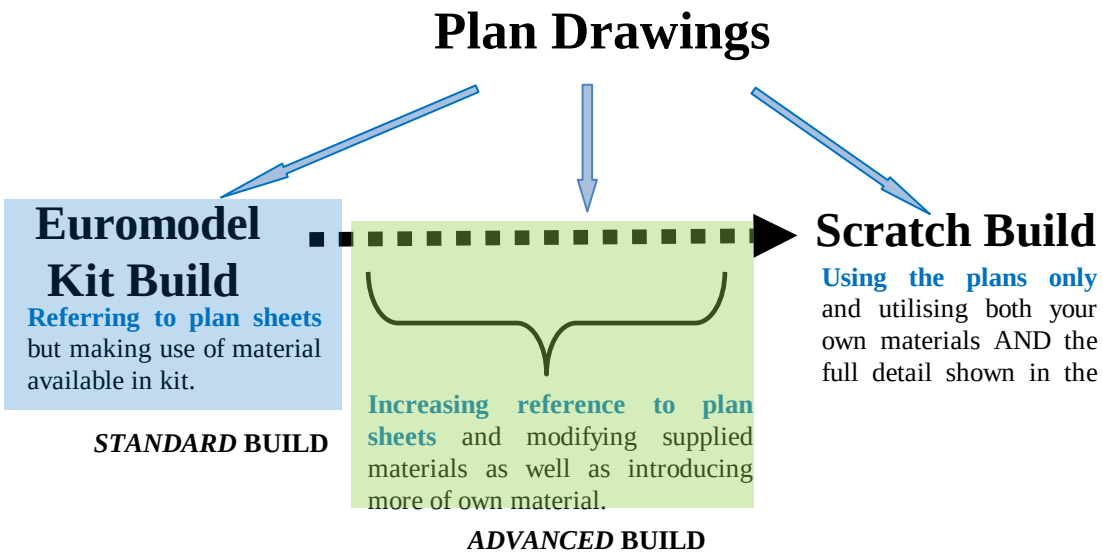
Euromodel Preview



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 Lyde, the builder is well advised to focus on three – Plan Sheets 1, 2 and 4

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 Lyde was built in an English shipyard near Plymouth around 1787 as an armed cargo boat. It was used as a transport for war materials to support the English ships at the siege of Genova during the Napoleonic Wars.

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Construction Philosophy

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

A classic example of a step above the kit approach is illustrated in Fig. 1 where another deck is constructed (shaded pale green). The kit only provides three decks (Forecastle, Main and Quarter Decks) in laser-cut shapes and yet a quick perusal of Plan Sheet 1 clearly shows the existence of another deck, the Upper Quarter Deck. This illustrates the fact that the plans are really for a scratch build that can be modified to produce a kit model. This extra deck can easily be formed by the builder and yet also can be left out ! Your choice. Other instances will appear which at first glance will suggest some component is missing from the kit but the reality is it will suggest that *something extra could be provided*.

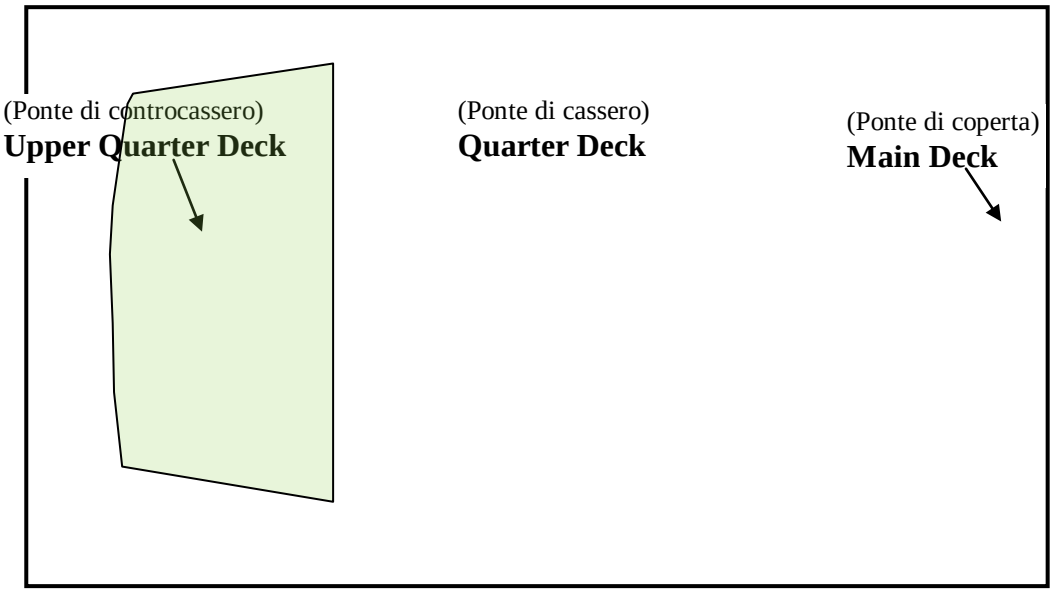


Figure 1: Working Towards a Scratch Model

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 '**Lyde 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 see 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+ click on the words 'advanced notes' in the previous sentence. 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 !

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

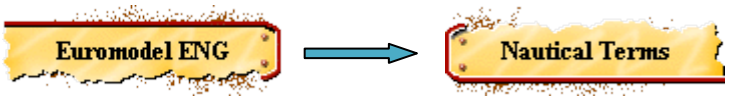
Text References

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

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

Chapter 2: 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.

Tavola 1 **VISTA D'INSIEME**	**Plan Sheet 1** **OVERALL DRAWING**

Tavola 2 **SCAFO CONSTRUZIONE**	**Plan Sheet 2** **HULL CONSTRUCTION**
BOLZONE	**DECK CAMBER**
SEZIONI TRASVERSALI (ordinate)	**CROSS-SECTION VIEW OF FRAMES**
tagliare su ordinata	frame cut-out
SEZIONE LONGITUDINALE sulle mezzana della nave.	**LONGITUDINAL SECTION along the centre line of the ship.**
linea di costruzione	(see sign convention below)
mezzaria nave	(see sign convention below)
SEGNI CONVENZIONALI	**SIGN CONVENTION**
⊠ or x : mezzaria nave	middle of ship
L.C. : linea di costruzione	centerline of construction
Ds. : lato destro della nave	right side of ship
Sn. : lato sinistro della nave	left side of ship
L. : lunghezza	length
l. larghezza	width, breadth
⌀ : diametro	diameter

Tavola 3 STRUTTURE PRINCIPALI	Plan Sheet 3 MAIN STRUCTURE
DIMA del BOLZONE	**DECK CAMBER TEMPLATE**
Incave sulle ordinate 1-2-3-4-5 per correnti longitudinali	Cut out on the frames 1-2-3-4-5 for the longitudinal stringers
Incave sulle ordinate 6-7-8-9-10 per correnti longitudinali	Cut out on the frames 6-7-8-9-10 for the longitudinal stringers
Legno 2mm. di spessore	2mm. thick plywood
TRACCIATURA del BOLZONE USANDO la DIMA	**OUTLINE TO FORM CAMBER TEMPLATE**
Centrare la dima su 'x', e puntare sui terminali dell' ordinata tracciata segnando il bolzone e le relative incave	Create the centre line for the template 'x' and at the top of the frame create the outline sketch of camber and the relative cut out.
N.B. la dima e tratteggiata	N.B. the template for the cut-out
curva da tracciare	curve of the camber tracing
DIMA per la LAVORAZIONE della STRUTTURA LONGITUDINALE CENTRALE	**SKETCH SHOWING PRODUCTION OF THE CENTRAL LONGITUDINAL STRUCTURE**
Cassero/ coperta/ castello	Refer to 'Nautical Terms'
Correnti Ds. e Sn.	Longitudinal stringers
Struttura centrale	Frame (central structure)
N.B. Tagliare sulla linea piena esternamente	N.B. Full view of shaping required for filler blocks
VISTA delle STRUTTURE CONGIUNTE	**VIEW OF ASSOCIATED STRUCTURES**
Riempimento in legno Ds. e Sn.	Filler block (for stern) in wood
Rivestimento dei ponti cassero,coperta,castello	Positioning of quarter, main & foredecks

Tavola 4 Viste de: POPPA, PRORA e dei PONTI	Plan Sheet 4 Views of the STERN, BOW and of the DECKS
SPECCHIO di POPPA	**VIEW OF THE STERN**
PONTI: CONTROCASSERO – CASSERO - COPERTA-CASTELLO	**POOP, QUARTER, MAIN & FORECASTLE DECKS**
BRACCIUOLO no 2 rinforzi	2 reinforcing TAFFRAIL KNEES
anello di ritenuta dell'ostino del picco	ring for guy rope of kicking strap of gaff
anello di ritenuta del bome	ring for boom guy rope
galloccia di ritenuta del bome	cleat for boom guy rope
attachi paranchi per brandeggio cannoni Ds. e Sn.	attach to gun carriage tackle, right & left
attachi funi della culatta Ds. e Sn.	attach to rope of breech (from cannon), right & left
attacco paterazzo volante Ds. e Sn.	attach running backstays, right & left
attachi stralli de maestra	attach stays of main mast
caviglia dell'ostino del pico	belaying pin for gaff kicking strap
golfare per calorna Ds. e Sn.	eye-bolt for lift/ tackle on right & left

VISTA della PRORA	VIEW OF THE BOW

Tavola 5 **ATTREZZATURE di COPERTA**	**Plan Sheet 5** **MAIN DECK RIGGING**
	For many terms, refer to 'Nautical Terms'
Il disegno si riferisce alla gru di destra – Ds. – costruire no. 2 gru.1 Ds. – 1 Sn.	Look at drawing of cathead on the plan for the right side & construct 2 - 1 for left & 1 for right.
VERRICELLO SALPANCORE	**WINDLASS WINCH**
campana dei quarti	bell (rung every quarter hour)
⌀ 1mm. fasciata con cordo ⌀0.4mm.	serve to 1mm. thickness with 0.4mm. cord

Tavola 6 **albero di MAESTRA, BOME, PICCO e particolari**	**Plan Sheet 6** **DETAIL OF MAIN MAST, BOOMS & GAFF**
1. ASTA di CONTRORANDA 2. PICCO + Buttafuori picco di maestra 3. BOME + Buttafuori boma di maestra	In descending order down the main mast are … 1. GAFF TOPSAIL BOOM 2. MAIN MAST GAFF + Main gaff outrigger 3. MAIN MAST LATEEN + Main boom outrigger
	NOTE: a. This sheet only gives detail without instructions for construction. The terms used will be found on the Euromodel website under 'Nautical Terms' b. The *pennola del contropicco di maestra* is shown on this sheet as simply '*pennola del contro'*. Both relates to the '***Ensign Staff***' which carries the Ensign flag.

Tavola 7 **albero di TRINCHETTO, PENNONI e PICCO**	**Plan Sheet 7** **DETAIL OF FOREMAST, YARDS & GAFF**
1. PENNONE di PARROCCHETTO 2. PENNONE di TRINCHETTO 3. PICCO di TRINCHETTO	In descending order down the foremast are … 1. FORE TOPSAIL YARD 2. FORE LOWER TOPSAIL YARD 3. FOREMAST GAFF
Calorna – N°. 2 albero maestra – n° 2 albero di trinchetto, una a Ds., una a Sn.	Two tackle to main mast and two tackle to foremast, one each to the left and to the right.
Paranco dell' amantiglio del picco	Lift block & tackle for gaff
Drizza pennone di trinchetto	Hoist for main yard on fore mast
Pianta all' incastro dell'albero di parrocchetto	Plan showing the interlocking joint of the fore lower topsail mast with the lower mast
Amantiglio del picco	Gaff lift

Alla cavigliere	To the pin rail

Tavola 8 BOMPRESSO, NODI e PARTICOLARI	Table 8 BOWSPRITS, KNOTS & ROPE DETAILS
tirando il nodo stringe	pull knots tightly
caspargere di colla e stringere forte il nodo	spread with glue & tighten knot strongly
N.B. Incava da farsi in corrispondenza delle posizioni dove devono essere fissati i bozzelli, cioe sui ... etc	Notch to be carved at locations where there are attached blocks – namely on yards, booms, gaffs, etc
nodo per cavo ancora	knot for anchor rope
nodo chiuso	knot closure
cavo guernito	rope seizings
inferitura con cavo	**furling line**
cavo d'inferitura	furling line rope
BOZZELLI	**BLOCKS**
con stroppo in ferro	with iron strap
con stroppo in fune (usare per il modello)	with rope strap (used by the modeler)
SARTIE	**SHROUDS**
	'To be completed at a later date'
STRALLO	**STAYS**
1° strallo di trinchetto	Primary foremast stay rope
strallo di trinchetto a una sola braca	Foremast stay rope is one single rope
2° strallo di trinchetto	Secondary foremast stay rope
strallo maestra a due brache	Main mast stay consists of two ropes
gerli d'inferitura	**furling line gaskets**
bugna d'inferitura	**clew of furling line**
branche (patte) di bolina	**branch of bowline**
BOMPRESSO e ASTA di FIOCCO	**BOWSPRIT & JIBBOOM**
	'To be completed at a later date'

Tavola 9 **MANOVRE e PARTICOLARI**	**Plan Sheet 9** **ARRANGEMENT & DETAIL(of rigging)**
DORMIENTI nere	**STANDARD RIGGING (black)**
	[For description of terms, refer to the on-line 'Nautical Terms' - Euromodel website]
MANOVRE CORRENTI colori naturali	**RUNNING RIGGING (natural colour)**
1. drizza di gola del picco	1. hoist for gaff throat
2. drizza di penna del picco	2. hoist for gaff boom
3. imbroglio di randa	3. lazy jacks of main sail
4. imbroglio di randa	4. lazy jacks of main sail
5. amantiglio dell'asta di controranda	5. lift for gaff sail boom
6. drizza della vela di strallo	6. hoist for stay sail
7. brancarella delle mura di controranda	7. cringle for gaff topsail & tack
8. amantiglio del bome	8. boom lift
9. scotta di controranda	9. gaff topsail sheet
10. drizza della pennola di contro	10. hoist for boom jumper stay
11. '5' ..brancarella della vela di strallo	11. '5' … cringle for stay sail
cavigliera di MAESTRA	**MAIN MAST PIN RAIL**
	Refer to translations above
cavigliera di TRINCHETTO	**FOREMAST PIN RAIL**
carica scotte della vela di parrocchetto	clewline of lower topsail
alabasso della vela di parrocchetto (scotta)	downhaul rope (sheet) for fore lower topsail
amante di terzarolo	tie-pendant of reef
amantiglio del pennone di trinchetto	lift for main yard
brancarella della vela di strallo	cringle of main stay sail
amantiglio del pennone di parrocchetto	lift for topsail yard
imbroglio di randa	lazy jacks of main foresail
drizza di penna del picco	hoist for gaff boom
brancarella della randa	cringle of for main sail
drizza del pennone di parrocchetto	hoist for fore topsail yard
drizza di gola del picco	hoist for gaff throat
alabasso vela di strallo – imbroglio di randa	main stay sail downhaul rope – lazy jacks of main sail
amantiglio del pennone di parrocchetto	lift for topsail yard
brancarella della vela di strallo	cringle of main stay sail
amantiglio del pennone di trinchetto	lift for fore main yard
amante di terzarolo	tie-pendant of reef
alabasso della vela di parrocchetto (scotta)	downhaul rope (sheet) for fore lower topsail
carica scotte della vela di parrocchetto	clewline of lower topsail
drizza del pennone di trinchetto	hoist for for main yard
vele di: randa t. – strallo - controranda e contro	Sails of : Fore Lower, Stay, Gaff Top & Jumper Stay
(vele di:) trinchettina e fiocco	Sails of : Fore Stay & Jib
vela di parrocchetta	Fore Topmast Sail
N.B. Le vele vanno rilevate dalla "Vista d'assieme" tav. 1	Relative positions of the sails are best determined by referring to Plan Sheet 1
Si consigliano funi di lino	We suggest that ropes be made from flax
14. drizza di trinchettina	14. hoist for fore stay sail
15. drizza del fiocci	15. hoist for jib sail
16. bracci del pennone di parrocchetta	16. fore upper topsail brace
17. bracci del pennone di trinchetto	17. fore stay brace
18. scotta di trinchettina	18. fore stay sail sheet
19. scotta di fiocco	19. jib sheet
20. alabasso di trinchettina	20. fore stay sail downhaul rope
21. alabasso del fiocco	21.jib sail downhaul rope
22. patte di bolina	22. bow line bridle

Chapter 3: THE KIT

Drawings

The diagrams are beautifully drawn and would allow a scratch-built kit to be readily developed. The difficulty is to separate the essential detail necessary to build the kit from the other more seriously accurate detail. The drawings depict a 'sandwich' of THREE timbers to form a false keel. However, in this kit we have ONE piece of timber 6 x 10 mm. The base of the elaborate bow 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.

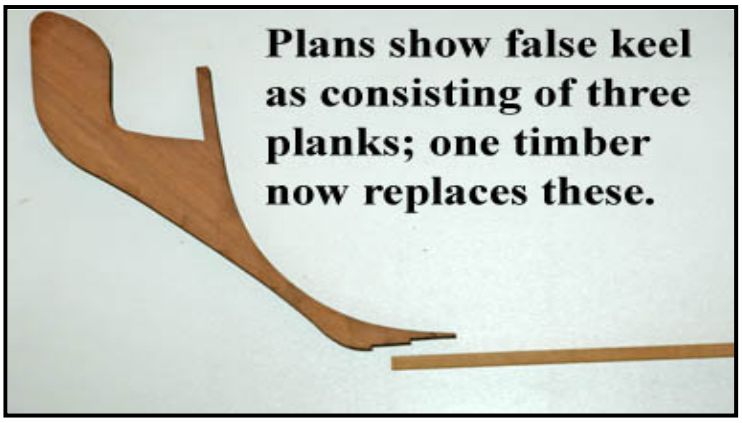


Figure 2: A Difference !

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.

Figure 3: Metal Identification

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

Keel (1) – Chiglia

Transverse Frames (10) - Ordinate

Main Deck (1) - Ponte di coperta

Quarter Deck (1) – Ponte di cassero

Forecastle Deck (1) – Ponte di castello

Stem Post (1) – Ruota di prora

Rudder (1) – Timone

Support Cradle (2) - Invasature

Wood – Limewood – Listello tiglio

30 x 40 x 220 mm.(1) **Filler Blocks for Bow & Stern** - Riempimenti di poppa e di prua
1.5 x 6 x 570 mm. (50) **First Planking** - 1° Fasciame

Wood –Walnut – Listello noce

1 x 6 x 570 mm. (50) **Second Planking** - 2° Fasciame
0.5 x 4 x 500 mm. (30) **Deck Planking** - Rivestimento ponti
6 x 10 x 500 mm. (1) **False Keel** – Sottochiglia; **Stem (Stern) Post** – Dritto di poppa
2 x 8 x 570 mm. (2) **Wales –** Incintoni
2 x 2 x 840 mm. (4) **Wales –** Incintoni
2 x 5 x 570 mm. (2) **Cap Rail** – Capodibanda
2 x 4 x 570 mm. (2) **Cap Rail** – Capodibanda
5 x 15 x 500 mm. (2) **Longitudinal Stringers** – Correnti longitudinali
10 x 10 x 220 mm. (1) **Cradle Support Cross Pieces –** Traversa per invasatura
5 x 5 x 500 mm. (1) **Pin Rail & Culverins Supports** – Pazienza e supporto colubrine
1.5 x 25 x 350 mm.(1) **Channels –** Parasartie
2 x 5 x 570 mm. (1) **Waterway** - Trincarino

Accessories

Anchors 40 mm. with ring & stocks (2) - Ancora da mm. 40 con ceppi ed anelli (Art. 11/009)

Bell (1) – Campana (Art. 11/107)
Belaying Pins (40) – Caviglie (Art. 11/005)

Blocks

3mm., 1 hole(10) - Bozzelli da mm. 3 a 1 foro (Art.22/026)
4mm., 2 hole(3) - Bozzelli da mm. 4 a 2 foro (Art.22/031)
5mm., 1 hole (31) - Bozzelli da mm. 5 a 1 foro (Art.22/028)
5mm., 2 hole (12) - Bozzelli da mm. 5 a 2 foro (Art.22/032)
7mm., 1 hole (20) - Bozzelli da mm. 7 a1 fori (Art.22/030)
7mm., 2 hole (14) - Bozzelli da mm. 7 a 2 fori (Art.22/034)
8mm., 3 hole (8) - Bozzelli da mm. 8 a 3 fori (Art.22/040)

Capstan (1) – Aragano (con 2 supporti mm. 4x20x80) (Art.22/010)
Chain Plates (16) - Landra (Art.11/306)
Cleats (13) – Gallocce (Art.11/010)

Crosstree with Main Cheek (1) – Crocetta con maschette di maestra (Art. 22/057)
Crosstree with Foremast Cheek (1) – Crocetta con maschette di trinchetto (Art. 22/058)
Culverins, complete (12) – Colubrine complete (Art. 11/001)
Deadeyes,7 mm. (32) - Bigotta da mm. 7 (Art.22/022)
Deadeyes, 4 mm. (16) - Bigotta da mm. 4 (Art.11/019)
Flags (2) - Bandiere (Art.13/033 & 13/023)
Grating 40 x 40mm (1) - 30 mm.(207) - paiolato da mm. 40 x 40 (Art.22/003.01)

Guns:

Cannons with Carriages (4) – Cannoni con affusti (Art.11/015)
Wheels (16) - Ruote per cannoni (Art. 22/001)
Axles for cannon wheels,40mm. (1) – Spina per ruote cannoni mm. 40

Ladders, complete (2) – Scala complete (Art. 22/002.01)
Lifeboat Hull (1) - Scialuppa (Art.88/02)

Mast Caps – Testa di moro ...(Art.22/054) (1) – Buttafuori del bome; (Art.22/055) (3) – Maestra e trinchetto e bompresso/ Main mast, Foremast & Bowsprit

Metal Castings ..

Transom (1) – Specchio di poppa in fusion (Art. 33/001)
Right Window (1) – Finestrella destra in fusione (Art. 33/002)
Left Window (1) – Finestrella sinistra in fusione (Art. 33/003)

Name Base Plate (1) – Targhetta per invaso (Art. 12/001)
Plans Set (10) - Serie disegni (No 10 Tavole) (Art.66/001)
Pump (1) – Pompa (Art. 22/102)

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

Rudder Hinges & Pins (3) - Cerniere timone complete di perni (Art.11/007)
Sail Cloth: 500 x 900 mm. (1) - Serie tela per vele mm. 500 x 900mm.
Instructions - Istruzioni

Masts & Spars – Alberi e Pennone

12 x 510 mm. (1), 12 x 470 mm. (1) ; 10 x 220 mm. (1) ; 8 x 550 mm. (1); 8 x 270 mm. (1); 6 x 420 mm. (2); 5 x 500 mm. (1); 5 x 210mm. (1); 3 x 310mm. (1)

A: BOWSPRIT

Bowsprit Mast – Albero di bompresso (10 mm.)
Jib Boom – Asta di fiocco (6mm.)
Bowsprit Flagpole - Asta di bandiera di bompresso (3 mm.)

B: FOREMAST

Fore Lower Mast – Albero di trinchetto (12 mm.)
Fore Lower Topsail Mast- Albero di parrocchetto (8 mm.)
Fore Mast Yard Arms
Fore Main Yard - Pennone di trinchetto (6 mm.)
Fore Topsail Yard – Pennone di parrocchetto (5 mm.)
Gaff - Picco di trinchetto(5 mm.)

C: MAIN MAST

Main Mast - Albero di maestra (12 mm.)
Main Skysail Mast – Alberetto di maestro (8 mm.)
Main Mast Yard Arms
Main Gaff Topsail Boom – Asta di controranda (5 mm.)
Main Gaff – Picco di maestra (6 mm.)
Main Gaff Outrigger – Buttafuori picco di maestro (3mm.)
Main Boom – Bome de maestro (8mm.)
Main Boom Outrigger - Buttafuori boma di maestra (3mm.)
Ensign Staff - Pennola dei contropicco di maestra (6 mm.)

Chapter 4: HULL FRAME

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 instructions are prioritised to make the construction process as simple as possible. Keep in mind that they are only *suggestions.* Study the designs carefully as the instructions highlight only the major steps for construction.

Structural Integrity

Nine of the ten transverse pre-cut 'bulkheads' were slotted into the false keel as a dry run to determine which joints were too tight and which were too loose. Before doing so a little clean-up of the edges of the bulkheads was required. Alignment of the beams supporting the decks was excellent. All nine frames were then removed from the false keel.

Frame 5

Examination of Plan Sheet 2 shows the Main Mast (albero di maestra) passing through Frame 5 (Fig. 5). It was obvious that Frame 5 needed a rectangular opening created (Fig. 4) before being fixed in place to allow for this mast placement. In cutting away the plywood, I left approx. 12 mm. at the top in the form of a wedge (Fig. 6).

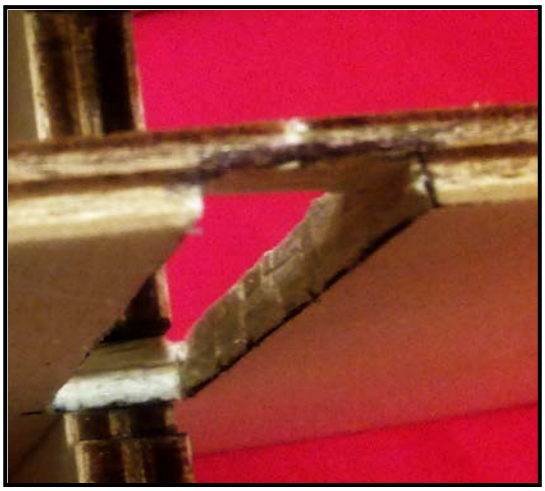


Figure 4: Half Frame Thickness Cut Away at Top

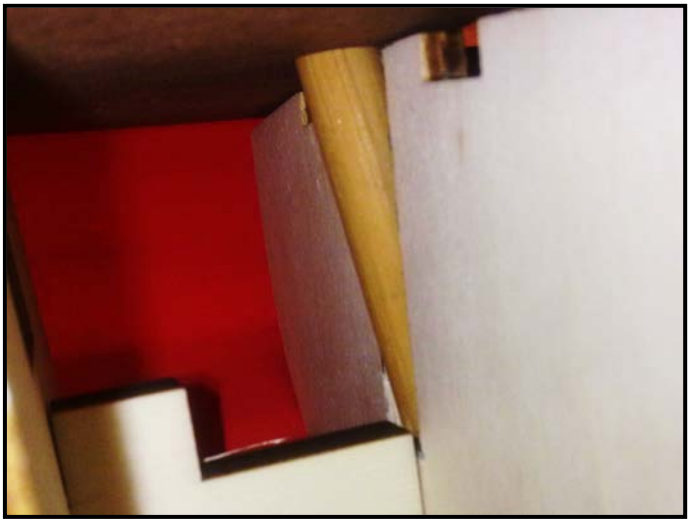


Figure 5: Mast Placement Through Frame 5

Figure 6: Wedge-shaped Form Left Above Opening

Frame Fixing

The following comments describe precisely the order of frame fixing which should be followed.

PVA is the adhesive of choice and ***Frame 5 was glued in first*** (Fig. 7) using a set square to check its alignment with the false keel. The glue was allowed to completely dry.

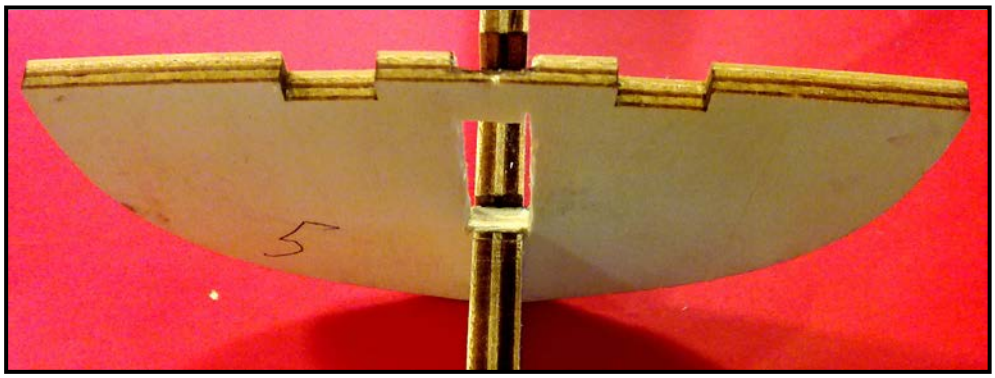


Figure 7: Fixing Frame 5 in Place

Frames 6 and then 4 and 3 were fixed in place whilst at the same time the distance between them *and* the diagonal distance between them was also checked . These three frames were allowed to dry before proceeding any further. Square and diagonal measurements as well as central alignment were constantly checked to ensure the correct overall alignment. These combined factors should provide for good symmetry through the ship.

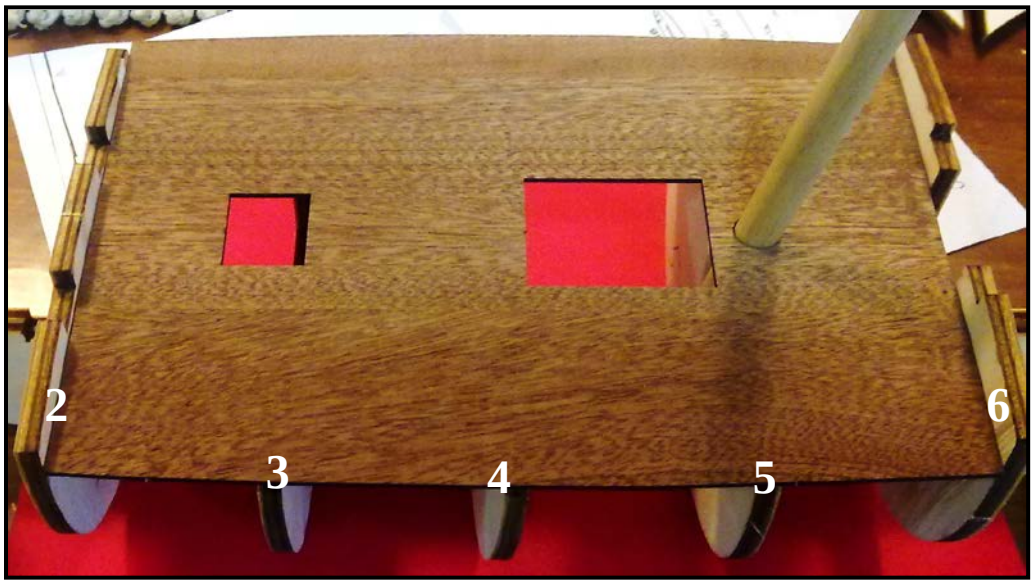


Figure 8: Main Deck as a Guide

Frame 2 was fixed in place using the dry-fitting of the Main Deck laser-cut piece as a guide (Fig. 8).

Frame 4

When I referred to Plan Sheet 3, I deduced that Frame 4 was approx. 1.3 mm. too high on the actual frame so I lowered the top edge by that amount. The profile along the top edges of Frames 3, 4 & 5 then appeared to fit the drawing better than when first assembled.

Decks

There are three decks that are visible – Quarter, Main and Forecastle Decks – and these are provided for in the kit as laser cut plywood pieces that will need to be planked over. There are three other decks [***Lower Decks***] beneath these in the more detailed scratch drawing. Many will choose to include these using their own materials and if the grates are removed, then portions of these decks will be visible. The choice is yours !

Main Deck Longitudinal Supports

Immediately below the Main Deck and running through Frames 2 and 6 were two longitudinal support timbers. Rectangular holes were cut through both frames to accommodate them. Two holes (shaded yellow in Fig. 9) were first cut through Frame 6 – when the stringers were inserted through these holes, ***pressure was required to hold down them down*** over the slots in Frame 5 (Fig. 10) thus creating a slight curve and thereby lifting the other end slightly when held against Frame 2 to mark the position of the other two holes (shaded green) in that frame.

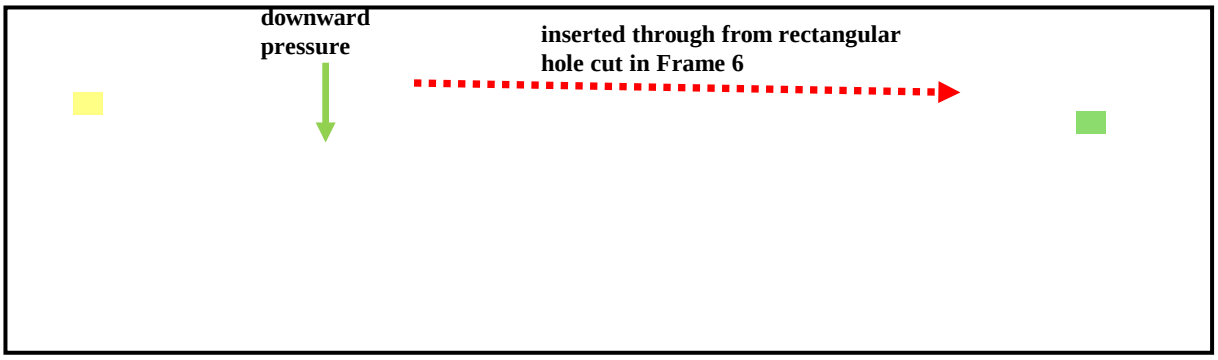


Figure 9: Main Deck Longitudinal Stringers

Figure 10: Maintaining Pressure Down on Frame 5

Figure 11: Holes Cut Into Frame 6 For Longitudinal

Frame 1

Before inserting this frame, make sure you peruse the following figure. The frame cut-out is too deep and care must be taken not to insert it fully into the keel cut-out.

The error will be corrected in the future but check Frame 1 anyway !

So ... ***glue in Frame 1***

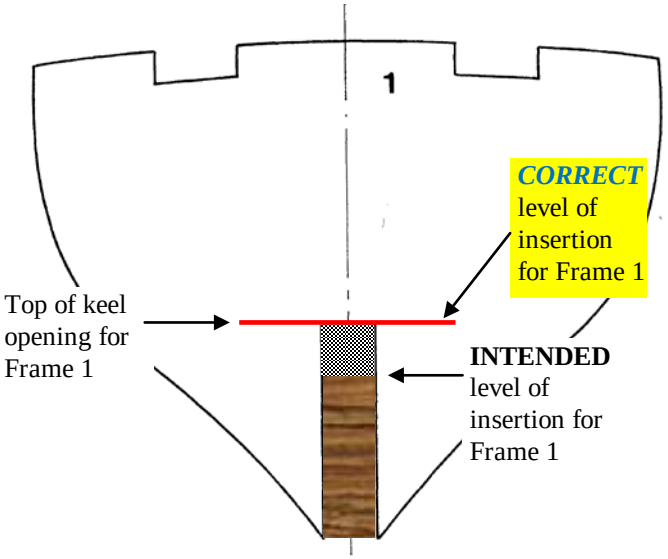


Figure 12: Frame 1 Insertion into Keel

Main Deck End Supports

Some pieces of scrap wood were used (2 x 2 mm. in my case) on the frame surface adjacent to the Main Deck to support each end. Fig. 13 illustrates this small but important step.

Figure 13: Main Deck End Supports

Quarter Deck Longitudinal Supports

From measurements taken off Plan Sheet 3, these timbers project 17.25 mm. abaft the edge of Frame 6. Given the lengths supplied in the kit, I ***only extended the supports back to within 1.5 mm. of the aft edge of Frame 9***. Whilst the concept drawing and Frame 10 both suggest/show the further extension back, the solid mass of blocks did not warrant this. With this shortened version, I did have sufficient timber to work from.

Filler Blocks

The one block supplied (30 x 40 220 mm.) needs to be carefully cut with minimum waste. In cutting the two stern pieces out, the full length is *not* obtained. To do this, a small amount of extra wood needs to be glued underneath the larger pieces.

Be aware that the central drawing on Plan Sheet 3 is more of a concept/ starting point drawing and so the stern does not finish up as a rectangular block.

For the bow side-view profiles, I cut out the shaded section from the front of the top drawing on Plan Sheet 3 and used that as a template.

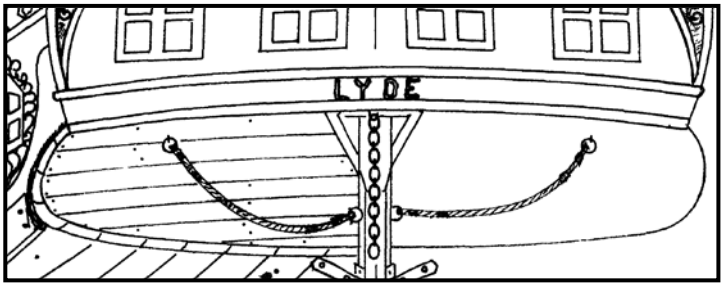


Figure 14: Rounded Stern Profile

Forecastle Deck Longitudinal Supports

If you have not followed what I did in the preceding sections regarding selective cutting of the longitudinal support material, then you may well have insufficient timber left to complete the Forecastle supports. Fig.l5 suggests how the extra length can be obtained !

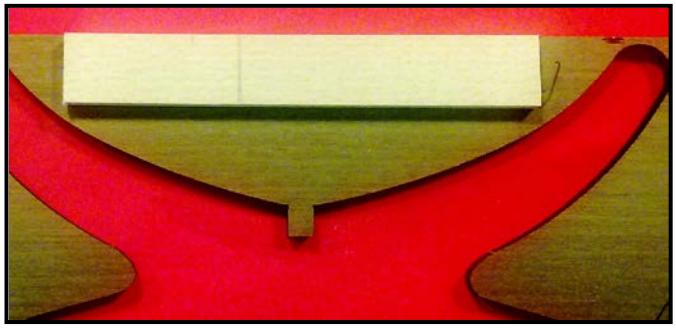


Figure 15: Obtaining Extra Longitudinal Support Lengths

Block Preparation

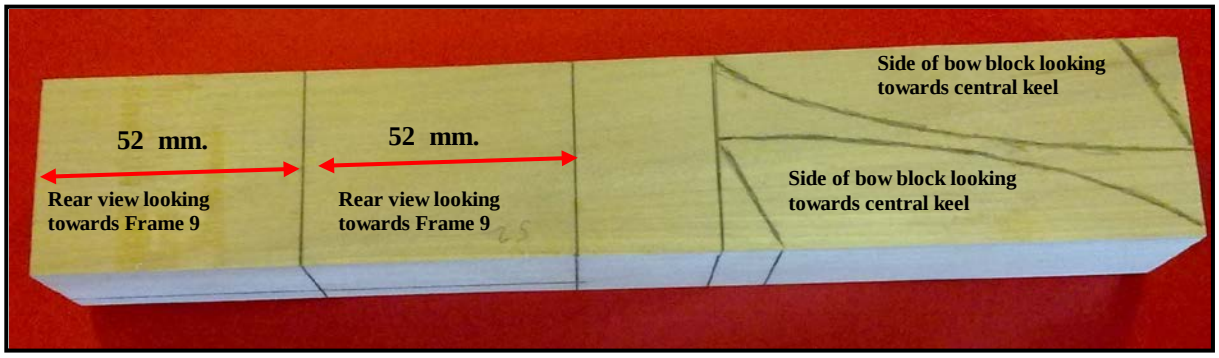


Figure 16: Marked Block (Top View)

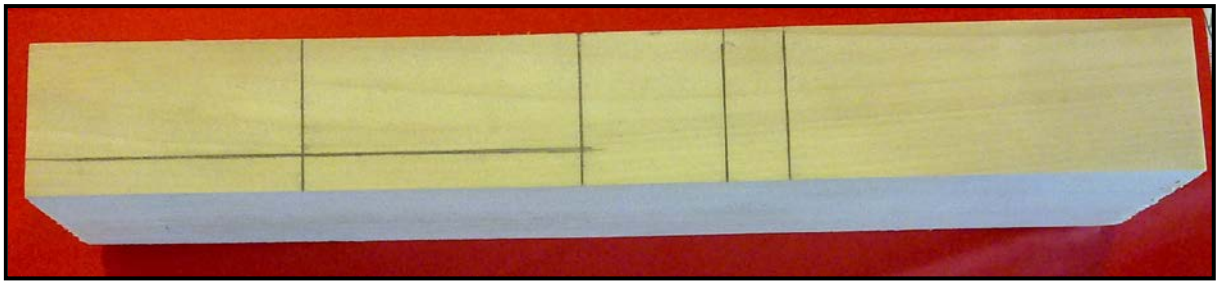
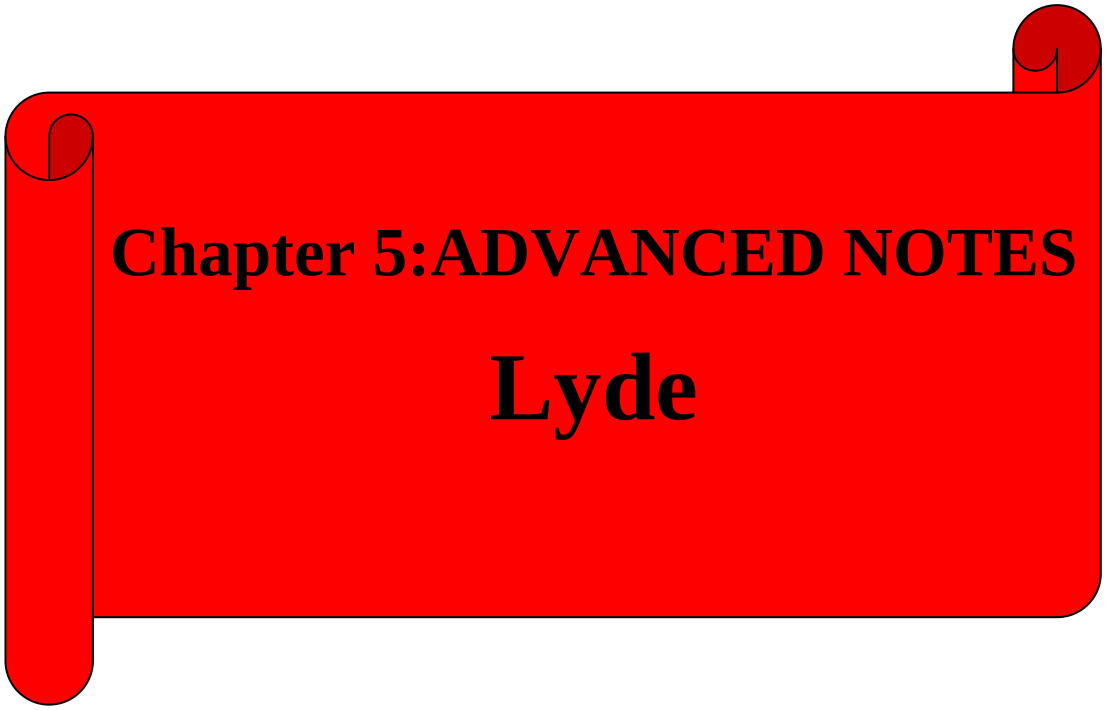


Figure 17: Marked Block (Side View)



Chapter 5:ADVANCED NOTES

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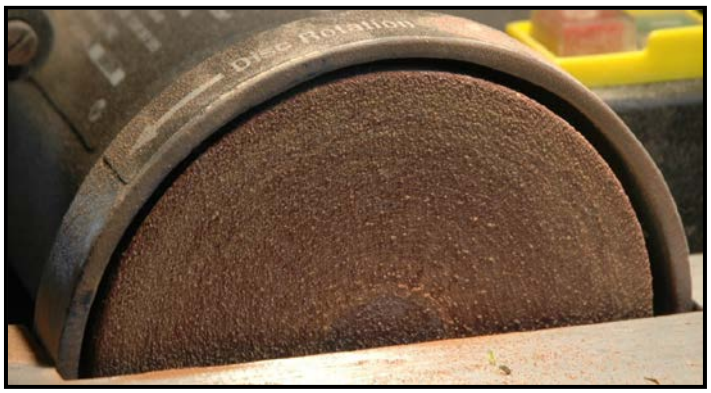
Tools

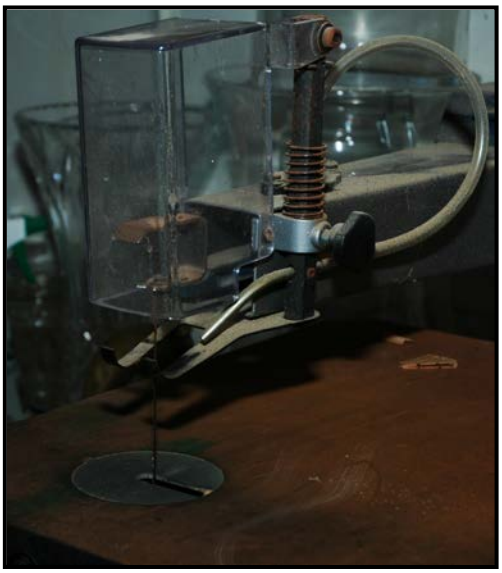
Apart from the normal range of cutting blades, cutting mats, fine metal files, large soldering iron (plank bending) etc., the following tools were essential or at the very least *useful*….



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.

Lower Decks

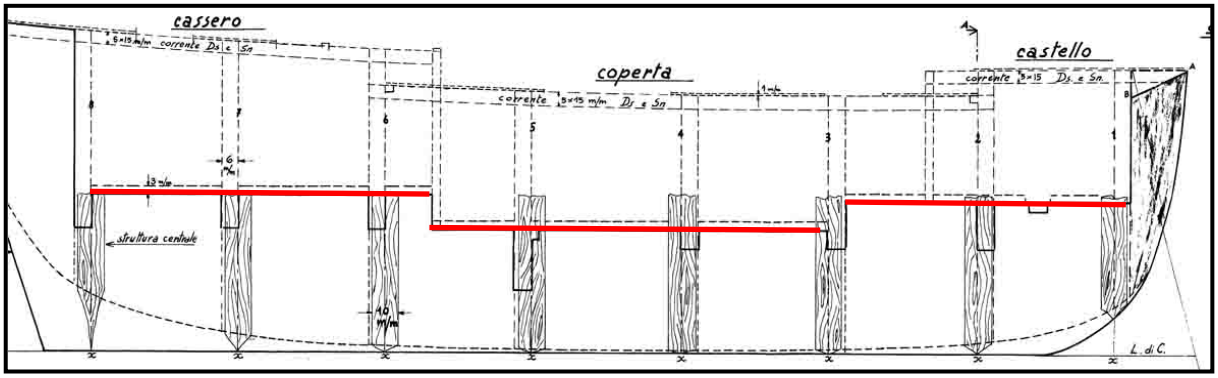


Figure 18: Lower Decks (in red)

Extra decking can be included below the three top decks and can be seen if the grates are removed. The following photographs illustrate such an inclusion and are provided through the courtesy of Peter Rawlinson from the UK.

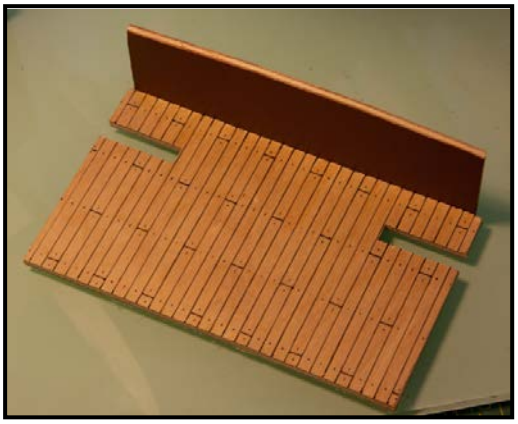


Figure 19: Rear Bulkhead and Deck

Figure 20: Visible Bulkheads Painted

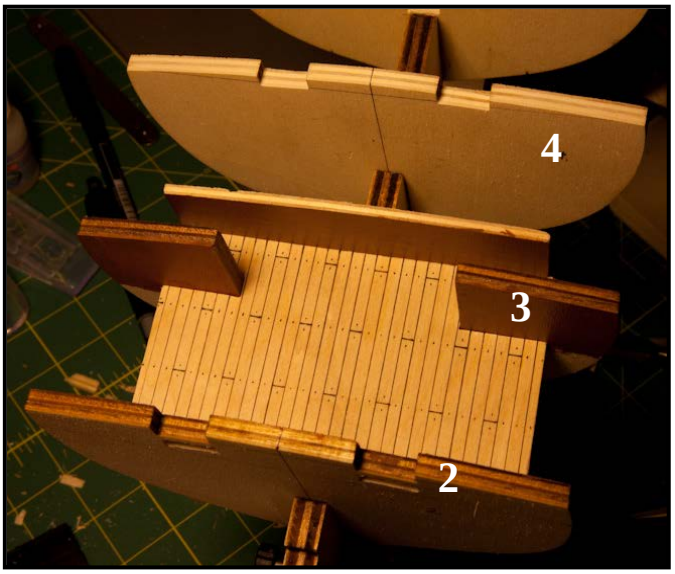


Figure 22: Decking in Place

Figure 21: Visibility of Lower Deck