

BUILDING INSTRUCTIONS



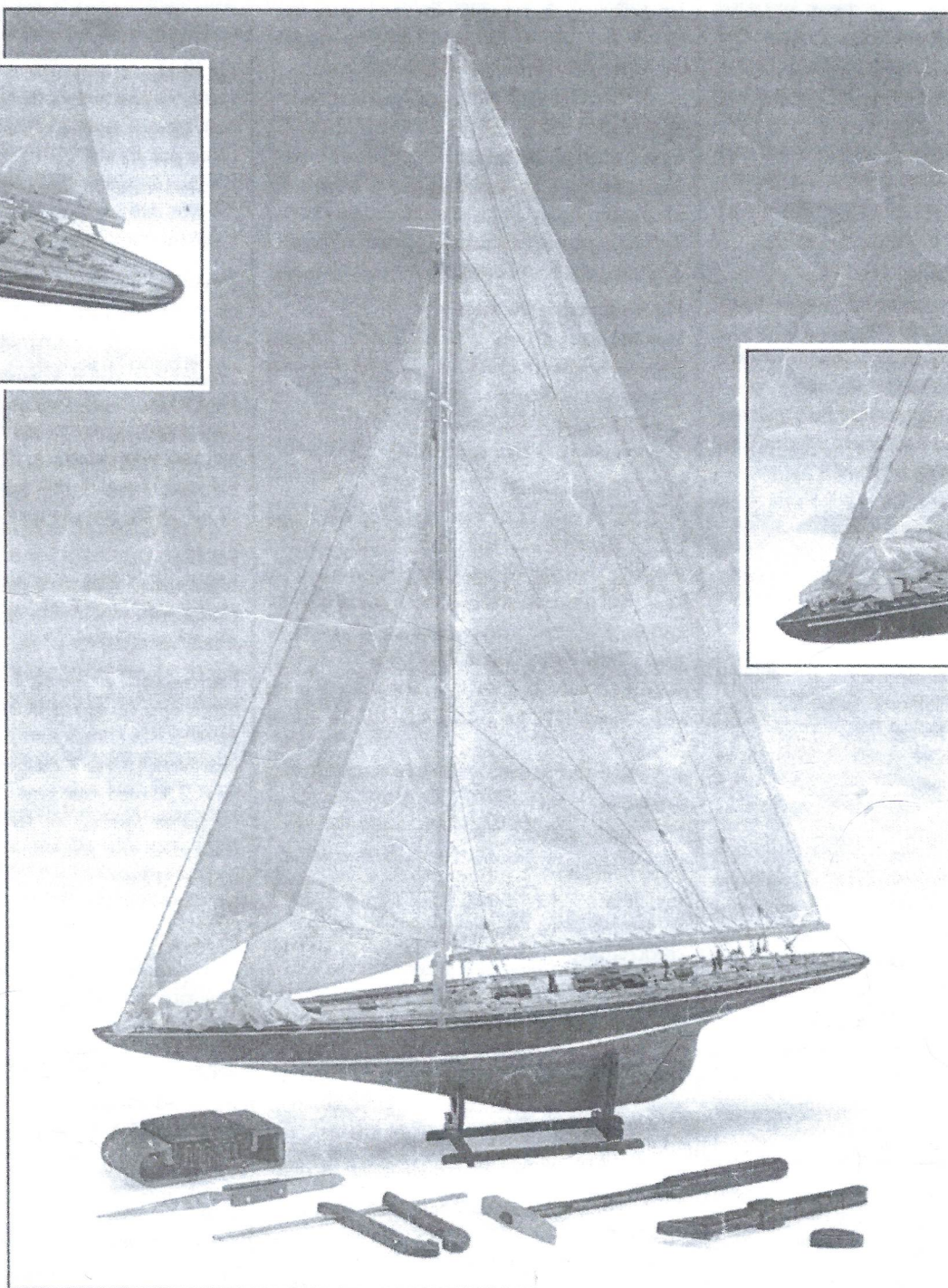
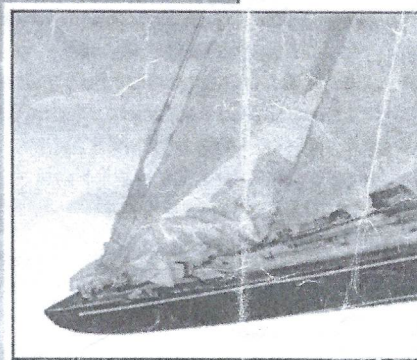
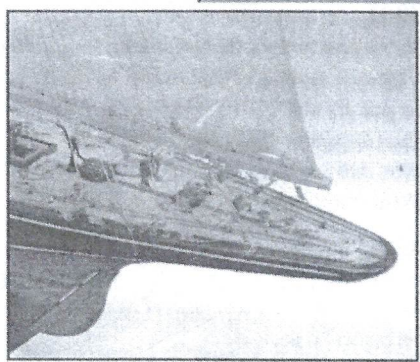
AMATI

ENDEAVOUR

1934 America's Cup Contender

kit n. 1700/10

1:80 Scale





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Read these instructions carefully and check all plans before starting to build the model. Check kit content following list of materials and drawings. Some parts must be shaped from wooden strips or dowels, in given measures. Set apart all wooden scraps, you may need them later on.

Inside this kit you will find five useful tools which will help you in the construction of the model. Some of them need to be assembled before use: please check page 3 of the instruction booklet.

Fig.1 - Boom construction

Shorten triangular strip 1 to mm.240. Remove material as shown for a length of mm.119, using a file or sand paper. Drill all holes as shown, using mm.0,5 or mm.1 drills.

The first drawing shows the two mm.1 holes (not running through holes) to be drilled at mm.5 from tapered end and at mm. 11 from the other end.

The second drawing shows the four 0,5 mm. holes (running through holes) to be drilled at:

- mm.22 from tapered end
- mm.44 from tapered end
- mm.47,5 from tapered end
- mm.51,5 from tapered end.

On same drawing you can check where to drill mm.1 running hole at mm.4,5 from not tapered end.

Rastrematura = Tapering

Foro/Fori = Hole/Holes

All measures shown in mm.

Fig.2 - Boom

Bend mm.1 metal rod 2 as shown in figure in order to insert it in drilled holes on boom. Use small pointed pliers to bend the rod. Cut off excess part of rod and glue the arch inside holes. Shorten legs of eyebolts 5 insert them in the holes on both sides of the boom.

Bend part 3/A of hinge adapting it to boom shape (not tapered end). Check correct hinge positioning then insert pin and fix hinge with glue and four shortened nails. It is advisable to punch the four holes on the boom before positioning nails, in this way the hinge will be nailed to the boom very easily. Check Fig.8, too.

Apply the two cleats 6 underneath the hinge, using few drops of glue. On same figure you can check blocks 7 and boom control arm positioning. Their preparation will be described later on (Fig.70-71-72).

Trasto = Boom control arm

Fig.3 - Mast

Cut halfrounds 8 and strips 9 (mm.1x3) in given lengths. Then you can start to glue them together thus obtaining a very resistant and flexible mast.

Semitonodi = Halfrounds

Listelli = Strips

Fig.4 - Gluing the mast

Glue halfrounds 8 and strips 9 together as shown in figure. Let the glue dry completely.

The rectangular strips (inserted between halfrounds) form a slot which will be useful during sail positioning.

Fig.5 - Tapering the mast

Start tapering the mast until you achieve following dimensions: base of the mast mm.6x7; head of the mast mm.3x4. Use medium grain sand paper.

Testa albero = Mast head

Base albero = Mast base

Fig.6-7 - Crosstrees

Cut parts 10 from metal tube, following dimensions given in figure. On mast drill mm.1,5 running holes for crosstrees insertion. All measures given in figure are taken from mast base. It is advisable to drill all holes for eyebolts 5 insertion before positioning crosstrees on mast. Check correct hole drilling points on Table 1. Insert each single crosstree in its seat and glue it. On each crosstree apply two eyebolts 5 for riggings, one on each side.

Insert and glue eyebolts 5 in their seats following instructions.

Lungh = Length

Fig.8 - Hinge

Bend hinge part 3/A for boom fixing, cut it and apply it on mast, following instructions carefully. On table 1 check correct positioning of all accessories on mast.

Rif.Tav.1 = Check Table 1

Painting mast and boom

The mast is now ready for painting. Use matt white enamel. Apply a first coat of colour on mast and boom. Apply colour on all accessories: eyebolts, cleats, hinge and crosstrees, too. Let the enamel dry well then apply a second coat. Let the mast and the boom dry completely.

Fig.9 - Keel

This figure shows how to assemble the keel. Start by sorting out all keel components (laser cut wooden tablet

mm.4). Detach one single piece at a time from the tablet, using a cutter. Sand each piece using the sanding block included in the kit, or sand paper.

Fig.10-11

Lay the two parts forming the keel on a flat surface. Glue them together, applying reinforcements 13 and 14 too. Let the glue dry well.

Vista laterale = Side view

Vista dall'alto = From above

Si/No = Yes/No

Fig.12

Insert all frames from 5 to 28 on the keel, following the numbering. Verify exact alignment of each frame, then glue all frames on the keel.

Fig.13-14

Apply reinforcements 29 and 30 on central frame 22. Glue stem shim elements 31,32,33 and 34 onto the keel and against frame 28. Glue stern shim elements 35, 36, 37 and 38 onto keel and against frame 15.

Fig.15

Prepare model base using parts 39 and 40 (laser cut wooden tablet mm.4) and strips 106 (mm.5x5). Check dimensions on figure.

Fig.16 - Deck positioning

Detach parts 41, 42 and 43 from the laser cut tablets, thickness mm.1. Verify exact positioning of these three parts forming the deck. Fix them on the keel, using few drops of glue and some small nails.

Questa figura... = This figure shows how to shape stern shim element, using a file and medium grain sand paper.

Fig.17-22

All these figures show how to shape stern shim elements, in order to adapt them to the hull. Use a file and medium grain sand paper.

Fig.23

Now check correct shaping of the lower part of the keel.

Fig.24 - First planking

Plank the hull using strips 44 (mm.1x3x250). Apply strips using few drops of glue and some nails, starting from central frame of deck level, going towards shim elements at stern and at stern. Apply strips alternatively on each side of the hull, so that it will not bend.

In some case you have to taper strips at stern or at stern. Remove nails each time you start to plank on same area,

you can use them again. Sand first planking carefully, in order to smooth surface.

Fig.25

Plank stern shim elements as shown in figure, using strips 44.

Fig.26-27

Sand first planking firstly with medium grain sand paper and then with fine grain sand paper and wipe dust off with a dry cloth.

Now start applying second planking using mahogany strips 45 (mm.0,5x3). You should apply them as if it were a brick wall. Firstly apply a strip on the upper edge (near the deck) part of the hull. Then finish this line of covering glueing two strips, one on each side of the first central strip. Repeat same sequence on the other side of the hull. Second planking must be as precise as possible. Use instant glue.

Finally cover stern shim elements with strips 45 as shown in figure. Now sand the whole structure carefully, removing all possible imperfections. Wipe the hull with a smooth and dry cloth.

Fig.28 – Rudder

Shape rudder 46 as shown in figure, using a small file for wood. Apply rudder to sternpost.

Now you should decide whether you want to paint the complete hull with the original blue colour; or to colour just the part of the hull above waterline; or to leave the hull with the mahogany planking.

If you decide to leave the complete hull or part of it in its mahogany planking you should plank the rudder, too. In this case you can use some small scraps of strips from the second planking. Apply these strips vertically. On the other hand if you decide to colour the complete hull you should only apply a thin coat of wooden filler on the rudder.

Fig.29-32 – Deck planking

Detach part 47 from the laser cut wooden tablet mm.1 and glue it on deck at stern. On deck apply central strips 48 (mm.1x2) leaving deckhouse seat and mast hole free and visible. Continue to plank deck with coupled strips, proceeding sternwards. Prepare all the other mm.1x2 strips for deck planking, keeping in mind that they have to be glued bent wise. Start planking from external edge of deck and proceed towards the inside. Taper each strip in order to adapt it to the already applied central strips (Fig.30) and to stem strip (Fig.31).

Sand the whole deck carefully in order to correct all possible imperfections.

Before painting the model it is advisable to drill all necessary holes on deck for eyebolts, skylights, winches and handrails insertion. Check Table 1. Cut the deck view (with all drilling points) from the Table and position it onto the model deck. Be careful that mast hole, stem and stern are perfectly aligned. Now drill holes where shown, paying attention to different diameters. Be careful while drilling on the edge of the hull. It is advisable to use a punch, for more precise and accurate holes. You can either use an electric drill or a hand drill. Use correct drill size for each single hole.

Sand deck carefully with fine grain sand paper then apply a coat of transparent wooden filler. Sand the surface again and apply a second hand of transparent wooden filler.

Fig.33-36 – Hull painting

Whatever you may have decided we advise you to follow these steps for painting the model.

Painting the complete hull:

Mask the deck with some paper, using adhesive tape to fix it.

Apply a first coat of filler (use spray filler) and let it dry (24 hours is a reasonable length of time).

Sand the hull carefully.

Apply a second coat of filler and let it dry well.

Remove all imperfections with sand paper and then apply a first coat of the blue colour (use spray colour)

Let the first coat dry well, then sand the hull carefully.

Apply a second coat of colour. Apply at least 3 coats of colour for best result. It is advisable to use spray colours in ventilated rooms. Keep the spray 30-40 cm. from the surface to paint. Never start or begin spraying on the model.

Mark waterline (Fig.35) using a pencil.

All along waterline apply an adhesive stripe, width mm.3 (car accessory shops).

Partial painting of the model

Mark waterline (Fig.35) using a pencil

Mask deck and the portion of the hull you want to keep natural wood, above or under waterline. Use some paper and adhesive masking tape.

Follow same steps described above up to point 6

Remove masking paper from the hull

All along waterline apply an adhesive stripe, width mm.3 (car accessory shops).

Fondo stucco = Base coat filler

Carta seppia = Sand paper

Tinta blu = Blue colour

Linea di galleggiamento = Waterline

Fig.37-43 – Deckhouse

Detach all parts (49-65) forming deckhouse from the laser cut wooden tablet mm.1. Follow sequence given in figures up to Fig. 40. Verify correct alignment of each single piece, before glueing it. Correct any possible imperfections with sand paper, especially along wall joints. Colour assembled parts mahogany. Paint parts 64 and 65 mahogany, too.

Cut window panes from acetate sheet 66 and glue them inside deckhouse windows.

Fig.44-45-46

This figure shows the brass photoetched set. Now detach only parts F1, F2 and F3, using a flat blade or a pair of very thin scissors. Apply photoetched gratings following instructions given in Fig.45 and 46. Use cyno-acrylic glue.

Prepare deckhouse cushions glueing together the three parts of strip 48 (mm.1x4), check dimensions in figure. Paint cushions blue, then apply them on the seats of the deckhouse.

Fig.47-50 – Skylight A

Detach parts (from 67 to 72) forming skylight A from the laser cut tablet mm.1. Mount the skylight following the sequence given in figures, then paint it mahogany. Paint shutters 71 and 72 and a piece of strip 48 in mahogany, too. Cut window panes from acetate sheet 66 and apply them. Glue shutters and strip 48 to the skylight.

Fig.49 shows how to prepare dashboard 73, shaping it in a piece of mm.4 wood. Follow instructions given in fig-

ure. Paint dashboard mahogany, then glue it against skylight A.

Detach gratings F4 from the photoetched set and apply them to the skylight. Cut dashboard instruments 74 from the last page of the instruction booklet. Apply instruments on dashboard.

Fig.51-53 – Skylight B

Detach parts (from 75 to 80) forming skylight B from the laser cut tablet mm.1. Mount the skylight following the sequence given in figures, then paint it mahogany. Paint shutters 79 and 80 and a piece of strip 48 in mahogany, too. Cut window panes from acetate sheet 66 and apply them. Glue shutters and strip 48 to the skylight.

Detach gratings F5 from the photoetched set and apply them to the skylight.

Fig.54-56 – Skylight C

Detach parts (from 81 to 86) forming skylight C from the laser cut tablet mm.1. Mount the skylight following the sequence given in figures, then paint it mahogany. Paint shutters 85 and 86 and a piece of strip 48 in mahogany, too. Cut window panes from acetate sheet 66 and apply them. Glue shutters and strip 48 to the skylight.

Detach gratings F6 from the photoetched set and apply them to the skylight.

Fig.57-58 – Companion ways

Detach parts 87 and 88 forming companion way A and parts 90 and 91 forming companion way B from the laser cut tablet mm.1. Mount companion way A keeping pieces perfectly aligned, sand the whole carefully, then paint it mahogany. Insert four eyebolts 89 in the four holes. Mount, sand and paint companion way B following same steps described for companion way A.

ACCESSORIES ON DECK

Fig.59 – Steering wheel

Polish brass column 92, then apply wheel 93, fixing it with nail 4. Position column on deck as shown in figure and on view of Table 1.

Fig.60 – Winch

Sand winch 94 and paint in black. Detach handles F7 from photoetched set. Bend handles where marked. Glue both handles on winch, one on each side. Position the completed winch on deck.

Nero = Black

Fig.61 – Binnacle

Sand compass binnacle 95. Paint mahogany the central body of the binnacle. Paint in brass colour the base of the binnacle and the upper part of it. Paint one light red and the other green. The small case should be paint mahogany. Position the whole on deck.

Mogano = Mahogany

Ottone = Brass

Rosso = Red

Verde = Green

Prua = Stem

Fig.62 – Cleats

Paint all cleats 96 brown and apply them on deck, checking correct positioning on view of Table 1.

Marrone = Brown

Fig.63 – Stem

At stem apply strips 97 (mm.1x1), following instructions given on view of Table 1. Between the two strips glue chocks 98, one on each side.

Fig.64

Refer to this figure and to the view on Table 1 to position all accessories on deck. Insert portholes 99 in their seats (6 pieces). For a more realistic finish of the model cut some round pieces from the acetate sheet 66 and place them inside portholes.

Apply companion ways, skylights and deckhouse as shown in figure.

Insert eyebolts 101 in drilled holes for rigging running and tying. Insert double leg rings in eyebolts.

Fig.65

Insert parts 101 in drilled holes, then place parts 100 inside part 101 forming handrail stanchions. Run handrail through rings.

Fig.66

Insert parts 101 in drilled holes, then place parts 100 inside part 101 forming eyebolts. Place these eyebolts along the side of the deck, sternwards. A block 7 will be applied to some of these eyebolts, for rigging.

Fig.67

Polish brass winches 102 and place them on deck.

Fig.68

Apply strips 97 (mm.1x1) flush with second board of deck planking. Glue them carefully, in order not to spoil the deck. Use quick setting glue.

Fig.69

Detach parts F8 and F9 from the photoetched set. Bend them following bending lines and place them on deck side and on hull. Use some nails to fix them. Repeat on opposite side.

Fig.70-71 – Boom tackle

Bend metal rod 2 with given dimension, forming the arch for boom tackle sliding. Insert two eyebolts 101 in holes on deck. Position two blocks in the arch, then apply it inside the two eyebolts. Make a ring with rope 103 on each of the seven blocks. Make boom sliding rings with rope 103, tying one block in each ring. On deck near companion ways insert two eyebolts 101 in drilled holes. Apply two blocks on double leg brass rings and tie them to eyebolts. Glue two cleats 96.

Fig.72 – Boom arm control

Bend metal rod 2 forming boom arm control, then position it in the holes on boom.

Fig.73 – Shrouds

Position mast through hole on deck down to the joint on the keel. Use rope 103 for shrouds A and B, as shown in figure. Make ties firstly on shelves on deck and then, running the rope through crosstrees, on mast rings. Before fixing boom onto mast it is advisable to make all mast frontal ties (stays). Stays D and E must be tied on deck, at stem, by eyebolts.

Always check correct slanting of the mast, referring to side view of Table 1. Once the mast is fixed you can insert boom hinge in mast hinge.

Apply boom guy rope 1 referring to Fig.78 and to views on Table.

Finish tying boom tackle rigging L, referring to Fig.70 and 71.

Make some rings with rope 103 starting from a cleat, then run rope as shown through blocks and back to the second cleat. Apply a piece of rope 103 between boom arm control and the cleat on deck (rigging M).

Fig.74

Apply all eyebolts with rings on deck. Prepare all blocks. Tie blocks 7 to eyebolts on deck, as shown in figure and on Table 1.

Run riggings F, G and H, referring to figures and views. Arrows show the direction of each single rigging up to the tying point on cleat.

Fig.75-77 – Sails

Dip sail cloth in a solution made of water (50%) and white glue (50%). When sail cloth is dry, press it with warm iron. Now cloth should be stiff enough to permit a perfect cutting. The white glue will keep cloth from fraying. Cut sails along perimetres. Eventually apply a thin cloth ribbon (cut it from cloth scraps) all along sail borders, using cyno-acrylic glue. Glue reinforcements along inside perimetres of sails.

Fig.78

Hoist main sail running rope through rings on mast and on boom arch. Make main sail halyard running rope through the hole on mast head. Rigging N ends on deck as shown in figure. Hoist jibs on stays (rigging D and E). Make halyards running rope through blocks on mast. Rigging P and T ends on deck as shown in figure.

Fig.79

Apply rope onto jib clews (sternwards) and run it through blocks following instructions given in figure. Sheets Q, R and U must be rolled round winches and then tied to cleats.

Apply rope to jib clews (stemwards) forming tacks S and Z. Refers to figures.

LIST OF RIGGINGS

A	Shrouds	left/right
B	Shrouds	left/right
C	Bobstays	
D	Jib stay	
E	Flying jib stay	
F	Backstays	left/right
G	Backstays	left/right
H	Backstays	left/right
I	Boom guy rope	left/right
L	Boom tackle	
M	Boom brace	
N	Main sail halyard	
P	Flying jib halyard	
Q	Flying jib sheet	
R	Flying jib sheet	
S	Flying jib tack	
T	Jib halyard	
U	Jib sheet	
Z	Jib tack	

LIST OF MATERIALS

1	Triangular strip mm.6x6x245
2	Metal rod mm.1
3	Hinge
4	Brass nails
5	Rings with leg
6	Metal cleats
7	Wooden block
8	Mast
9	Mast
10	Metal tube mm.1,5
11-28	Laser cut wooden tablet mm.4
29-30	Laser cut wooden tablet mm.4
31-38	Laser cut wooden tablet mm.4
39-40	Laser cut wooden tablet mm.4
41-43	Laser cut wooden tablet mm.1
44	Wooden strips mm.1x3x250
45	Wooden strips mm.0,5x3x250
46	Laser cut wooden tablet mm.4
47	Laser cut wooden tablet mm.1
48	Wooden strips mm.1x2x250
49-65	Laser cut wooden tablet mm.1
66	Acetate
67-72	Laser cut wooden tablet mm.1
73	Laser cut wooden tablet mm.4
74	Dashboard instruments
75-80	Laser cut wooden tablet mm.1
81-86	Laser cut wooden tablet mm.1
87-88	Laser cut wooden tablet mm.1
89	Eyebolts mm.2
90-91	Laser cut wooden tablet mm.1
92	Steering wheel column
93	Metal steering wheel
94	Metal winch
95	Metal binnacle
96	Metal cleats
97	Wooden strip mm.1x1x250
98	Chocks
99	Eyebolts mm.3
100	Two leg rings
101	Eyebolts mm.1,5
102	Metal winch
103	Rigging rope
104	Sail cloth
105	Wooden dowel mm.2
F1-8	Photoetched set