ONE METRE HULL CONSTRUCTION

This article is to give prospective builders of any John Spencer designed 1m an idea on how to construct the hull (although the accompanying diagrams refer to the Merry Hell/Snow White designs, see November 1990 newsletter). It is based on a letter John Spencer wrote during June 1990.
Many thanks to John for allowing me to produce this article. I have found this way of building the hull, quick and true. If neccesary in future newsletters we can go into detail of any area. Please write with comments, suggestions etc.

Johns first hulls were built from 1.2mm birch ply, but he has found since that 1.8 Okoume' is lighter, stronger and easier to work. (NOTE:Okoume' is also known as Gaboon).

Everything is attached with Hi-Tech 9000 resin bog. This is the resin mixed with lightweight filler to thick paste consistency. Tests showed this stronger than using timber fillets, chines, etc.

Packaging tape has proved superior to masking tape for holding the panels together while gluing.

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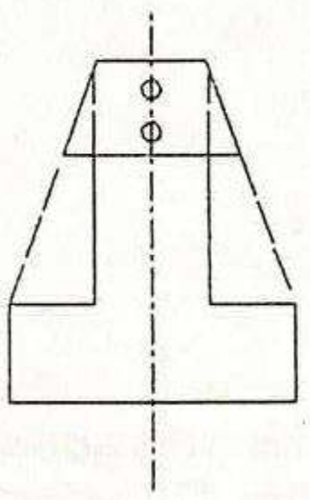
Make Building Jig with no Station-1, and Station-2 partly removable. i.e.



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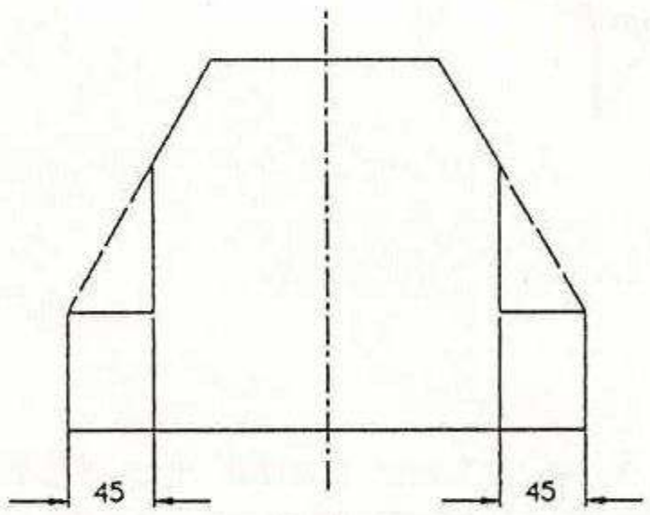
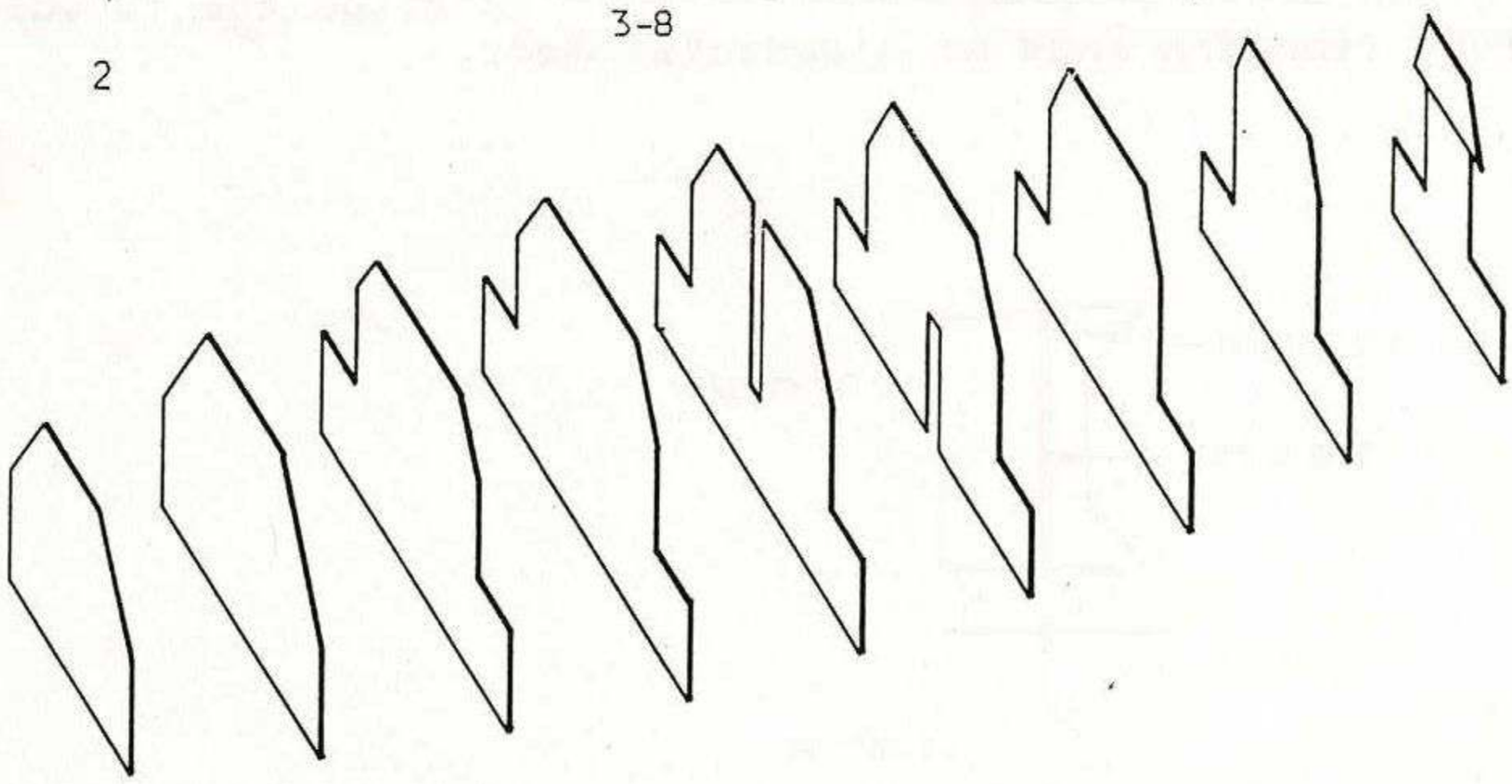


3-8

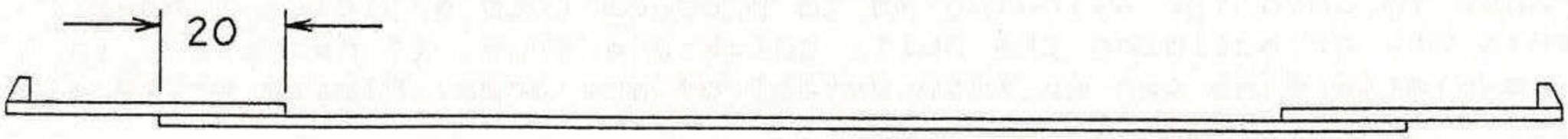


Rest of Station-3 to Station-8 as diagram. This allows for 45mm wide side decks. Stations-9 & 10 are normal (i.e. full shadows). The transom is fixed to Station-10.

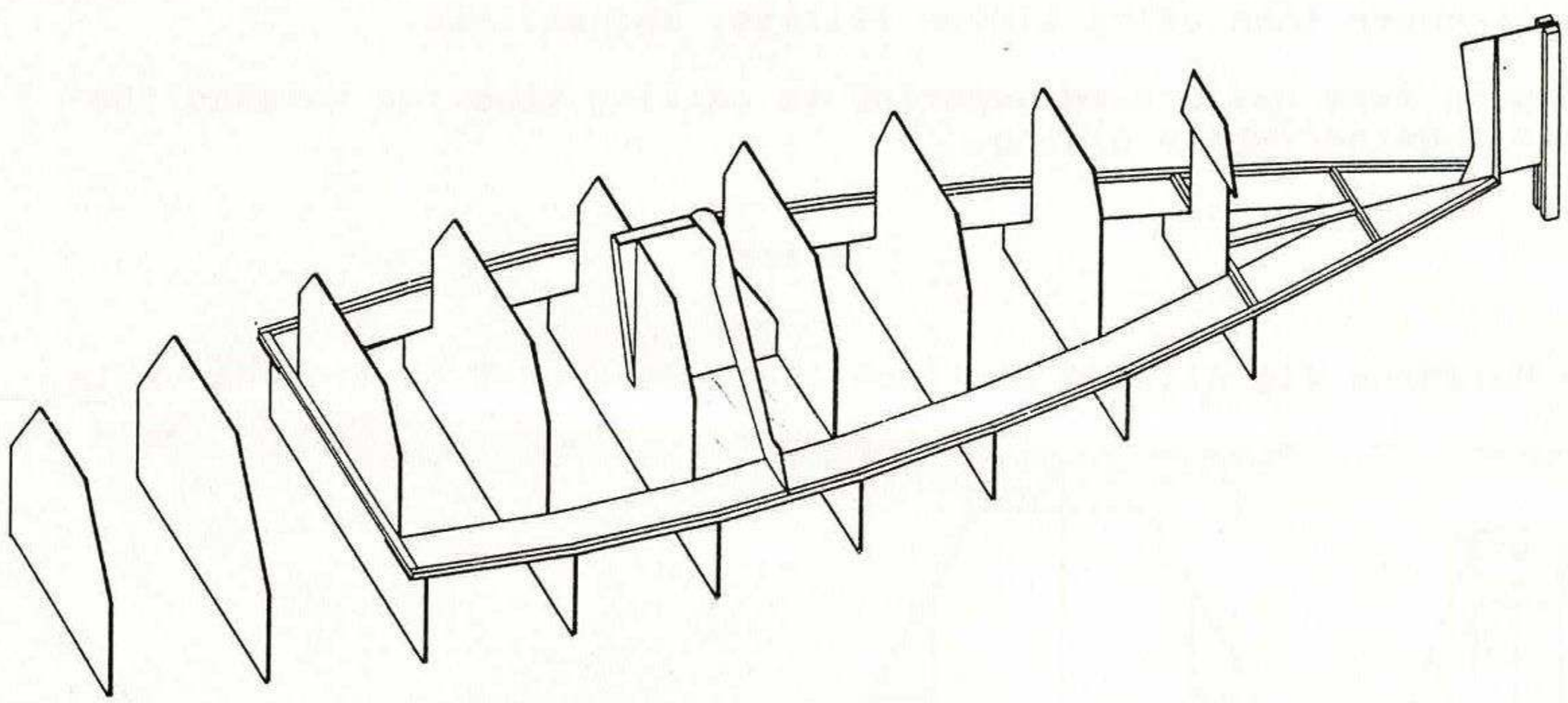
Lay the 45mm SideDecks from Stem to Station-8 first, after fitting 4mm x 4mm gunwales to them over the building board.

Then fit deck section full width between Station-5 & Station-6 and beams as required (in my case immediately aft of Station-8 and a forestay/jib boom swivel support).

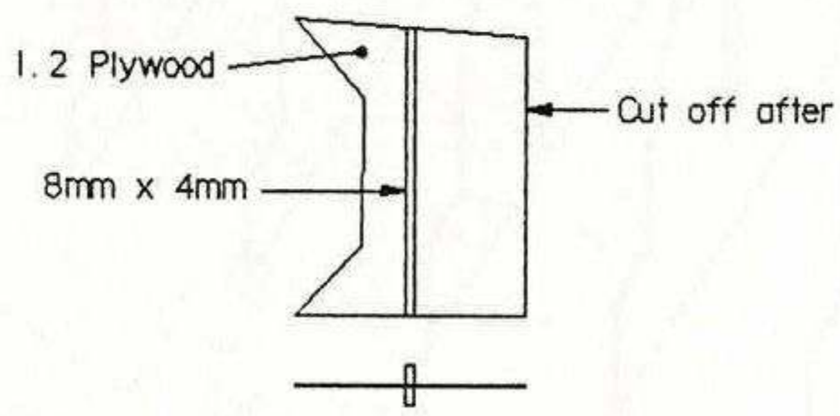
Central deck is fitted;



Then fit keel box in slots for it in Station-5 & Station-6 down over central deck and a cross girder to brace and support chainplates.

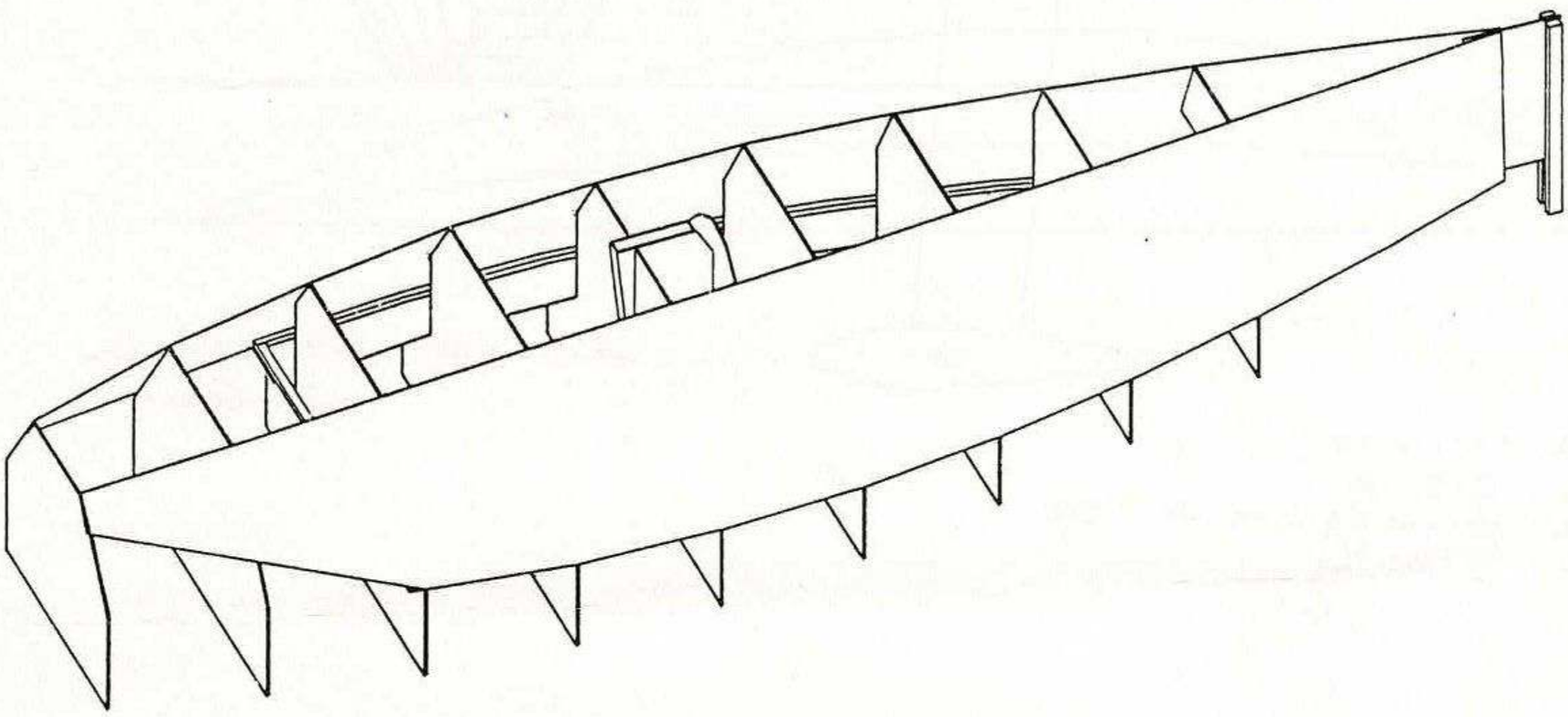


My jig has a stem support forward of the stem made to fit 1.2mm plywood and clamp in place and a packer under forward deck to align the foredeck where the two halves (forward ends of sidedecks) meet.



The stem fits in over deck panels holding them down. Keel box holds down centre section and masking tape will hold down aft end at Station-8. I extend sidedecks 8mm or so past Station-8 to fit beam behind. Later this is bevelled to take sloping decks from Station-8 to aft cockpit for steering.

Topsides go on next and when ready chines faired off with a sanding board and bottom taped down over at each station gluing only to transom and stem. I cut bottom a mm wide each side and a touch of bog between each tape secures it until removed from jig and fully bog covered inside. Then fit further deck and aft cockpit as required and use Bantock type hatchcovers for rest - from some clear polyester film.



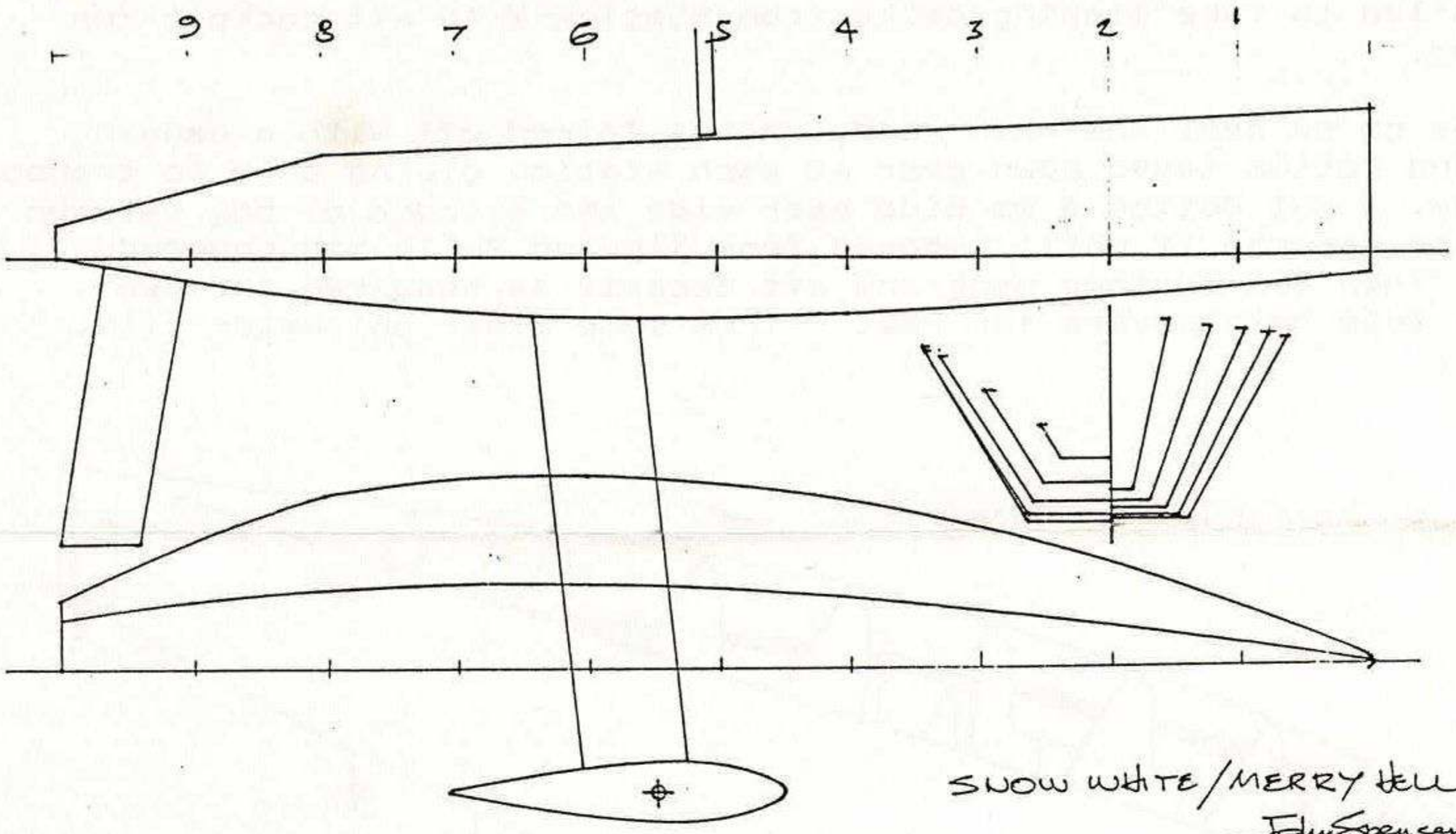
The C of G of the lead should be 55% from stem and floatation is right with RC gear aft of Station-6. My bulbs are NACA 1:6 section, max dia. 30% from forward end and 255mm x42.5mm. Cleaned up come out around 2.30kg and the fin 200 grams approx. My fin has central core of 4mm aluminium. There are lightning holes in the upper end (above fin) of 1/2" dia. I cut cedar 10mm and slot in saw bench from front. Leading edge is filled with 4mm Sapele. My rudders are 1:6 section and foils also have 30% section.

The aft cockpit I simply lay in from sheer. The rudder is aligned at 90° to bottom of hull.

My chainplates are 18g or 20g Ss wire (non-adjustable fore and aft) simply bogged in place.

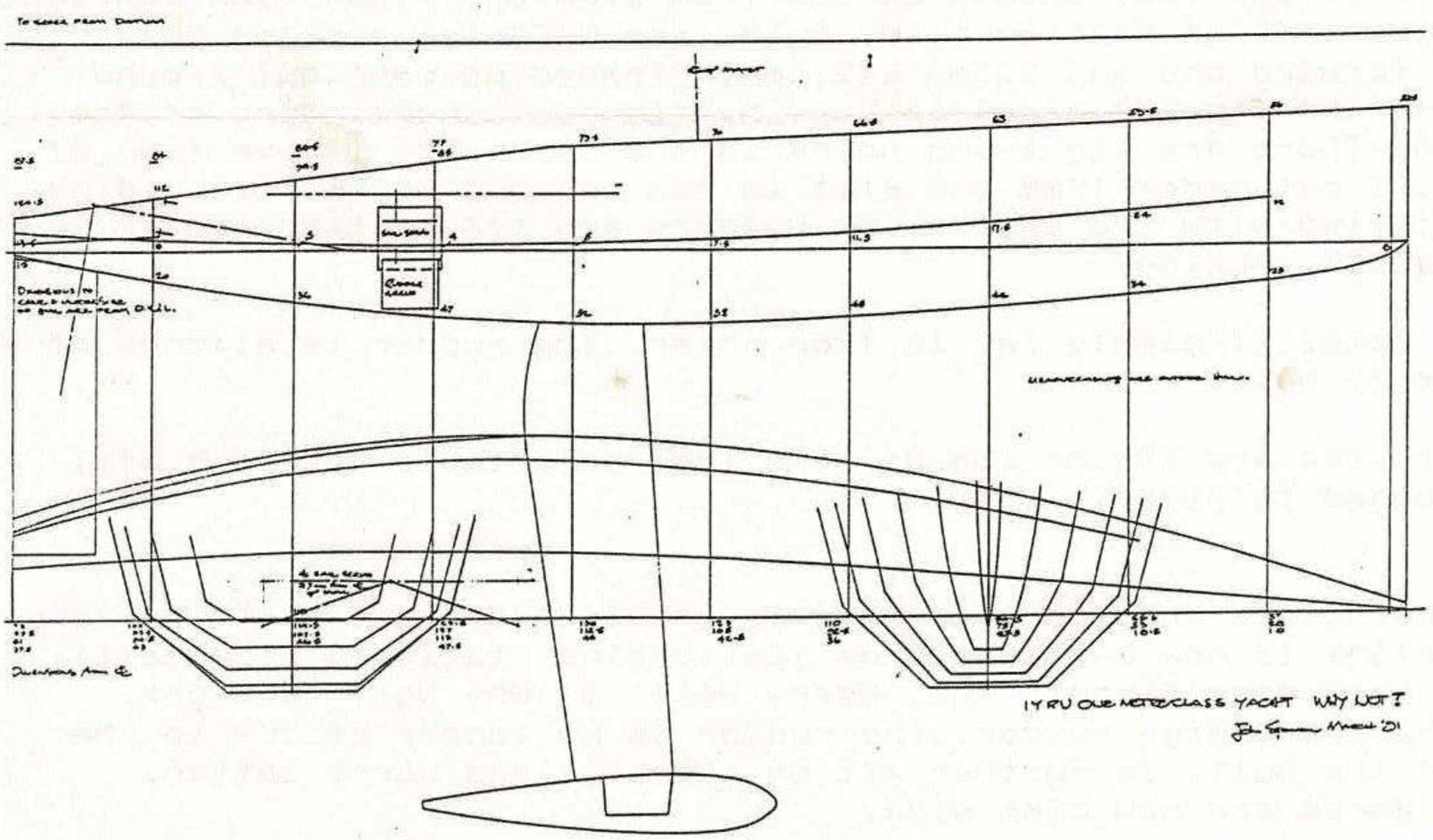
<u>UPDATES</u>

The following are some changes made in the latest boats built by John. The Sheerline is now cut away from just behind Station-6 (16mm aft). This has been done to both the 'Merry Hell' & 'Why Not?' designs. There is a new design rudder. The rudder is no longer at 90° to the bottom of the hull, is further aft on the boat and works better. The side decks are now 30mm wide.



SNOW WHITE/MERRY HELL.
John Spencer.

L.O.A. 1 METRE
BEAM 0.285
DISPL. 4.00 Kg WITH No 3 BIG
KEEL 2.50 Kg



1 YR OLD METRE CLASS YACHT WHY NOT?
John Spencer March '01