

Build a Liberum Dory

1 CHECK THE WEBSITE: WWW.THEFRESEAS.ORG FOR WISE WORDS FROM SALTY BOAT-BUILDERS, PEOPLE-WHO-HAVE-LEARNED-THE-HARD-WAY, AND THE BOAT DESIGNERS THEMSELVES! CHANGES ARE INEVITABLE AND YOUR LIFE IS AT RISK!!

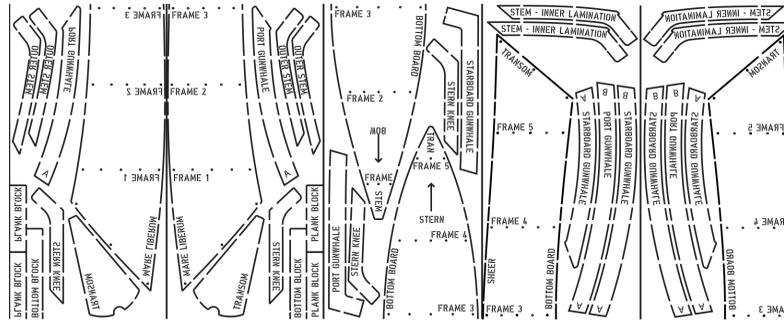
2 GET YOUR TOOLS AND SPACE TOGETHER. THINK IT THROUGH. A JIGSAW AND A SCREW GUN IS THE MINIMUM. SAND PAPER OR A RANDOM ORBIT SANDER, BIG CLAMPS OR A FEW STRONG FRIENDS.

3 BEFORE YOU DO ANYTHING ELSE, GET SOME CONTEXT. READ THE PLANS AND THE ARTICLES... AND THE WEBSITE TOO. AND IF YOU'RE IN DOUBT, FEEL FREE TO WRITE TO US. REMEMBER, YOUR LIFE MAY BE AT RISK!

4 ACQUIRE YOUR BOAT BUILDING MATERIALS. YOU WILL NEED:

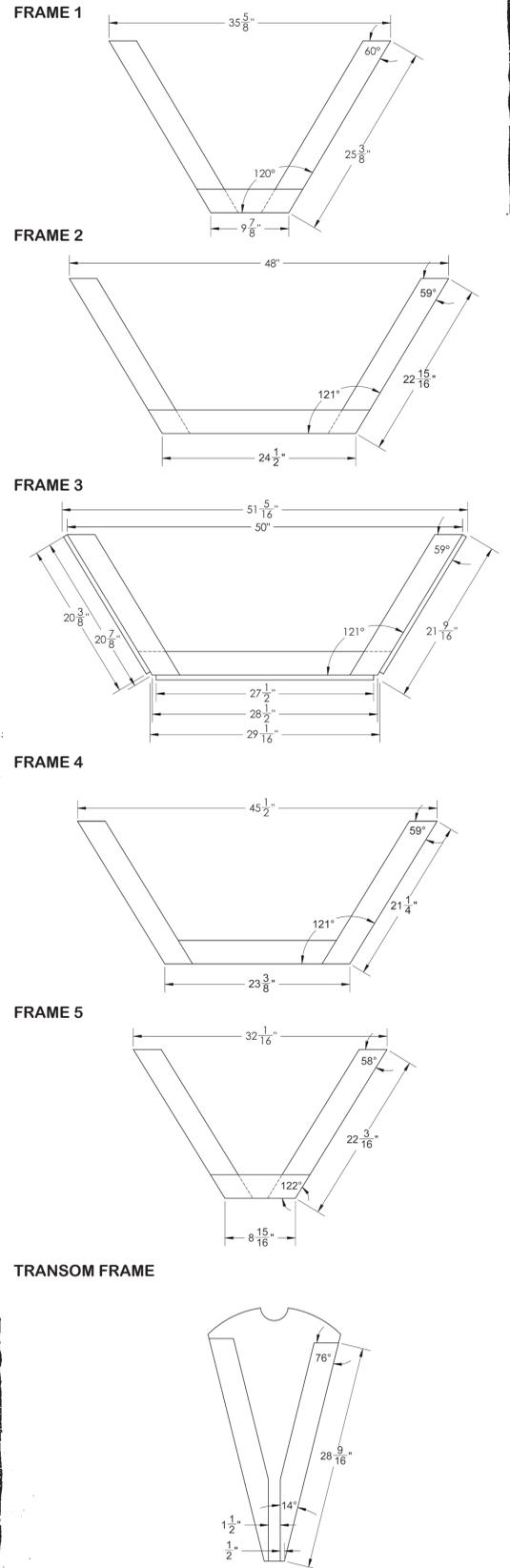
- 5 SHEETS OF 1/2" PLYWOOD WITH THE OUTLINES OF THE PARTS LAID OUT ALREADY OR A COPY OF THE TEMPLATES AT 1:1 SCALE. THE LIBERUM CREW WILL ATTEMPT TO MAKE THEM AVAILABLE TO ALL, BUT BE RESOURCEFUL. (NOTE: IT HAS BEEN FOUND THAT UNLESS THE 1/2" PLYWOOD IS OF REMARKABLE MAKE AND CONDITION, SPLITTING AND BREAKAGE MAY OCCUR. TWO LAYERS OF 1/4" PLY OR 3/8" MAY ALSO WORK WITHOUT THE AFOREMENTIONED PROBLEMS WITH SPLITTING.)
- A GOODLY SUPPLY OF 3/4" PINE - AT A MINIMUM OF 3" IN WIDTH - FOR THE STRUCTURE. THICKER STUFF CAN ALSO BE USED FOR ADDED STRENGTH (WHICH MAY BE WELL-ADVISED). 2" X 4" 'S EVEN. YOU WILL PROBABLY NEED 40-50 FEET OF THE STUFF.
- STAINLESS STEEL DECK SCREWS IN A RANGE OF LENGTHS WOULD BE CHOICE.
- WOOD GLUE, CONSTRUCTION ADHESIVE, AND SOMETHING TO SEAL THE BOAT WITH. THIS CAN BE PAINT OR EVEN A TRADITIONAL MIXTURE OF 1/3 PINE TAR - 1/3 MINERAL SPIRITS - 1/3 VARNISH!

5 LAY TEMPLATES OUT ON YOUR MATERIAL, TRACE, AND CUT OUT ALL THE PARTS YOU WILL NEED WITH THE JIGSAW. CUT TO THE INSIDE EDGE OF THE MARKS - BUT NO FURTHER! IT IS BETTER TO ERR ON THE SIDE OF TOO BIG. YOU CAN ALWAYS SAND OR PLANE DOWN LATER. ADDING WOOD OR FILLING GAPS WILL PROVE MORE DIFFICULT.

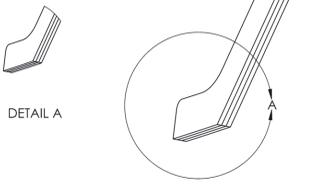


6 ASSEMBLE FRAMES FROM 3/4" SOLID WOOD (SEE DRAWINGS BELOW FOR THE DETAILS)

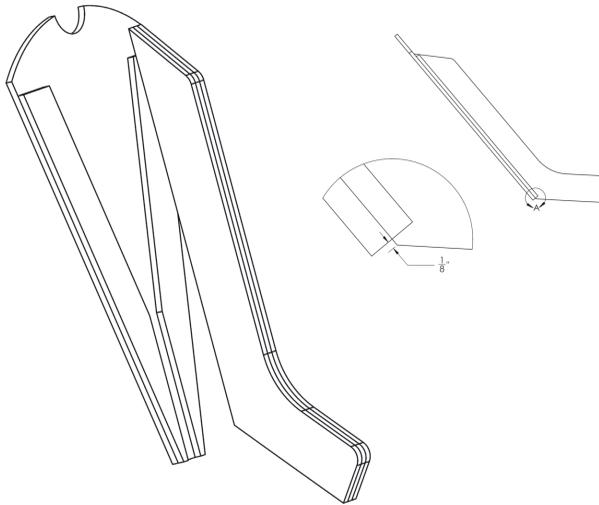
→ CHECK THE WEBSITE. THESE DIMENSIONS MAY CHANGE AS LESSONS ARE LEARNED AND INFORMATION IS SHARED.



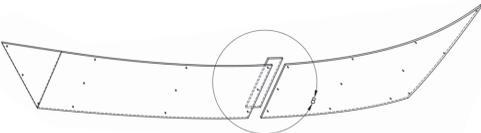
7 LAMINATE STEM TOGETHER AS SHOWN. DO THE SAME FOR STERN KNEE.



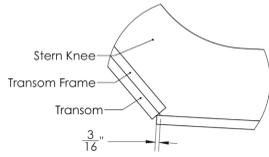
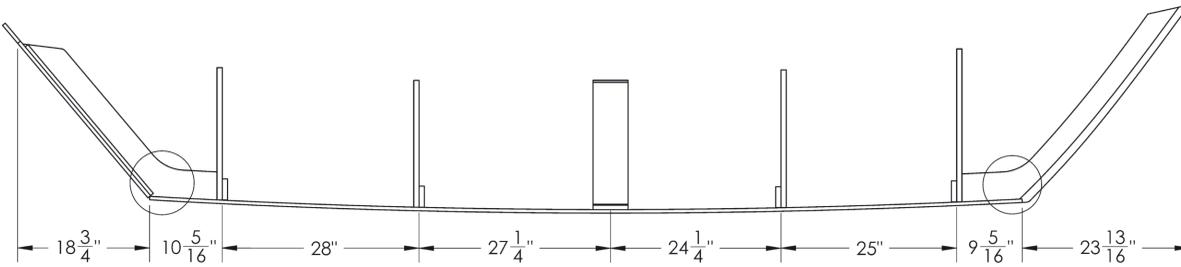
8 ATTACH TRANSOM TO STERN KNEE (SEE DIMENSIONED DRAWINGS AND BE SURE TO CHECK FOR UPDATES TO THE GEOMETRY.)



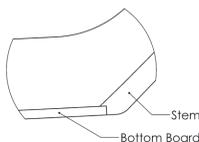
9 ATTACH THE BOTTOM BOARD HALVES TOGETHER, THEN DO THE SAME WITH THE SIDES. USE THE "PLANKS" SECTIONS AS FOUND ON THE TEMPLATES.



10 ATTACH STEM AND STERN KNEE TO THE BOTTOM BOARD AS SHOWN BELOW, USING BOTH ADHESIVE AND SCREWS. ATTACH FRAMES TO THE BOTTOM BOARD IN THE SAME WAY.



NOTE: The Stern Knee is attached 3/16" from the edge of the Bottom Board, such that when the Transom is attached, it's outside face lines up with the bottom edge.

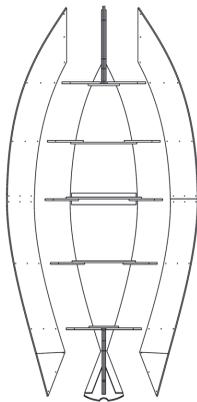


NOTE: Make sure the Stem clips the Bottom Board as shown.

- LAY A BEAD OF CONSTRUCTION ADHESIVE ALONG THE BOTTOM OF THE FRAME. THIS WILL ADD STRENGTH AND FILL THE GAPS.
- LOCATE THE FRAMES ON CENTER AND IN THE LOCATIONS SHOWN IN THE DRAWING, BEGINNING WITH FRAME 3 AND WORKING OUTWARD.
- MAKE SURE THAT YOU ORIENT THE FRAMES CORRECTLY - THE VERTICALS FACE OUT FROM THE CENTER. SCREW IN PLACE THROUGH THE BOTTOM BOARD. LEAVE THE SCREWS A LITTLE LOOSE UNTIL THE SIDES ARE ATTACHED SO THAT YOU CAN PULL THEM INTO VERTICAL IN THE LOCATIONS MARKED ON THE SIDES.

11 BEGINNING IN THE MIDDLE AND WHILE WORKING OUTWARD, CLAMP AND ATTACH BOTH SIDES OF THE BOAT TO THE FRAMES.

- ADD ADHESIVE ALONG THE FRAMES AND ALONG THE EDGE OF THE BOTTOM BOARD.
- ALIGN THE SIDES TO THE BOTTOM BOARD WITH THE SEAM LINES ON BOTH.
- MAKE SURE THE BOTTOM BOARD'S EDGE IS FLUSH WITH THE BOTTOM EDGE OF THE SIDES. (CHECK AGAIN AND AGAIN AS YOU MOVE OUTWARD.)
- USE THE HOLE LOCATIONS PAINTED ON THE SIDES TO POSITION THE FRAMES RELATIVE TO THE SIDES.
- FASTEN WITH THE STAINLESS STEEL DECK SCREWS. YOU WILL PROBABLY WANT TO PILOT THE HOLES TO AVOID SPLITTING THE FRAMES. FEEL FREE TO ADD AS MANY SCREWS AS MAKES YOU HAPPY AND SAFE.
- PROCEED FROM THE MIDDLE OF THE BOAT WORKING TOWARD THE ENDS, WORK ON BOTH SIDES OF THE BOAT EQUALLY.



12 ATTACH THE SIDES TO THE STEM AND TRANSOM IN THE SAME FASHION, USING BOTH ADHESIVE AND SCREWS

- THIS MAY BE THE MOST DIFFICULT PART DUE TO THE ACCUMULATION OF ERROR, INCREASED FORCES, AND DIFFICULTY IN CLAMPING THE CURVES. PROCEED WITH CARE AND CAUTION. GO SLOWLY, BUT HAVE HEART! YOU ARE ALMOST THERE.)
- REINFORCE WITH "CHINE BLOCKS," BITS OF 2X4 BETWEEN THE FRAMES THAT BOTH THE BOTTOM AND THE SIDES CAN SCREW TO.

13 SCAB GUNWALES (PRONOUNCED 'GUNNELS', JUST SO YOU KNOW) TO EACH OTHER AS YOU'VE DONE WITH SIDES AND BOTTOM.

ATTACH GUNWALES TO FRAMES. WATCH FOR SPLITTING WHEN SCREWING INTO END GRAIN. PILOT DRILL YOUR HOLES OR TOENAIL THEM IN.

14 SQUIRT ADHESIVE EVERYWHERE → GET IN BEHIND THE STEM → ALONG THE TRANSOM SEAM, BOTTOM BOARD → PLUG UP ANY HOLES IN THE BOTTOM BOARD THAT PREVIOUSLY EXISTED

15 ADD DESIRED FINISH TO SEAL AND COAT THE OUTSIDE AND INSIDE OF THE DORY

- PAINT
- VARNISH
- PINE TAR
- ROOFING TAR
- FIBERGLASS
- SPIT AND FINGERNAIL POLISH OR ANYTHING ELSE...

16 BUILD SOME OARS AND ATTACH OARLOCKS, SEATS, FLOTATION FOAM IF DESIRED. KIT OUT YOUR LIBERUM DORY WITH CABINS, MAST & SAILS, RUNNING LIGHTS, BENCHES, BARBECUES, TRAPEZE KITS, BLENDER, PLANKS...

SHARE WHAT YOU'VE LEARNED WITH US AND DRAW US A PICTURE IF YOU LIKE. →

Draw your liberum dory, cut out this postcard and mail it back to us to join the Mare Liberum fleet.

comments: _____

the name of your dory (optional): _____

your name: _____

location: _____

address: _____

