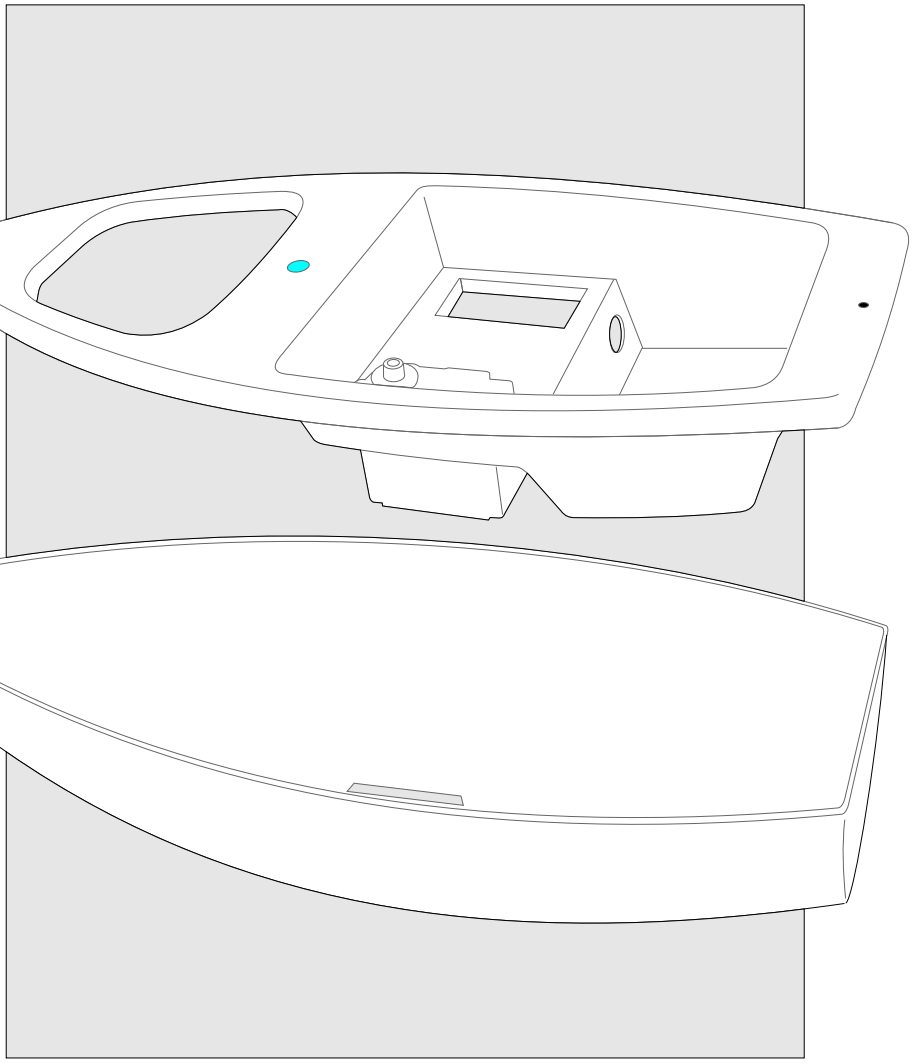
the 507 footy class yacht

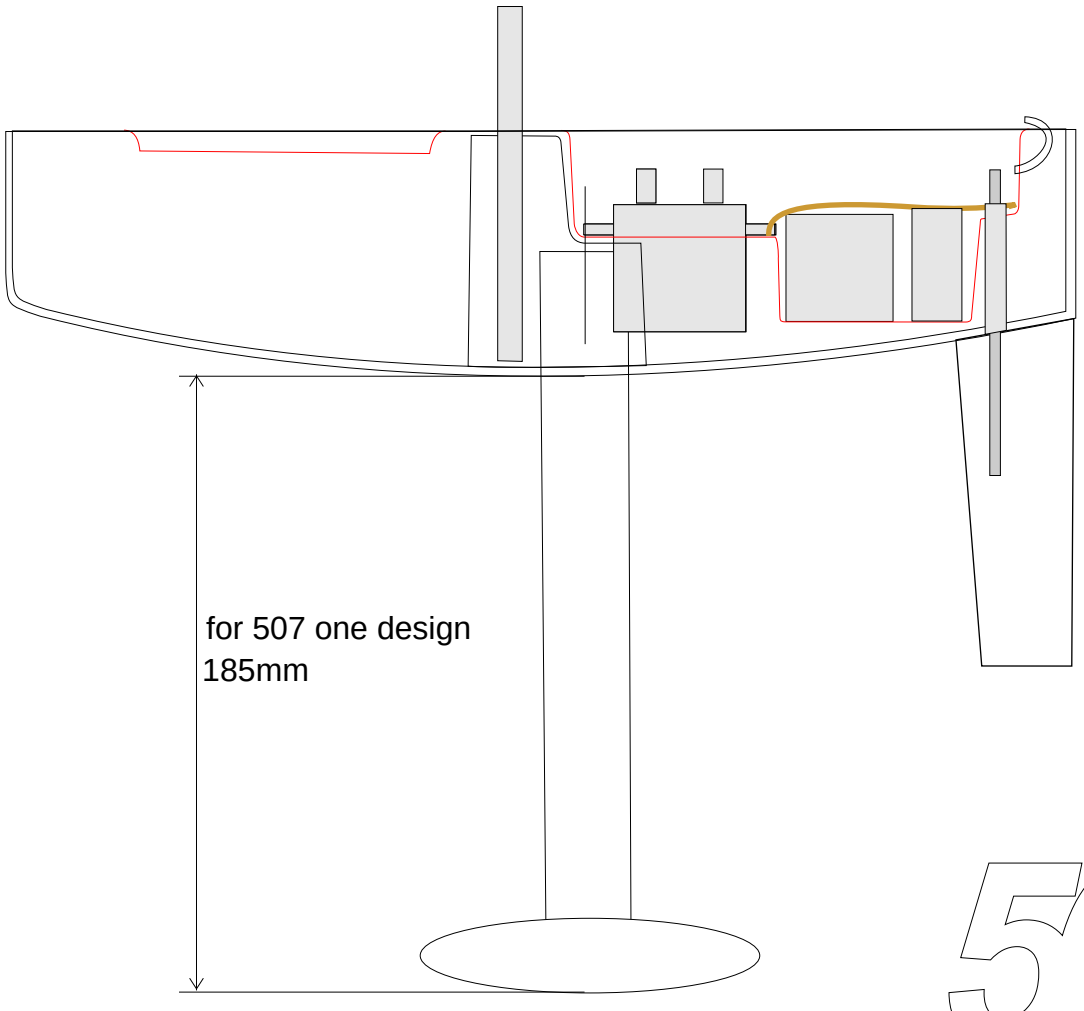
by andrew cook

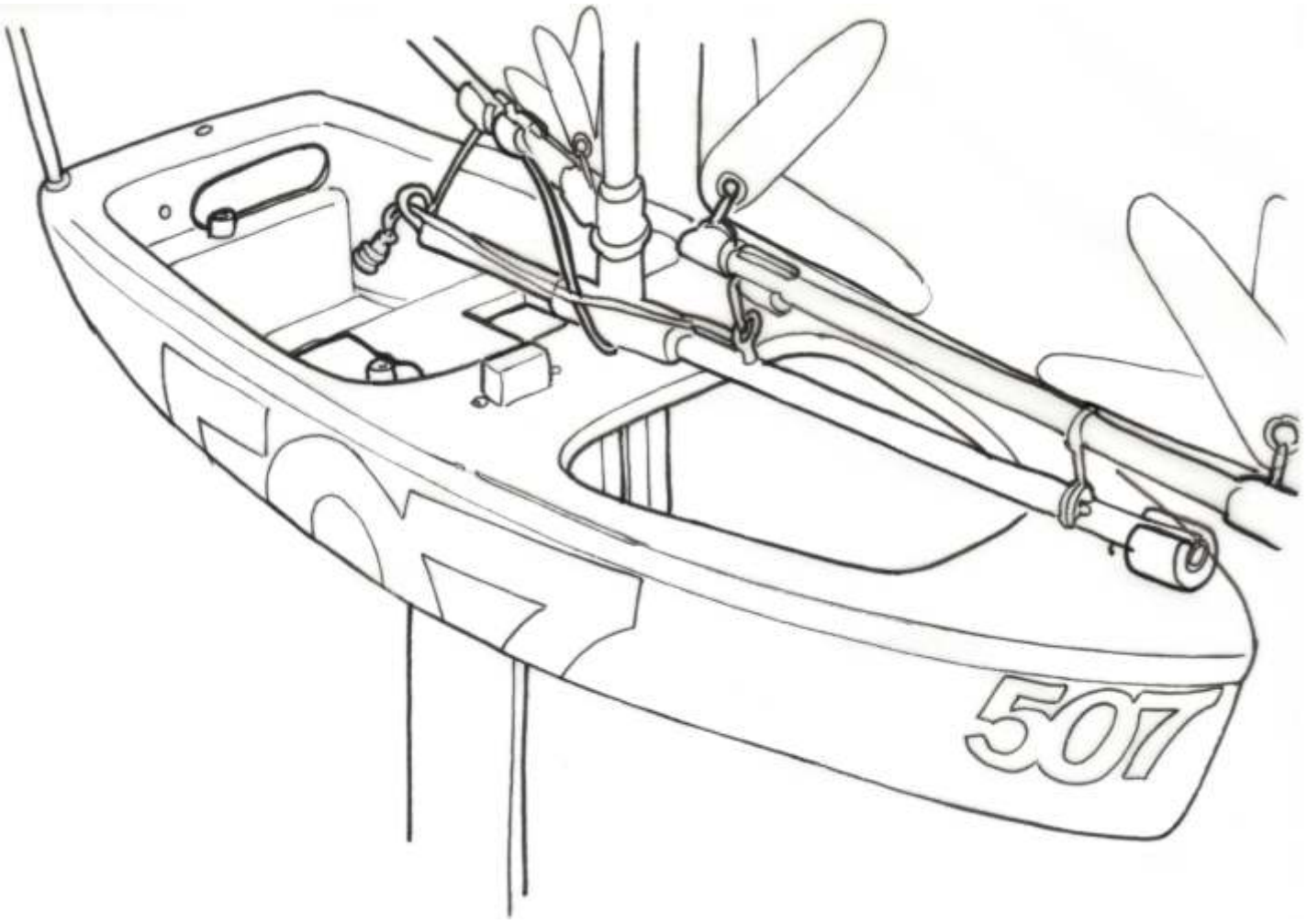
507

proudly made in Australia

www.GOSpectre.com




for 507 one design
185mm



thank you for choosing the 507 Footy design to build, sail and enjoy!

from initial hull lines developed by Angus Richardson in the UK, the 507 hull was reworked and gained an innovative deck design to create a light, strong, functional monocoque.

the rig reflects the trends of aerodynamic efficiency and gives a well natured boat as a result, the 507!

as a design the 507, so named for its inception on the 5th month of the year 2007 has been a fun project and even more fun to sail!

having created the design package, made tooling and even vacuum formed the boats myself , I am proud to say she is my best boat design so far, have a look at others at www.gospectre.com !

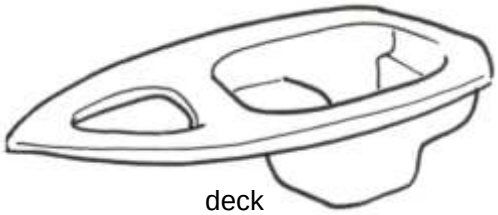
so whether you are racing or having fun mucking about you can register your boat with your countrys footy class association and of course send me photos of your boat sailing!

if you need any building help or have any thoughts please email me on andrew@gospectre.com!!

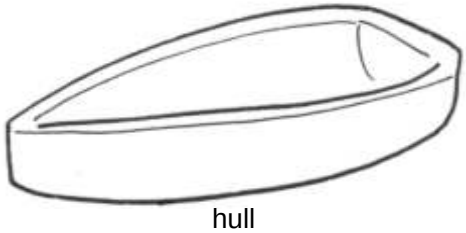
go sailing!

Andrew Cook

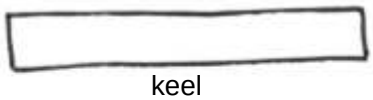
parts



deck

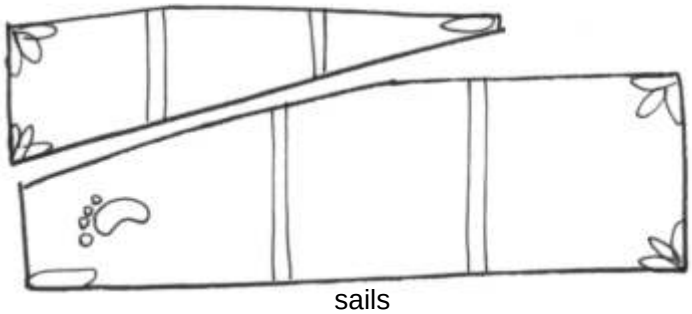


hull



keel

keel bulb

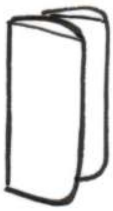


sails

rubber band

sail sheet(string)

keel box



rudder

switch cover

steering arm

sail arm

rudder head

gooseneck

keel / mast clamp bolt

magnetic clip

rubber aerial cap

rudder tube (white)

aerial tube (clear)

mast t piece

carbon fibre

main mast lower Ø6mm

main mast upper Ø5mm

sail booms Ø5mm

sheet booms Ø6mm

rudder stock Ø3mm

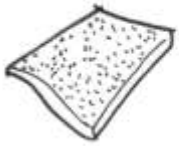
steering linkage and sail guide titanium wire

sail guide tube

sail clip tube Ø8mm

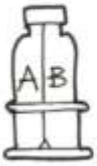
tools

craft knife



sand paper
60 grit

CA Glue

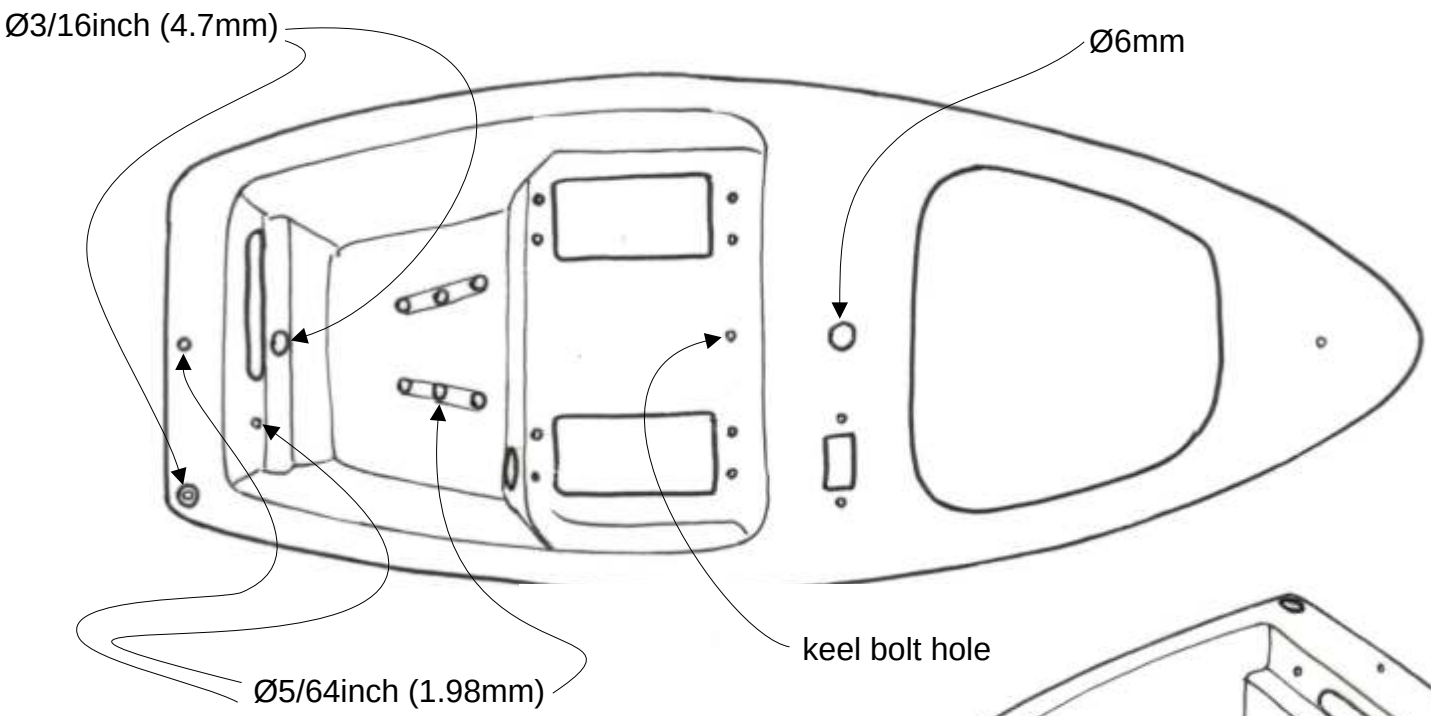


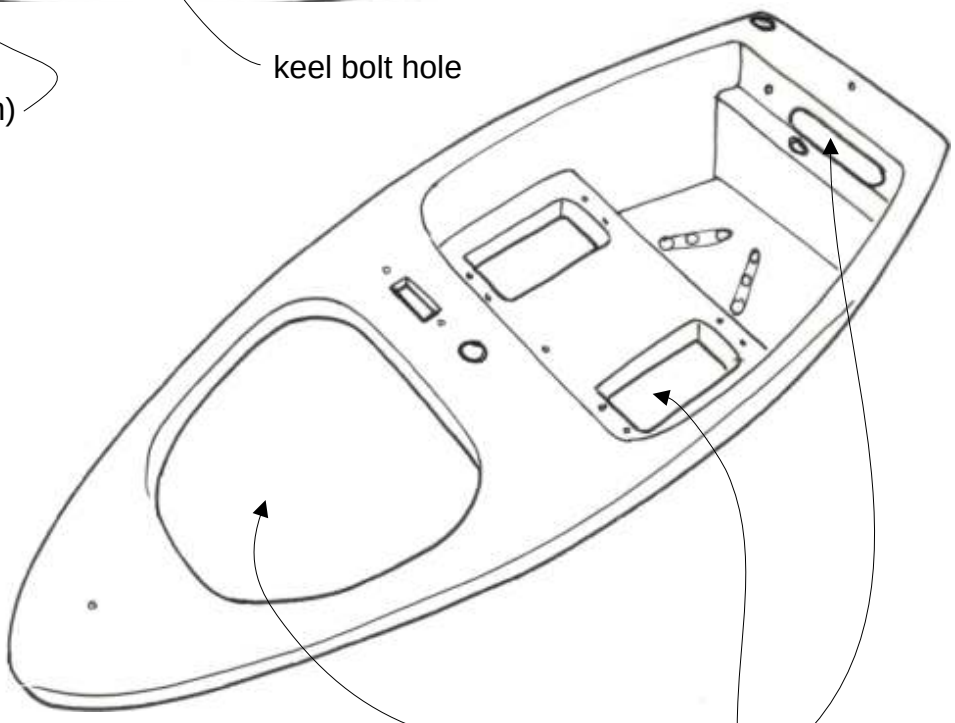
5 minute
epoxy

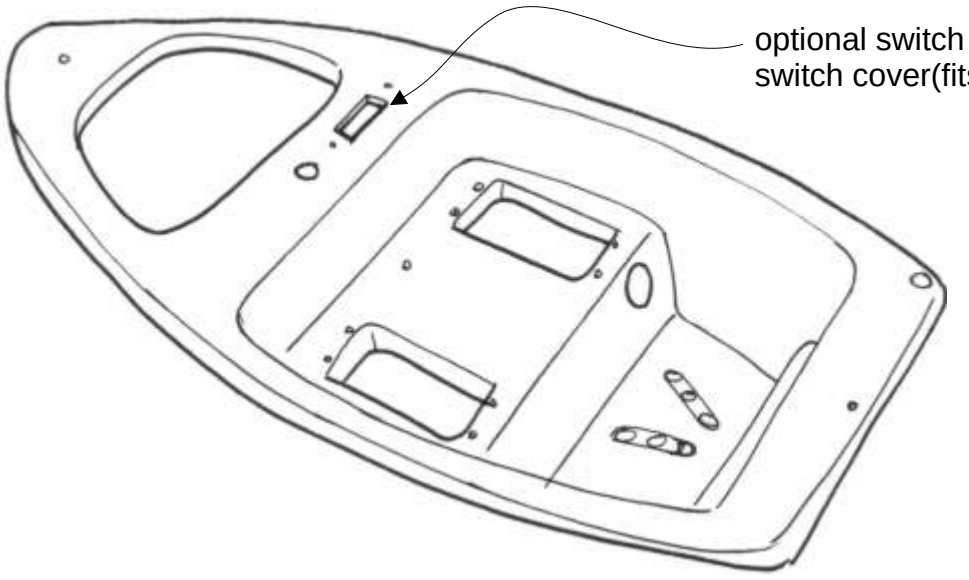
pliers

drill bits
5/64 inch (1.98mm)
3/16 inch (4.7mm)
6mm

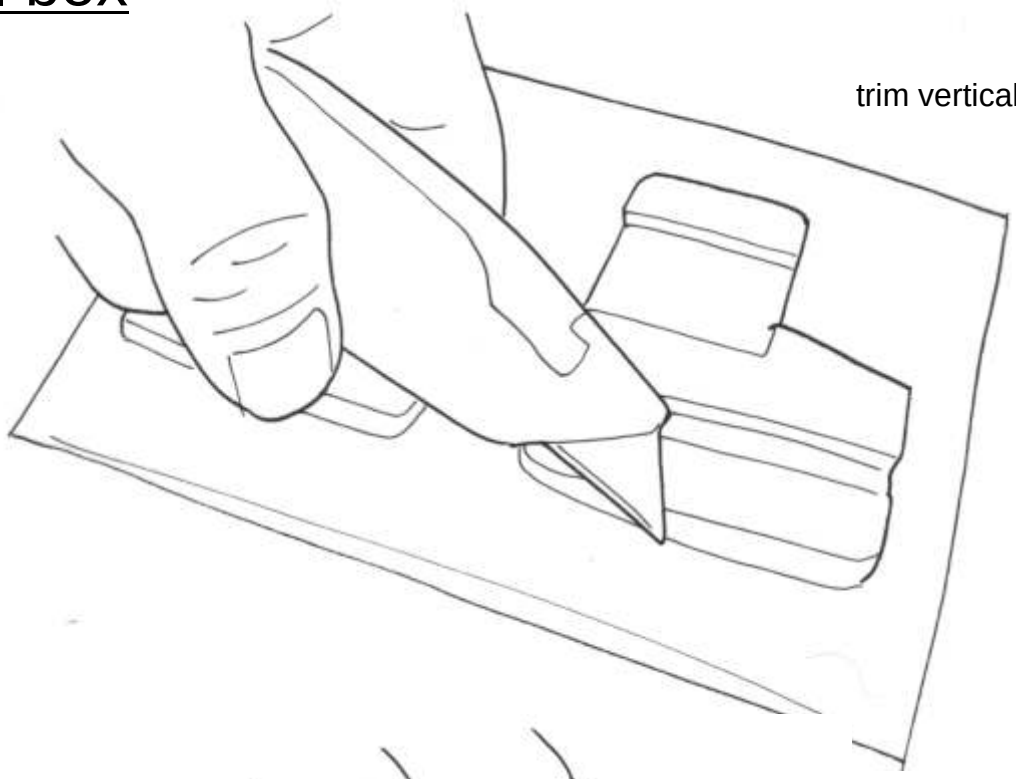
the deck holes



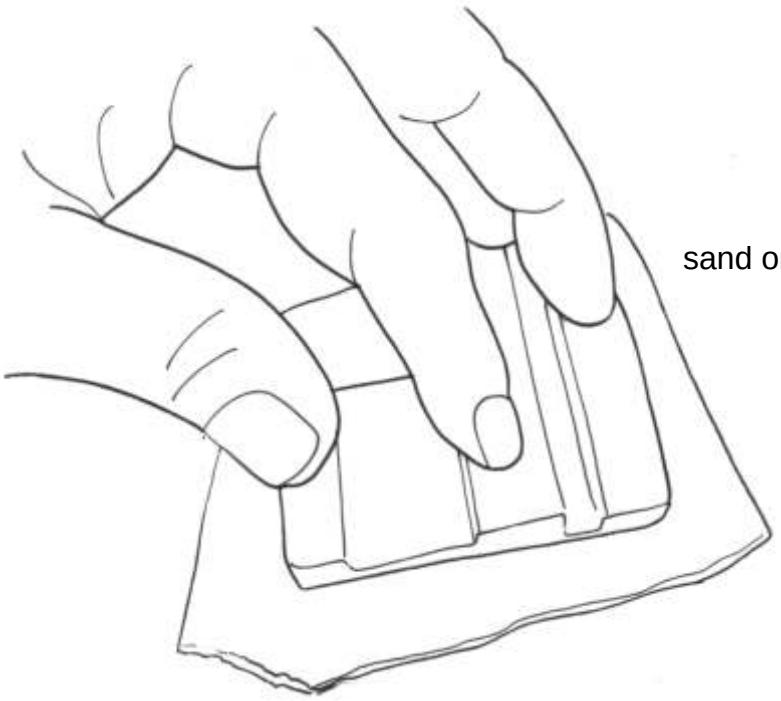




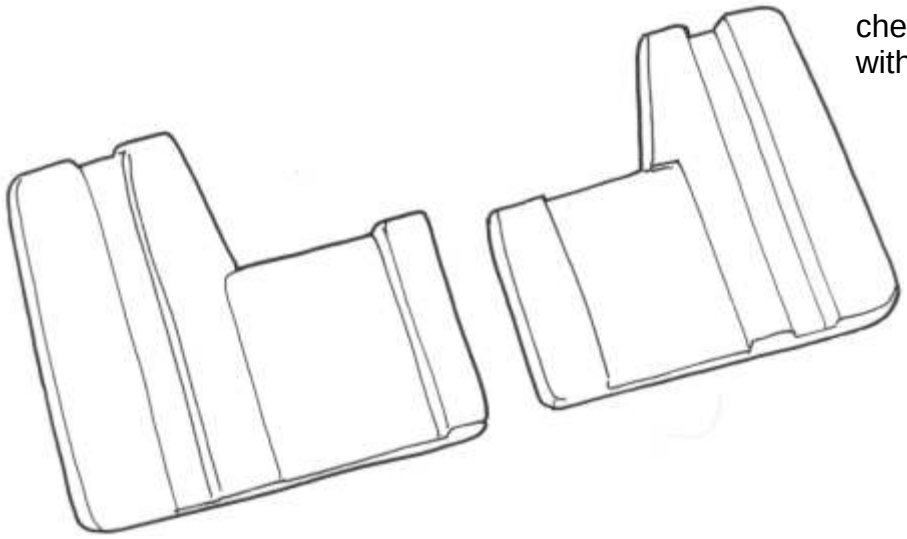
the keel box



trim vertically with craft knife



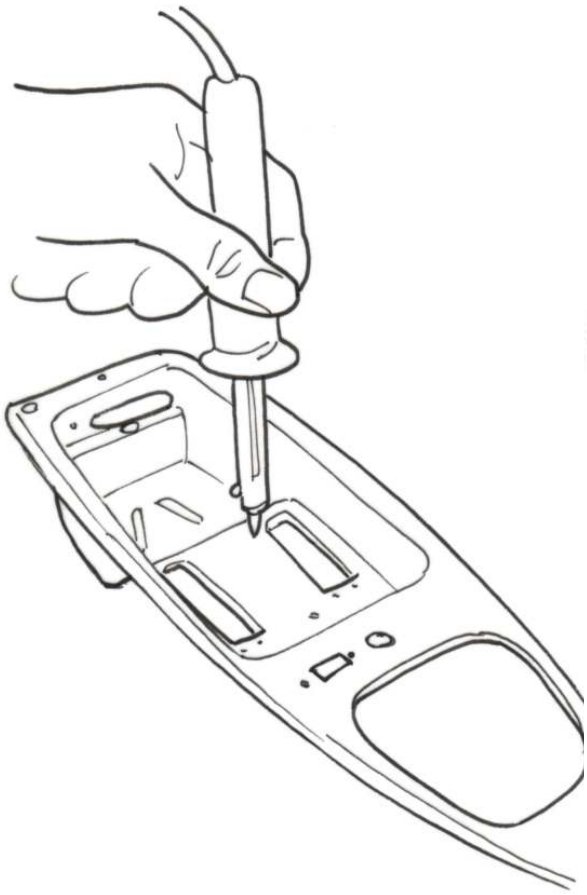
sand on flat surface to tidy cut area

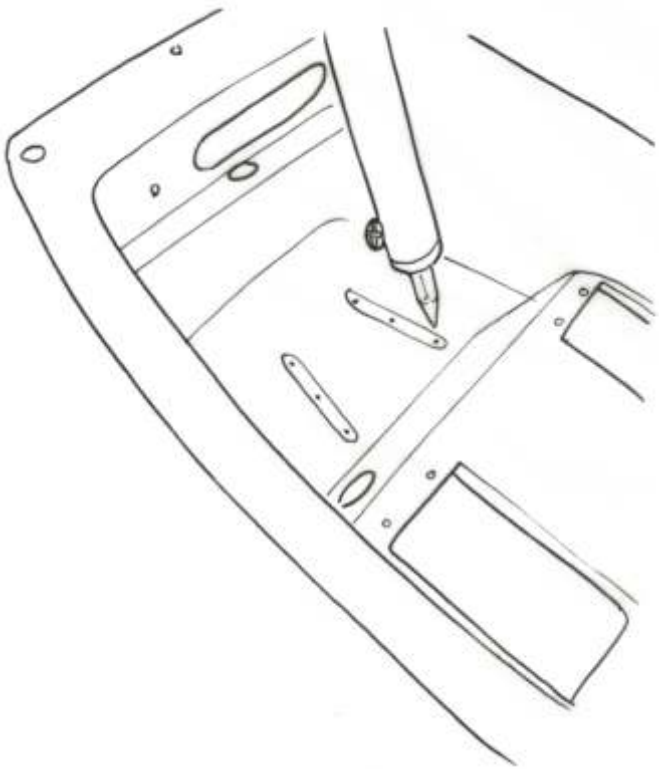


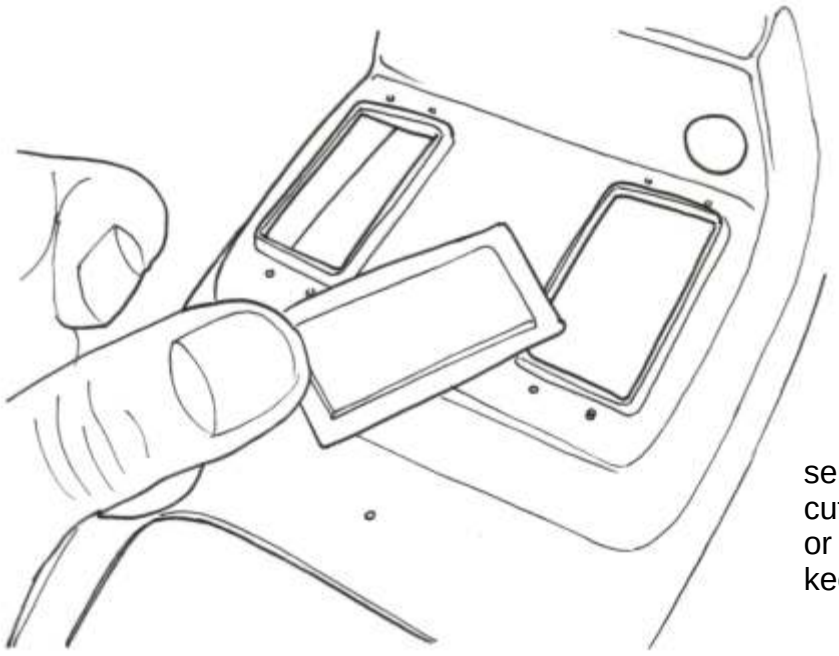
check parts before glueing with CA adhesive

cockpit holes

a soldering iron is recommended
to make drain holes in cockpit area,
drill may also be used with care as
material is thin and can tear easily

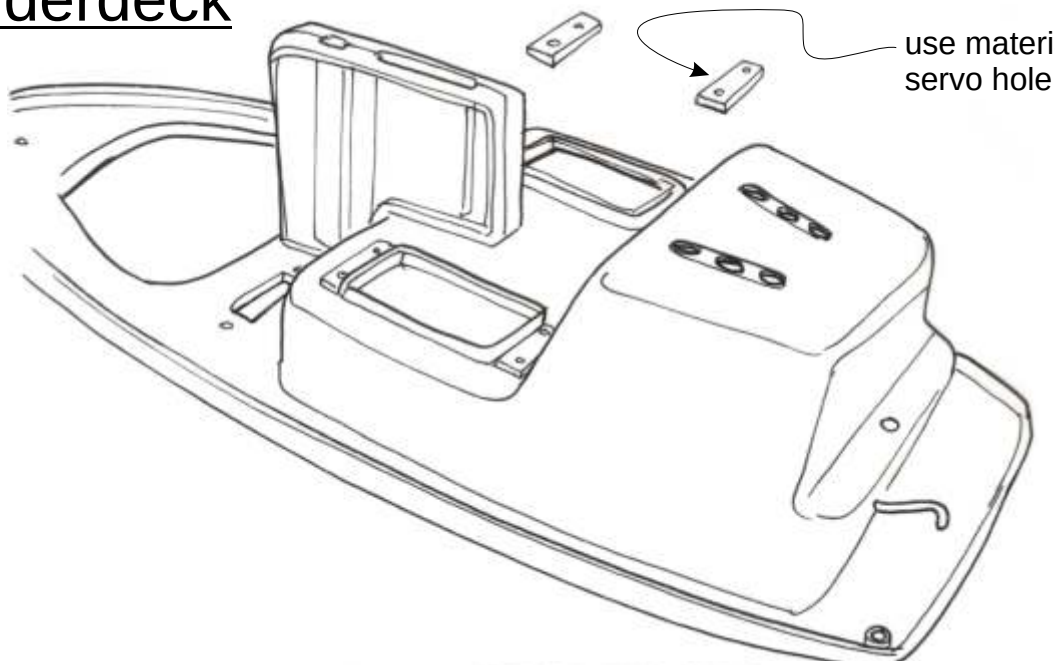






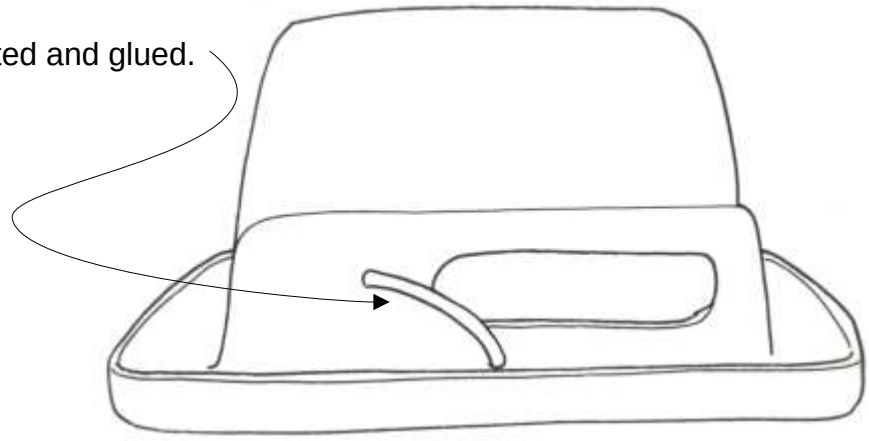
servo cut out area.
cut to standard servo size
or micro servo size.
keep offcut for reinforcement.

the underdeck

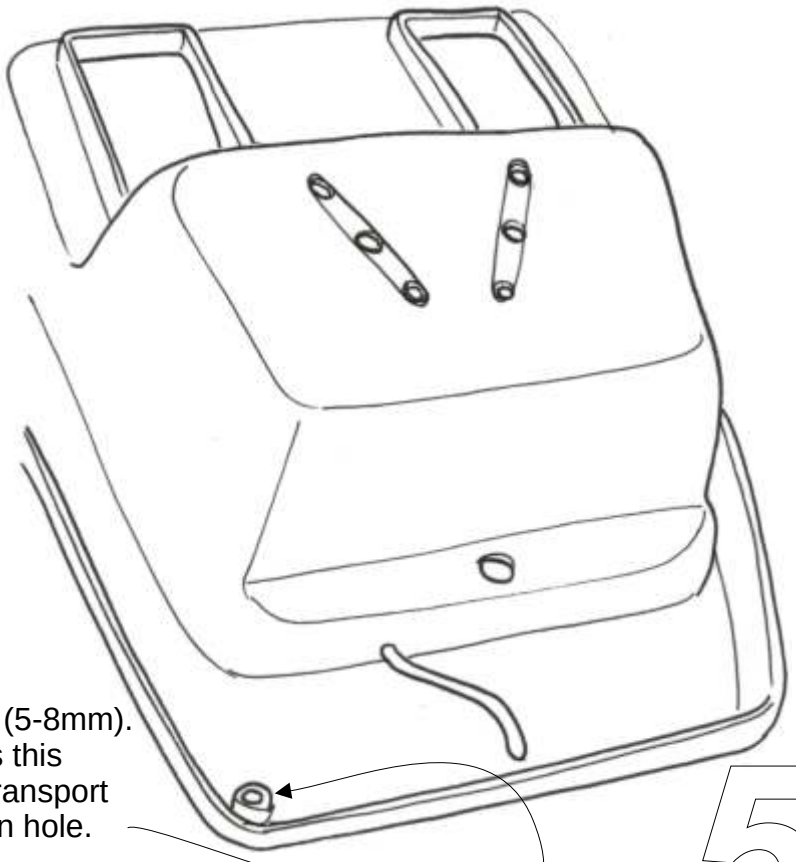


use material cut out from servo hole as reinforcement

sail sheet guide fitted and glued.



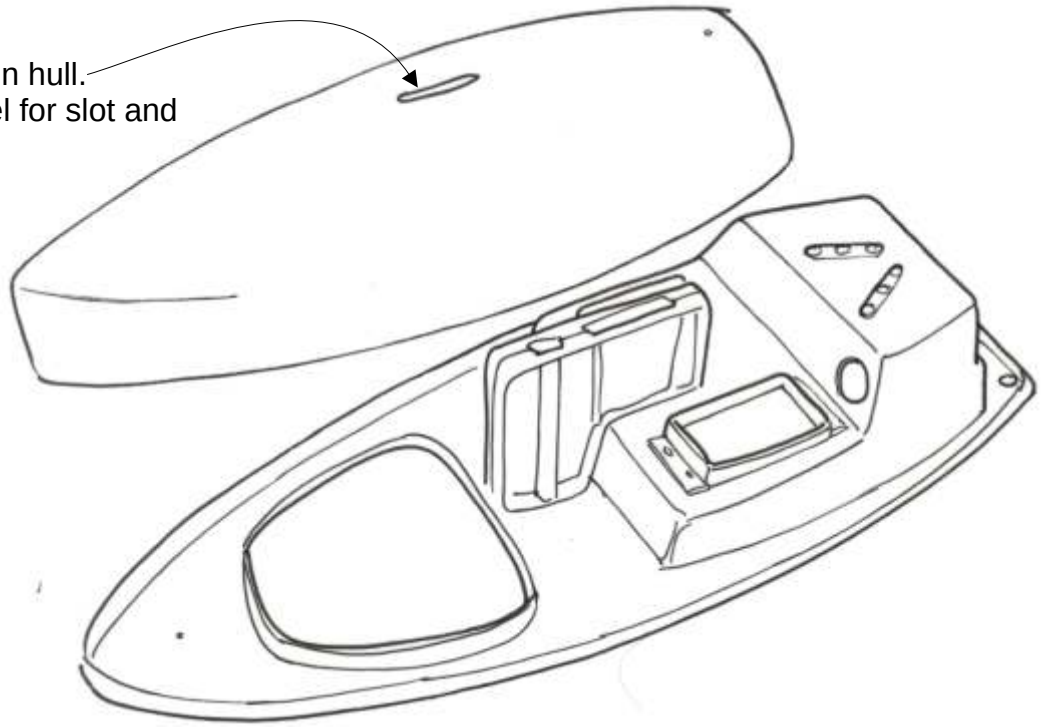
note:-
cut sail sheet guide at 45 degrees on the end so as to aid feeding it into holes

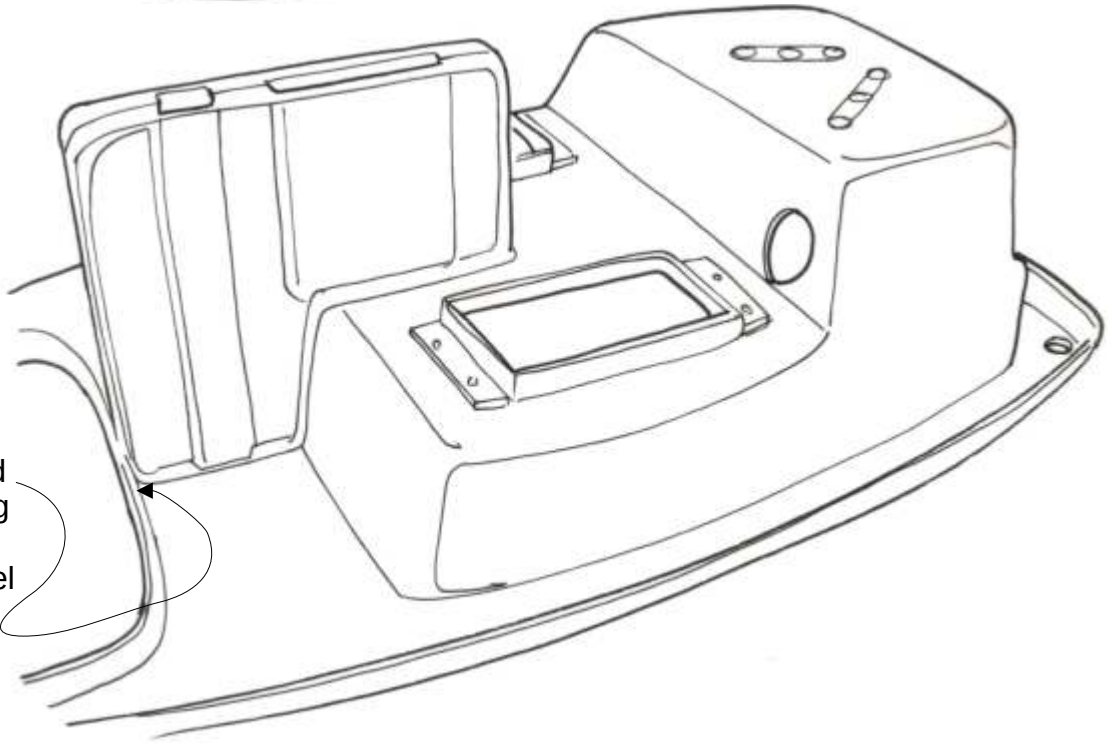


aerial tube holder glued to deck (5-8mm). (do not glue aerial tube into it as this allows aerial to be removed to transport the 507, also this is the hull drain hole.

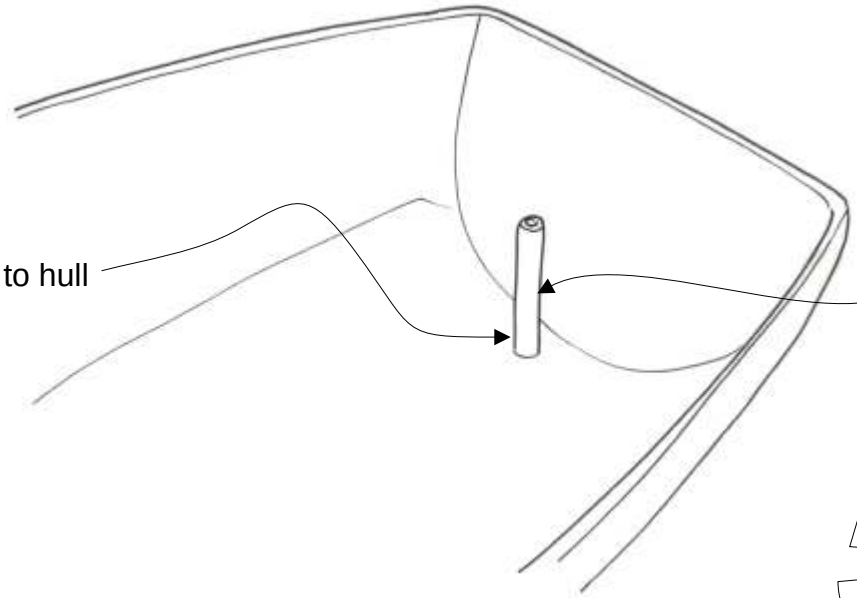
the keelbox

drill 3 x 3/16inch holes in hull.
at front and back of keel for slot and
for rudder tube.





position keel box forward
against foredeck opening
and glue in place.
(be sure to align with keel
bolt hole and ensure
mast fits through deck).

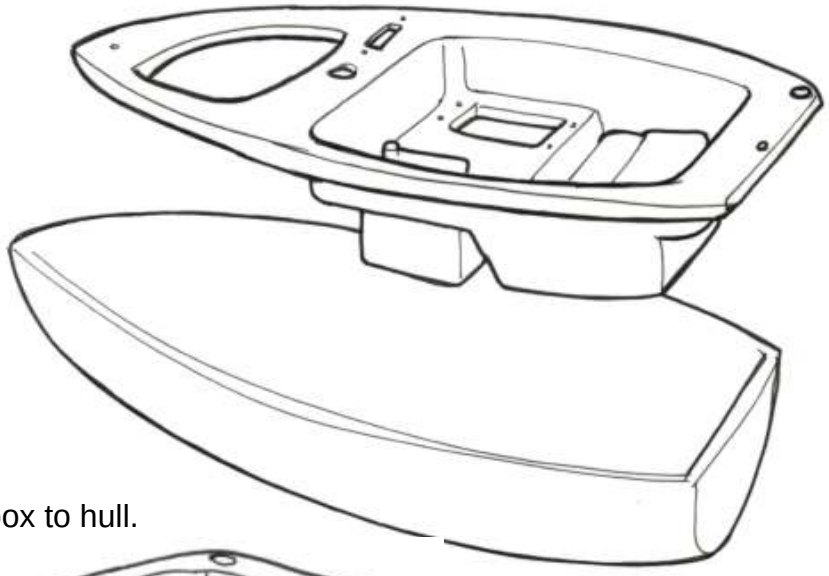


40mm long

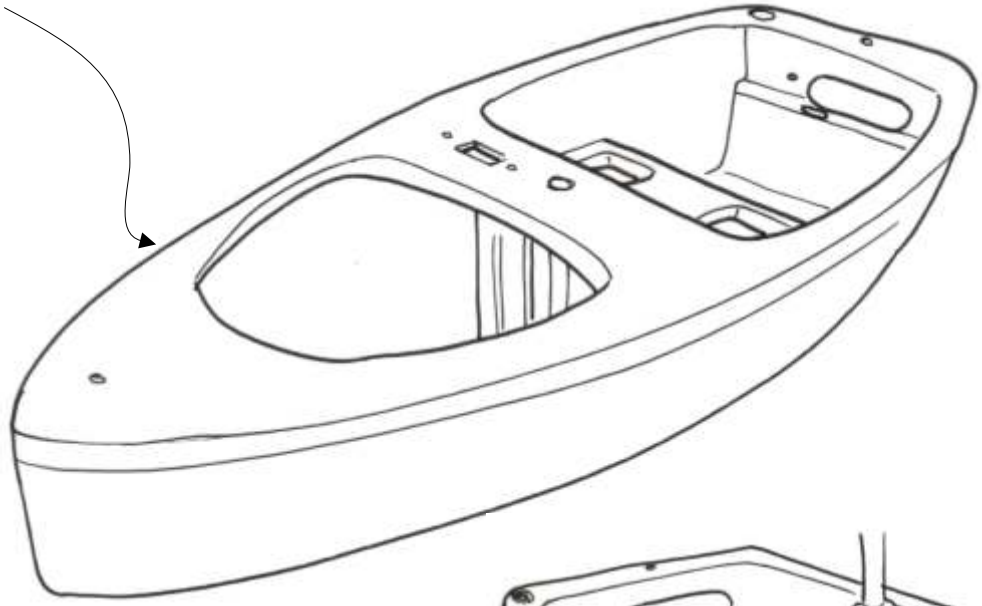
glue rudder tube to hull

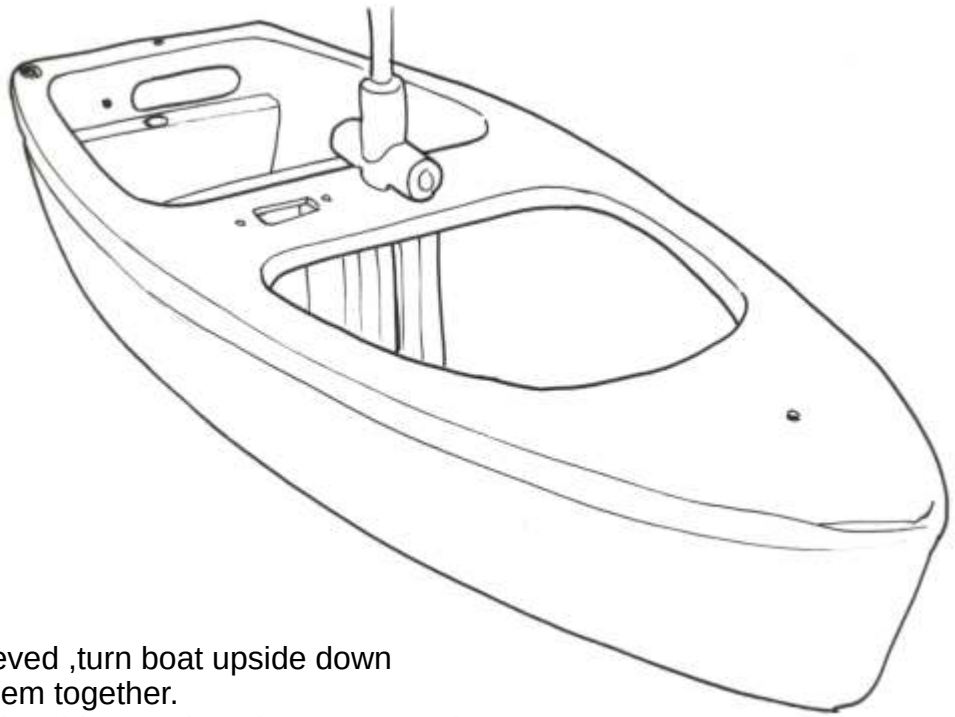
hull and deck joining

trial fit hull and deck



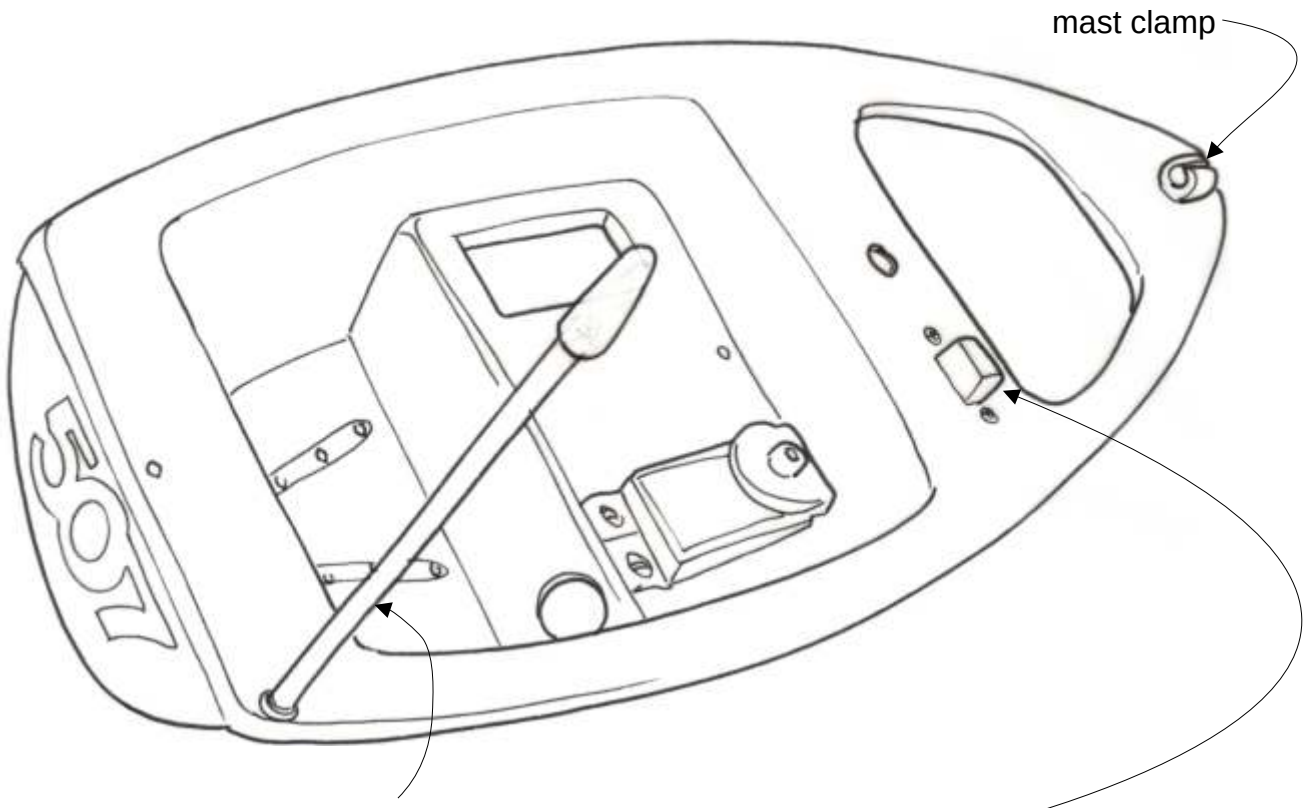
glue hull to deck at join line, then keel box to hull.



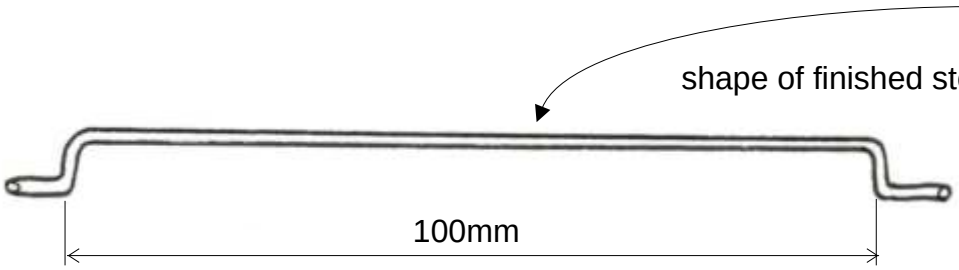


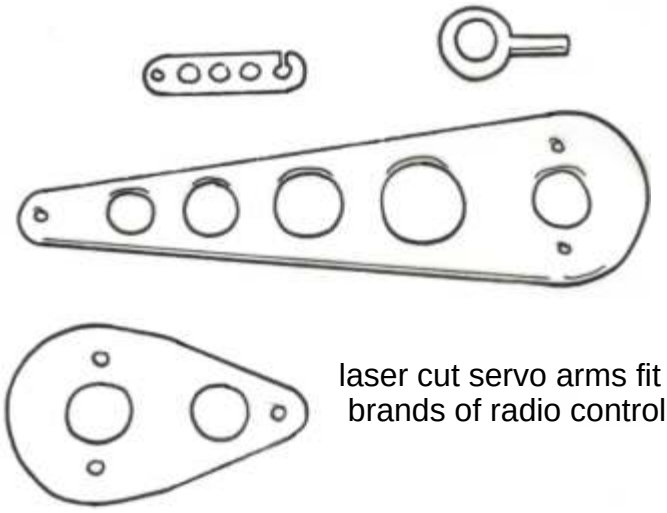
when correct hull to deck fit is achieved ,turn boat upside down
and CA glue can be used to hold them together.
if you are not confident to use CA glue this way the other suggested
method is to use 5 minute epoxy glue applied to the upturned deck
around the inner edge before fitting the hull to it.
once this has cured glue keel box to hull.

deck fittings



aerial tube fits to hull, once aerial is in tube then fit cap onto top.
fit on/off switch boot to switch and fit to deck
sit servos in cut out and screw in, see servo fitting page for orientation.

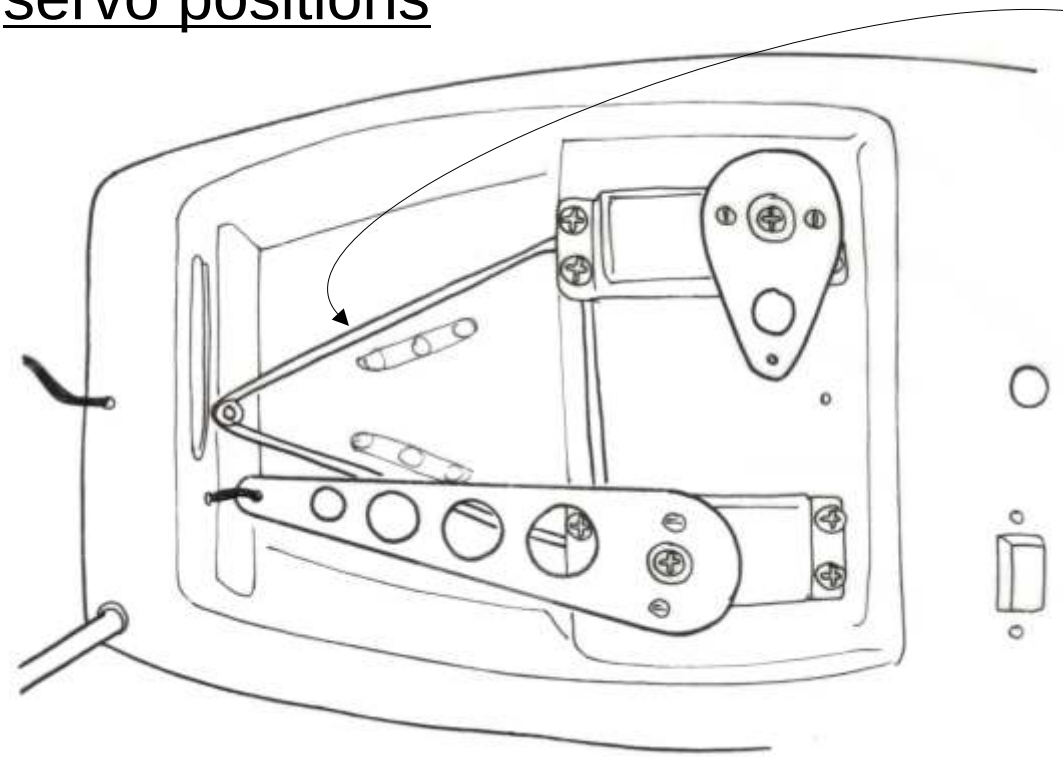




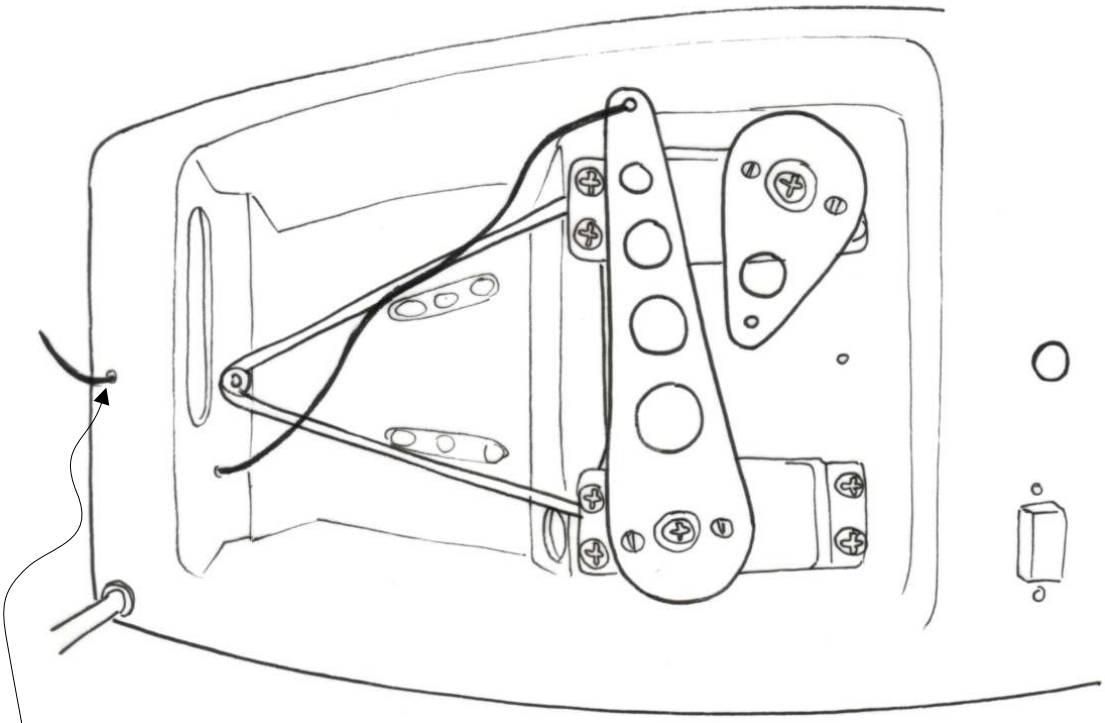
laser cut servo arms fit most popular brands of radio control servos

secure servo arms to the servo arms supplied with servo motors use self tapping screws.

servo positions



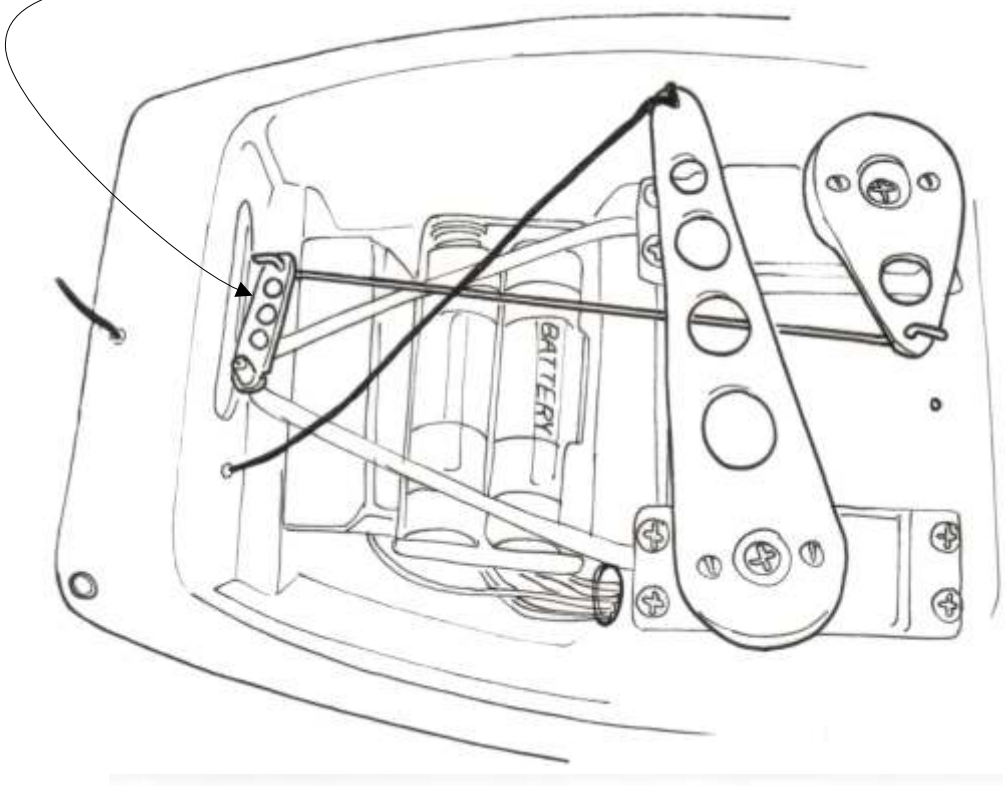
rubber band connects under servo screws and loops over top of rudder tube to hold batteries in place.



to feed the sail control line through the hull tube guide the best method is to coat 3cm of the string in super glue allow it to dry to make it stiff before threading it into tube

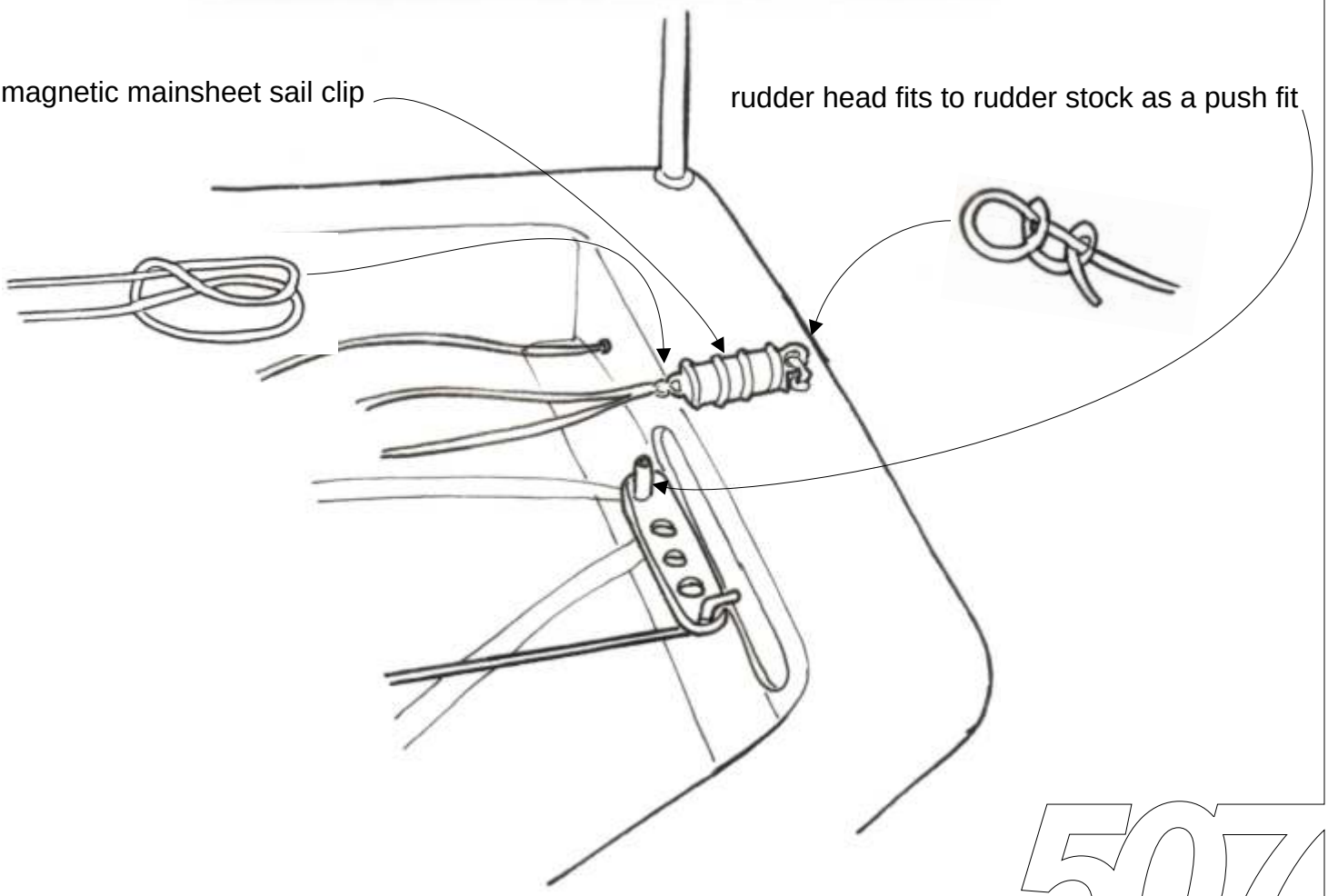
rudder and sail sheets

sail arm is connected and rudder steering arm is also fitted to servo.
titanium wire connects rudder arm to rudder head fitting.

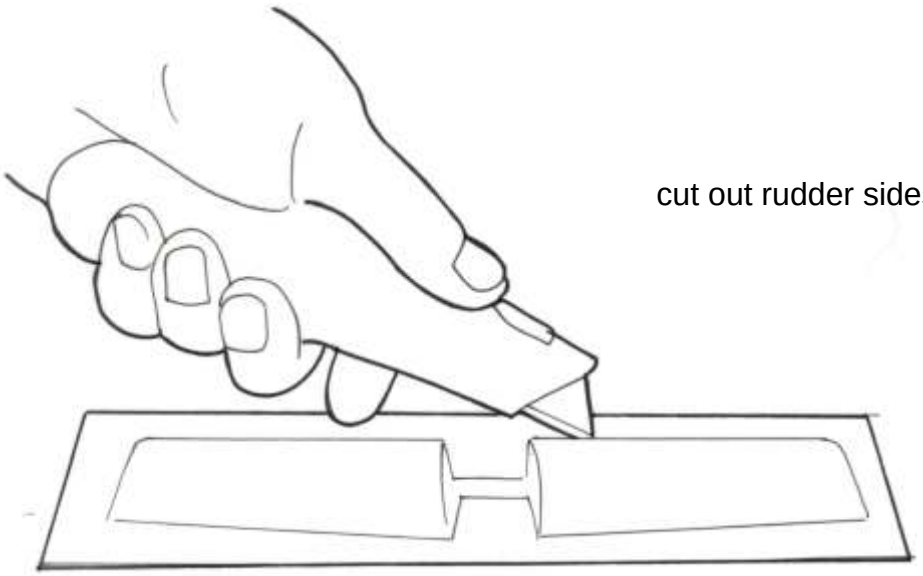


magnetic mainsheet sail clip

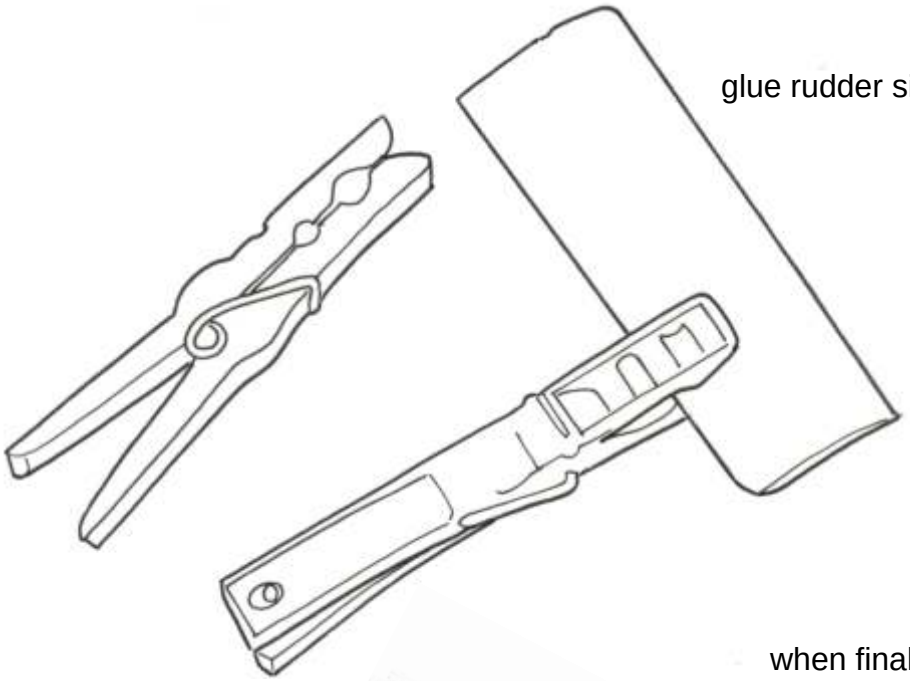
rudder head fits to rudder stock as a push fit



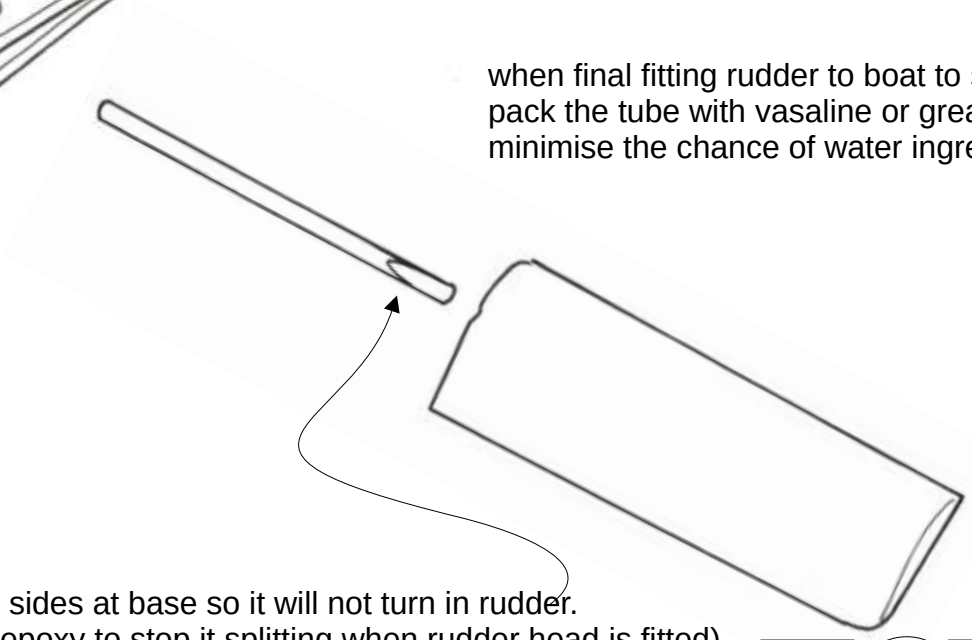
the rudder



cut out rudder sides



glue rudder sides with Ca glue and clamp

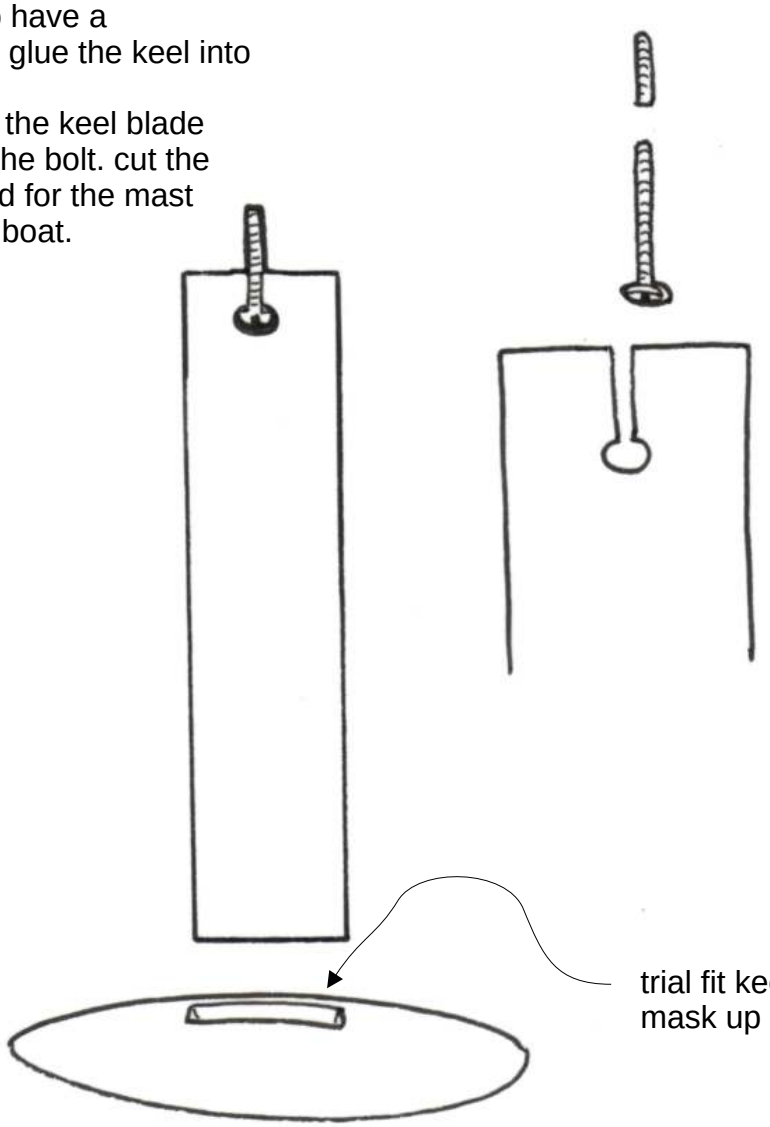


when final fitting rudder to boat to sail,
pack the tube with vasaline or grease to
minimise the chance of water ingress.

fit rudder stock
(sand a flat on opposite sides at base so it will not turn in rudder.
also fill top of tube with epoxy to stop it splitting when rudder head is fitted).
Ca glue in and epoxy.

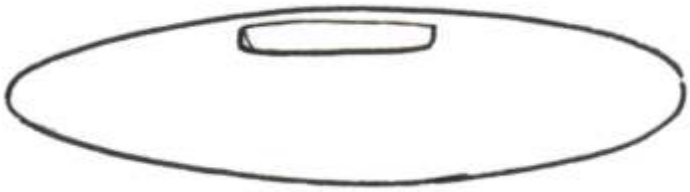
keel and bulb

if you are not wanting to have a removable keel you can glue the keel into the boat, no bolt!
other wise drill a hole in the keel blade and make a slot to suit the bolt. cut the bolt as the off cut is used for the mast clamp at the bow of the boat.



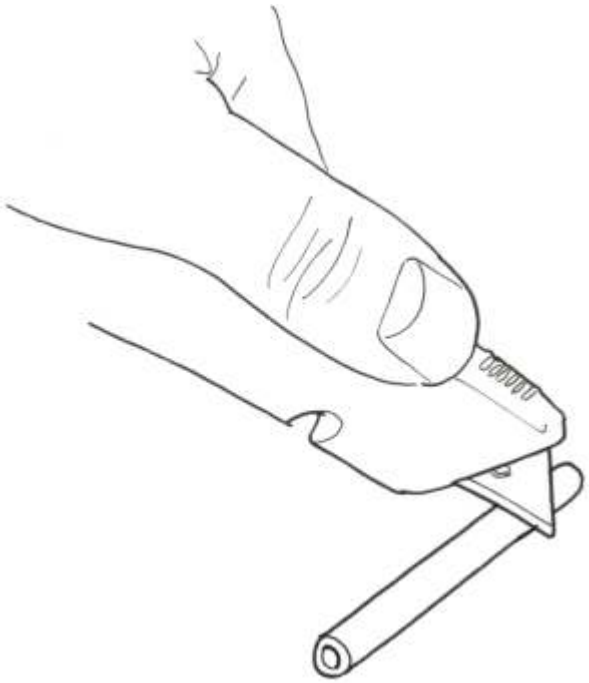
trial fit keel into bulb ,
mask up and epoxy glue it in.

file bulb and sand smooth with steel wool

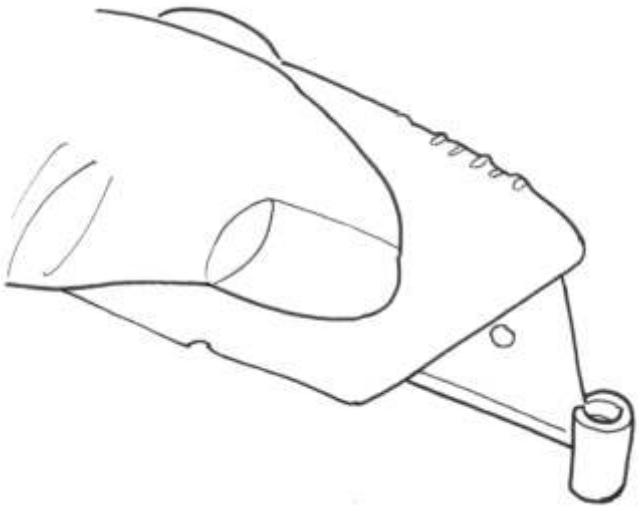


sail clips and mast clamp

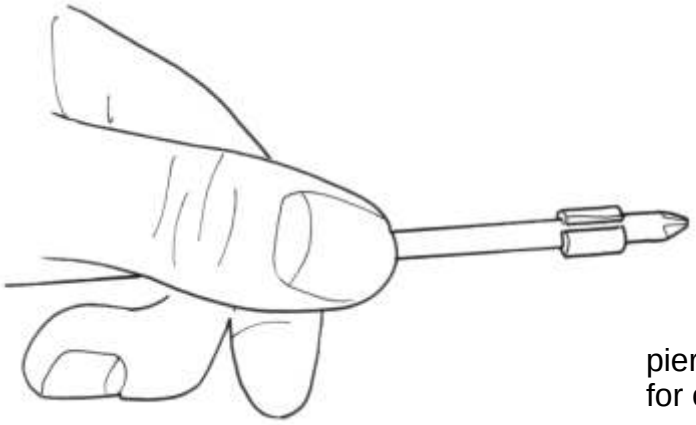
cut plastic tube to 10mm lengths x10



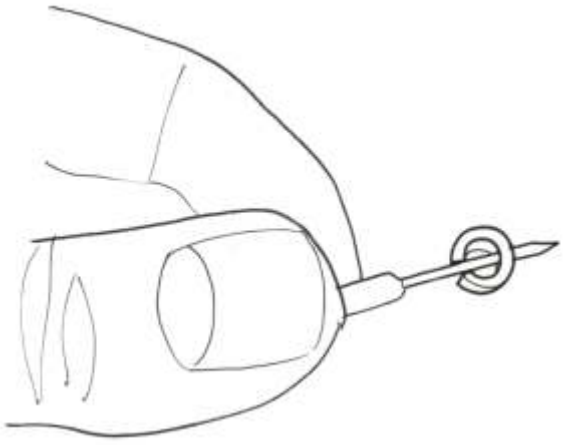
cut the lengths vertically

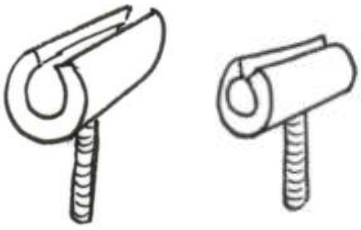


slide over a phillips head screwdriver to open up to size



pierce a hole to tie through.
for one use half of the keel bolt to make mast clamp.





mast clamp to fit to bow.

mast and booms

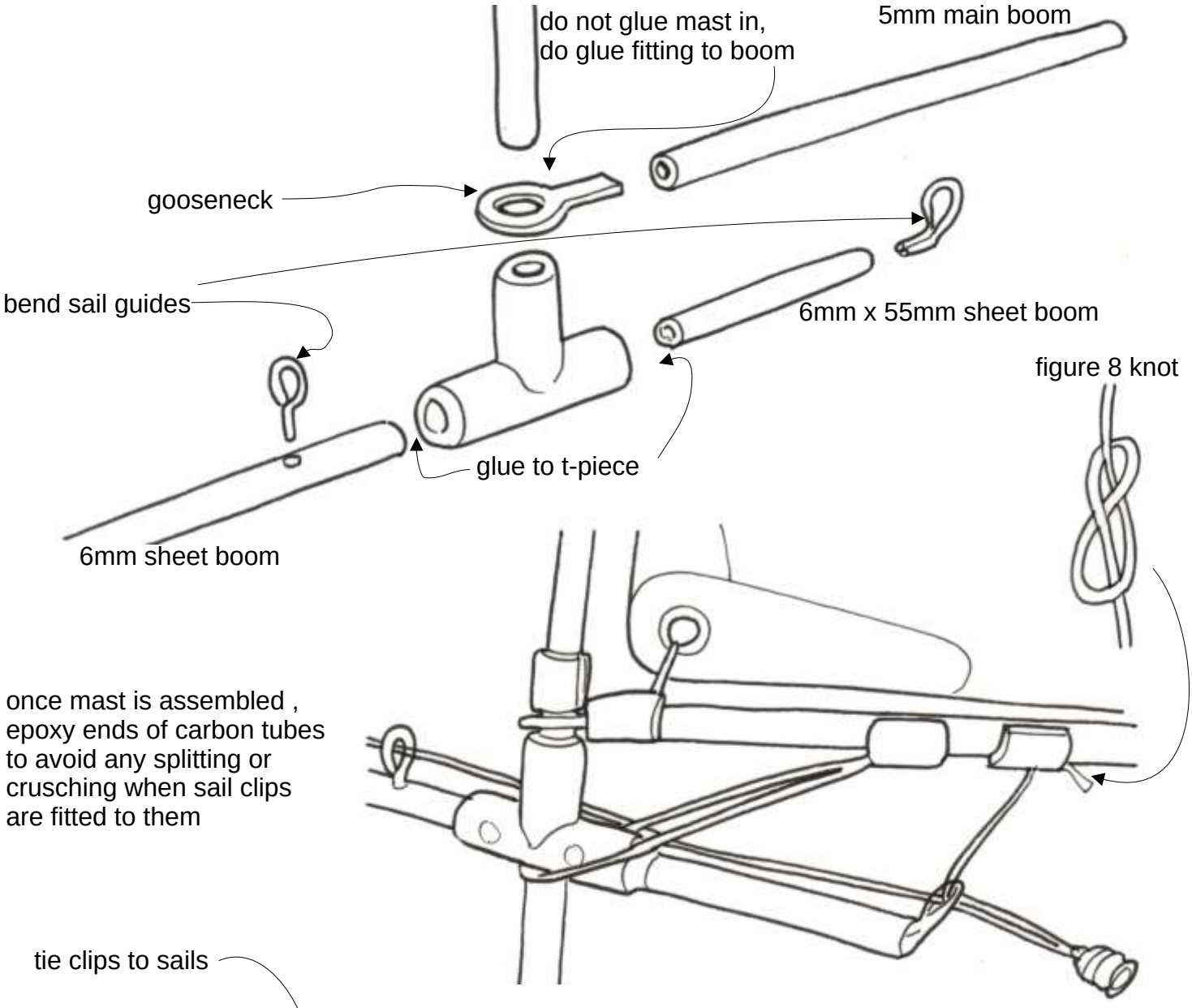
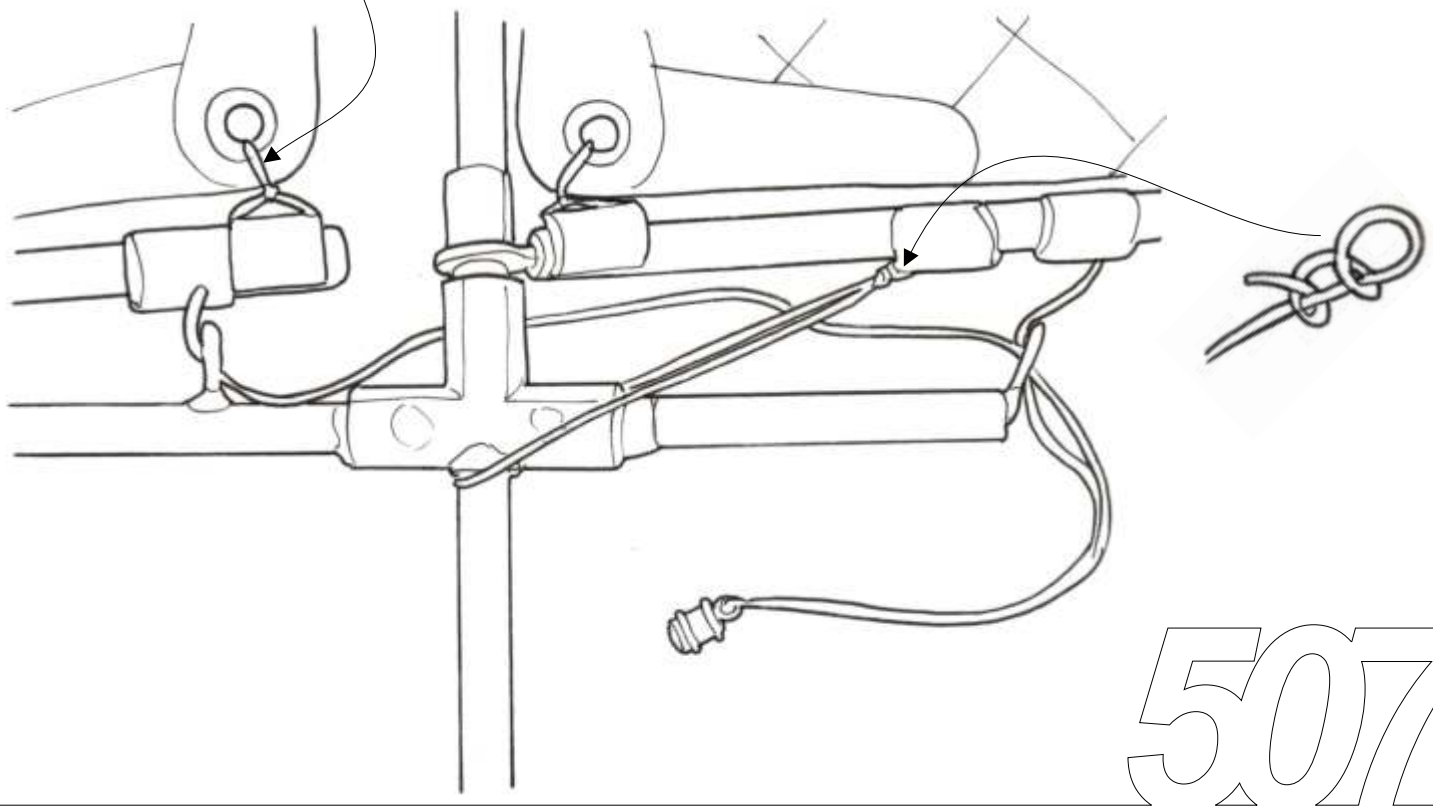
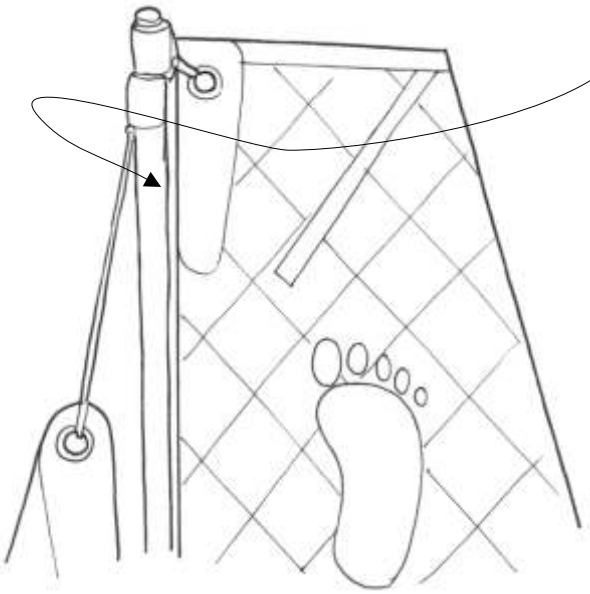


figure 8 knot

once mast is assembled , epoxy ends of carbon tubes to avoid any splitting or crusching when sail clips are fitted to them

tie clips to sails

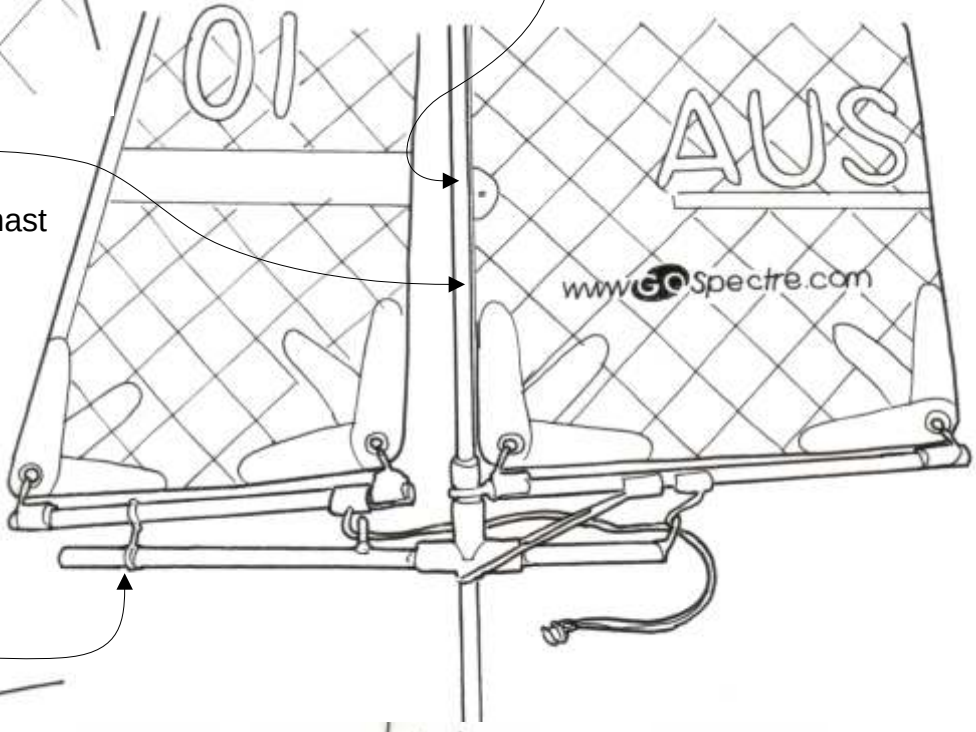




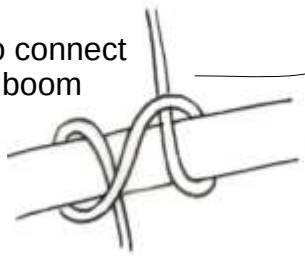
5mm top mast

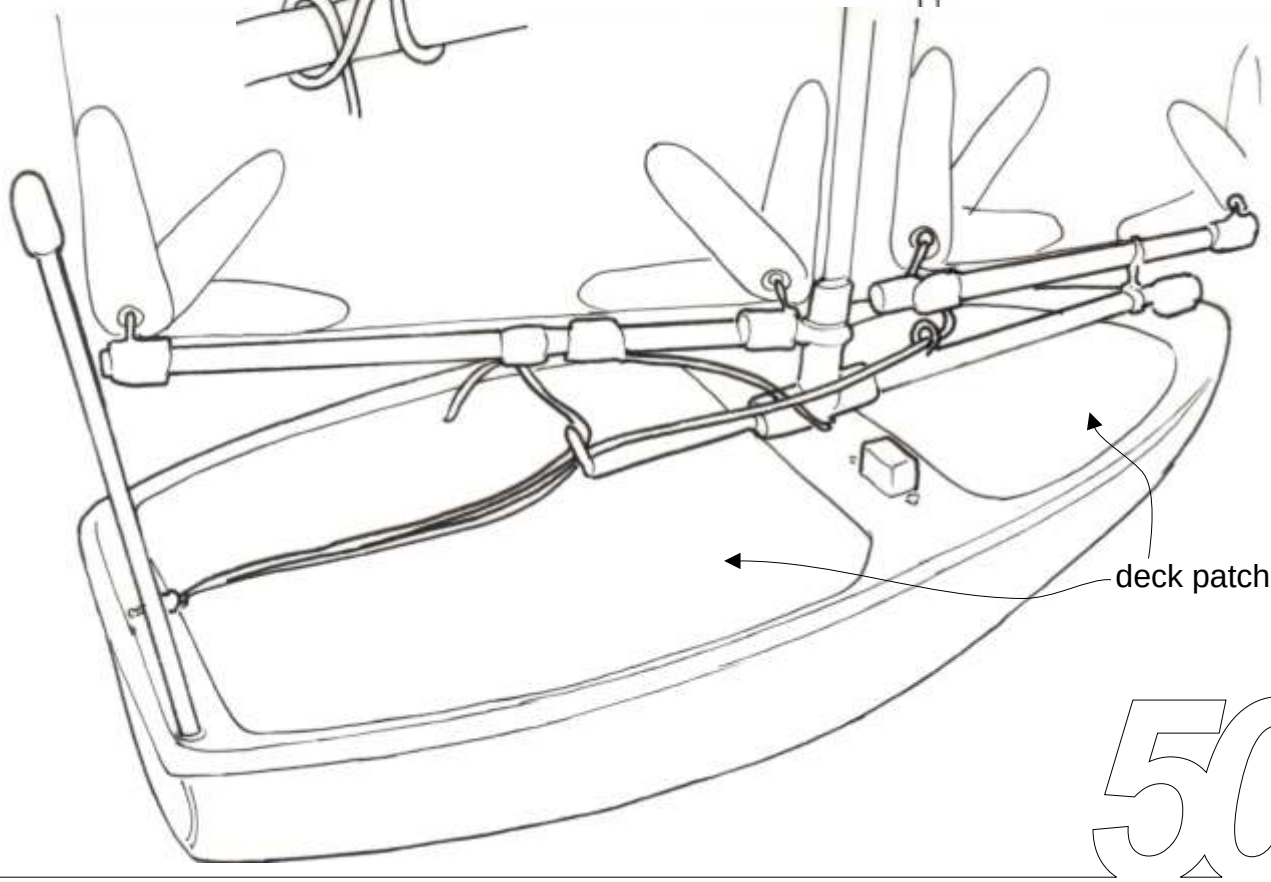
tie mainsail to mast
with a reef knot

6mm bottom mast
note , sand top mast to fit bottom mast
do not force as it will split.
can glue mast together or a band
of tape on top mast to stop mast
sliding into bottom mast.



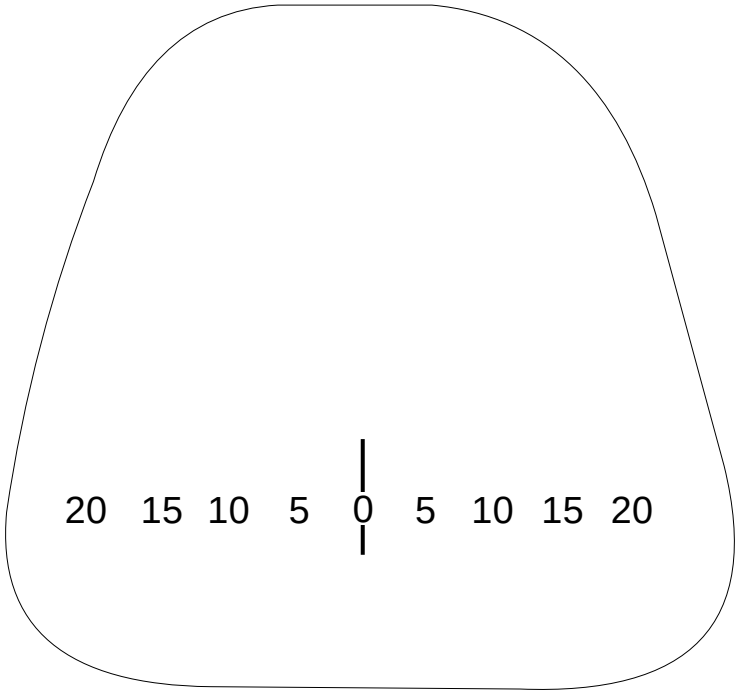
tie a clove hitch to connect
jib boom to sheet boom

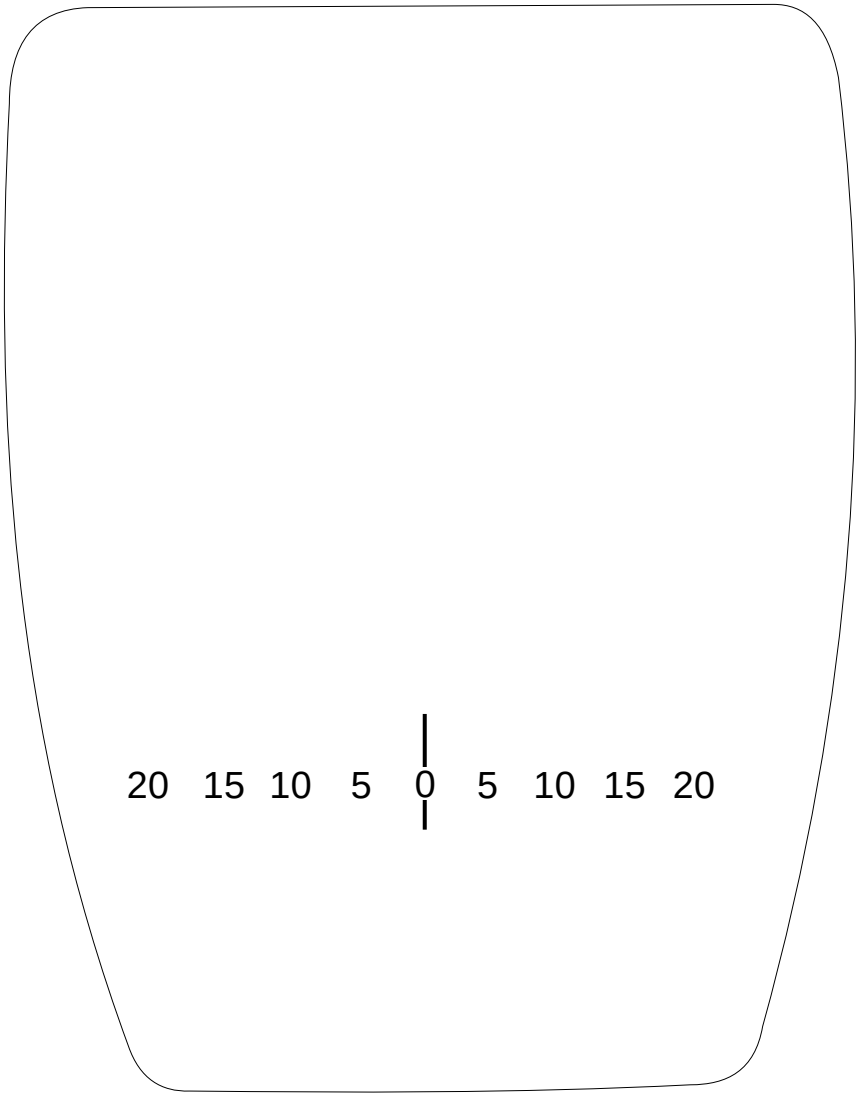




deck patches fitted

deck patch templates





sail tuning.
with a large mainsail the 507 requires more jib than may sometimes seem optimal.
with the mainsail at 10 degrees
the jib may be at 5-7 degrees as a starting point for tuning.
boom vang loose enough so as to allow boom to move freely.
this set up allows the jib to goose-wing down wind readily.
fill in your own settings sheet below
in various winds, write down the angles sails are on and details!

wind	jib	main

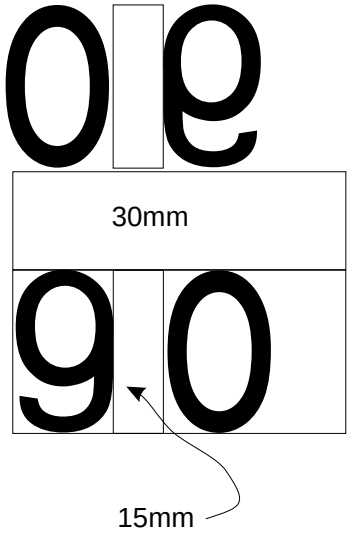
Main sail numbers!

1234

567

890

number spacing!



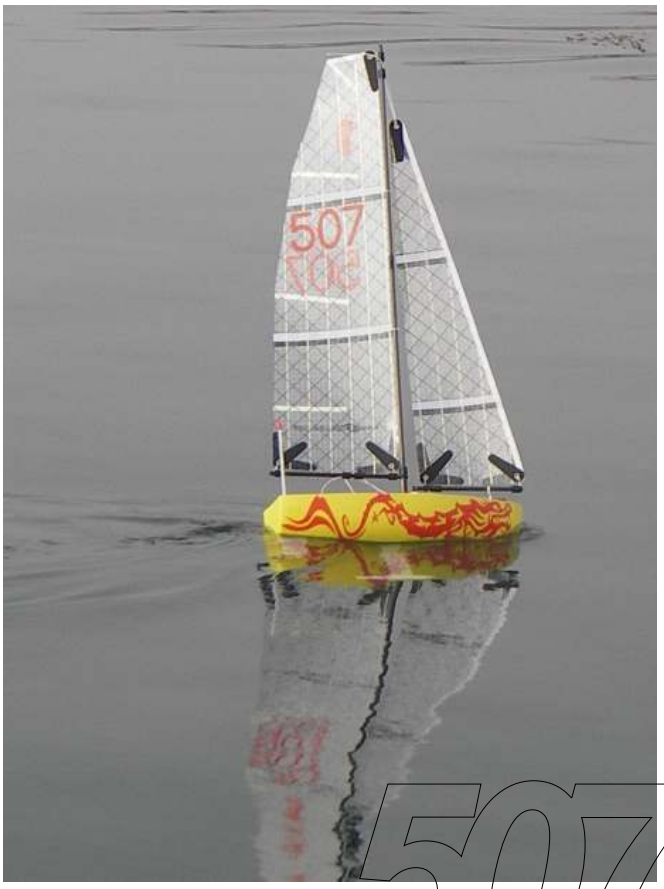
the easiest way to apply numbers to your sails is place this template behind the sails, use a piece of tape on the sail as a base line and trace onto the sail with a permanent marker!!


507
AUS
507
www.GOSpectre.com
507
507


10
01
AUS
GO


GO


507


507