

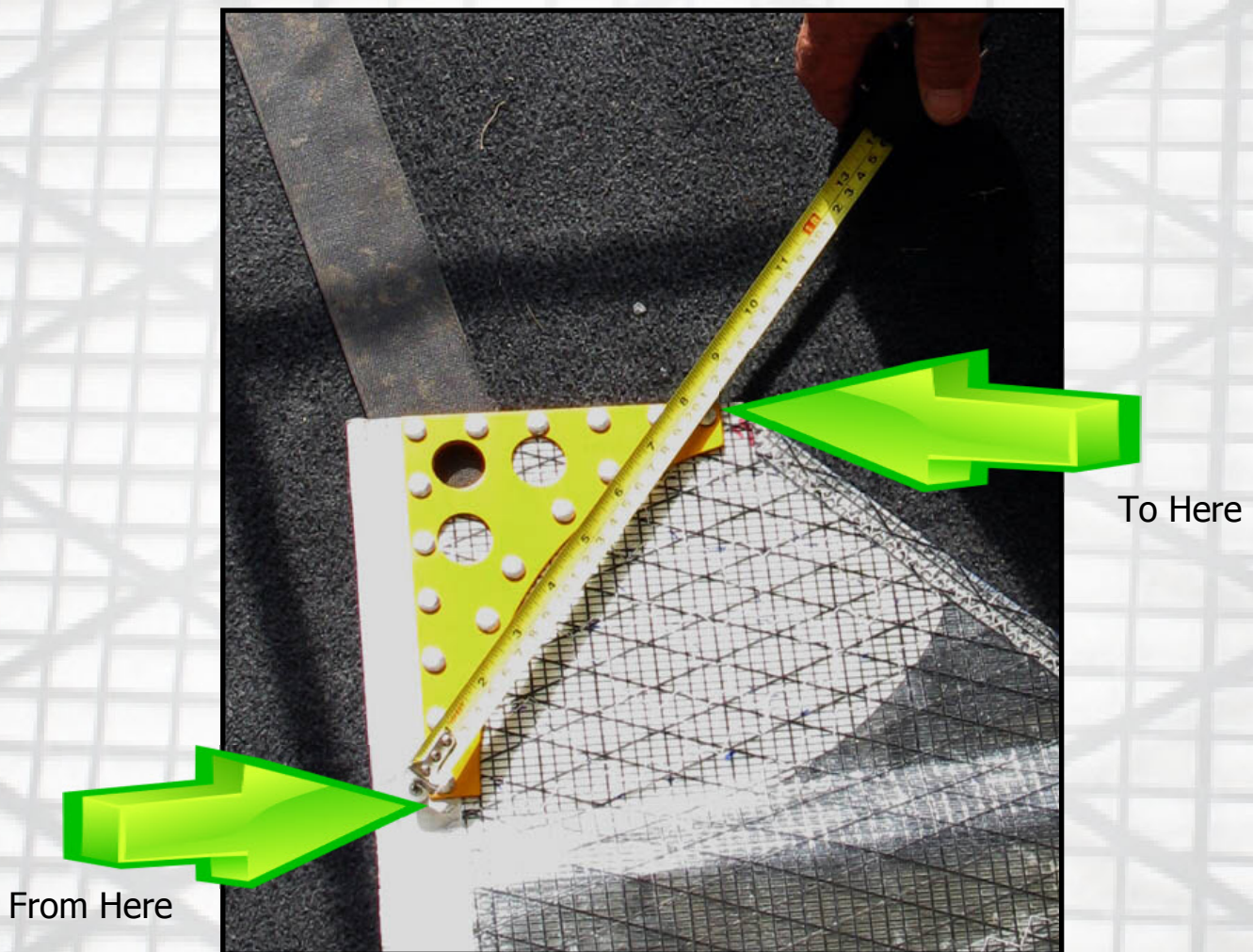
# THE GUIDE TO MEASURING A PHANTOM SAIL

This guide should read in conjunction with the official Sail Measurement Form that can be downloaded from the Phantom Class Website at [www.phantomclass.org.uk](http://www.phantomclass.org.uk).

The guide will be used to clarify all of the measurement requirements on the form. Any figures quoted on this guide are taken from the official form but in the event of any disparity then those on the form should be used.

## **Headboard**

The measurement should be no more than 220mm across the board as follows -

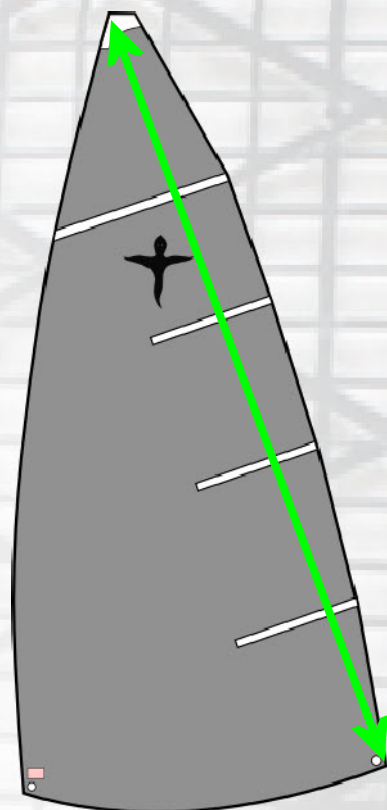


Note that it is at the extremes of the headboard, in this instance right at the corners.

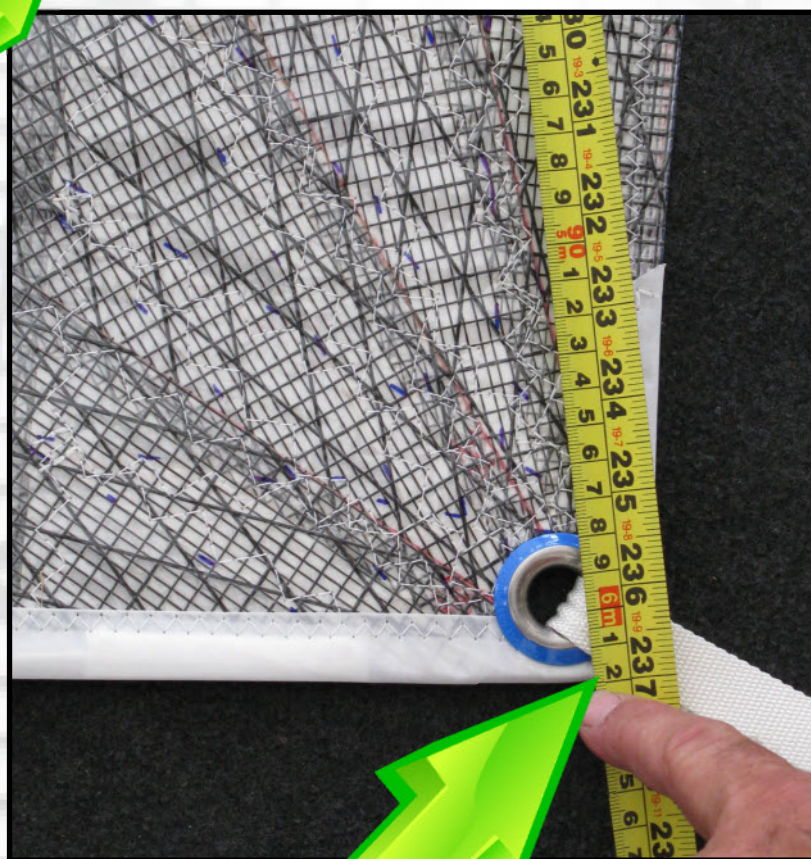


## **Straight Leach Measurement**

This is the straight line from the top front corner of the sail to the bottom aft corner. The sail should be pulled flat so that there are no creases to distort the measurement. This does not include the roach of the sail. It shall be 6220mm max.



From Here



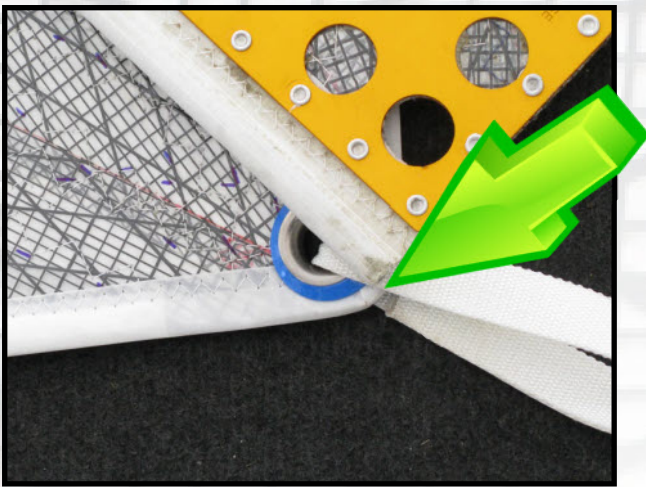
To Here

Note that the measurement is to the clew not the cringle

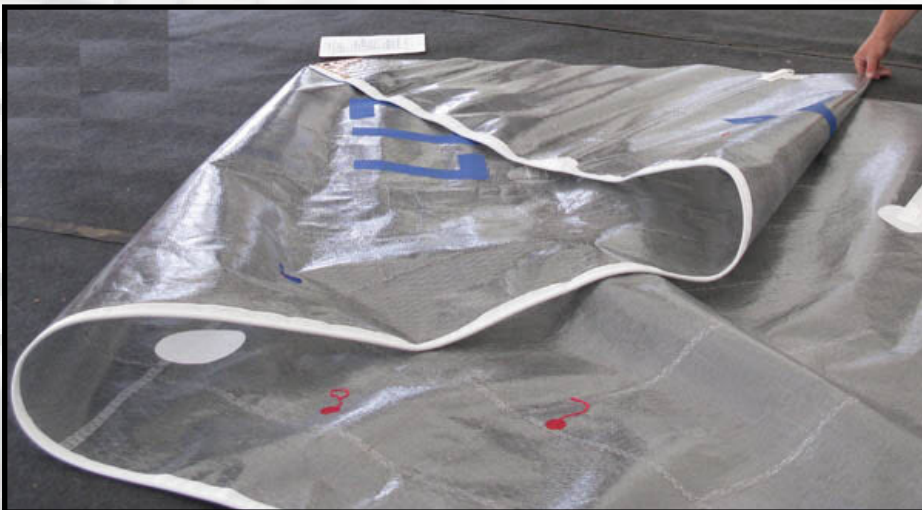
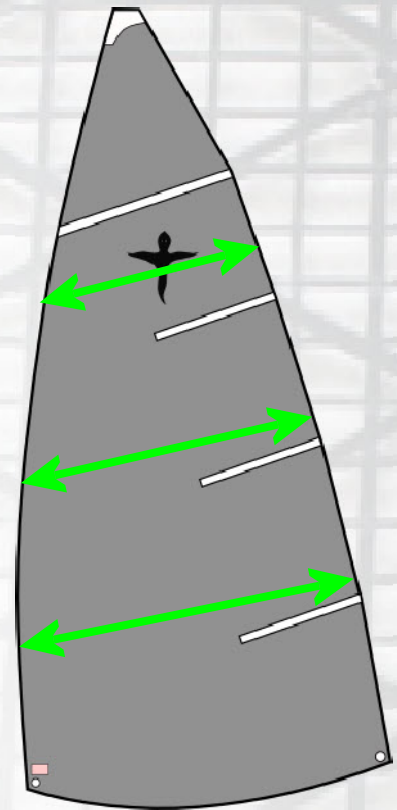


## **Width of Sail at 1/4, 1/2 Height & 3/4 Height Measurements**

To carry out the width of sail measurements you need to mark the 1/4, 1/2 and 3/4 height measurements on the leach & the luff of the sail. The sail should be pulled flat so that there are no creases to distort the measurement. Firstly mark the leach -

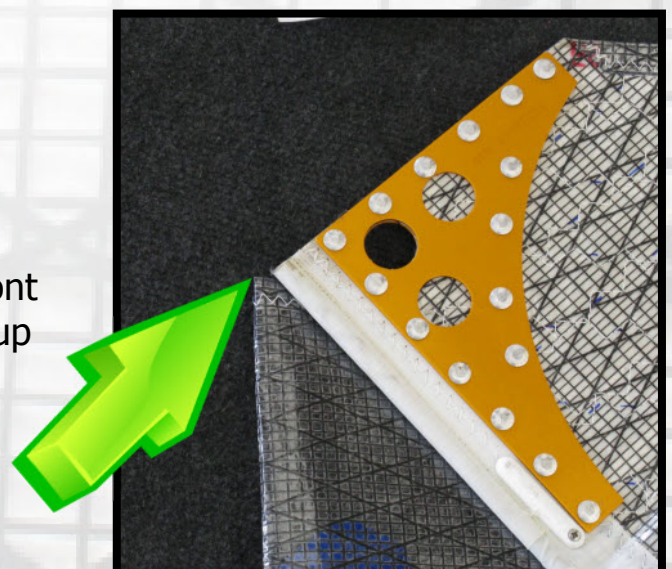


Firstly fold the headboard down to the clew not the cringle



Then fold back the head of the sail to the 1/2 way point

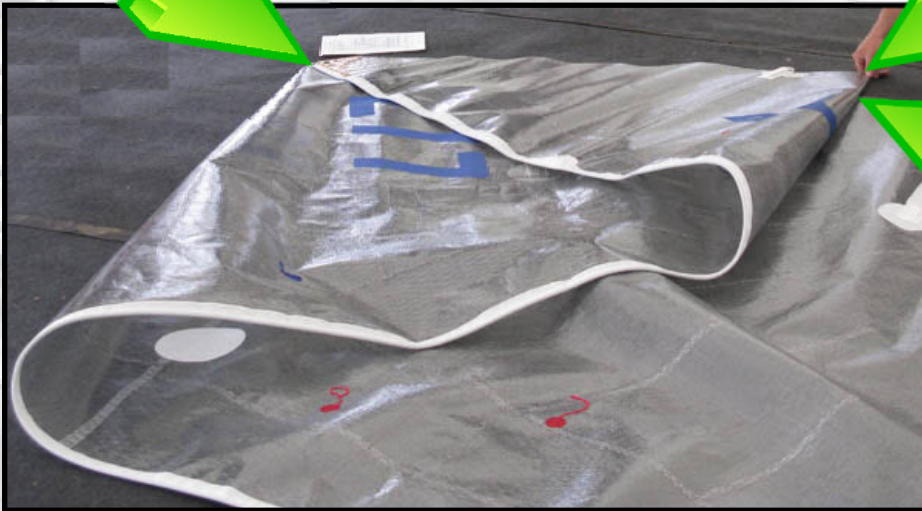
Make sure that the front of the bolt rope lines up with the fold at the 1/2 way point





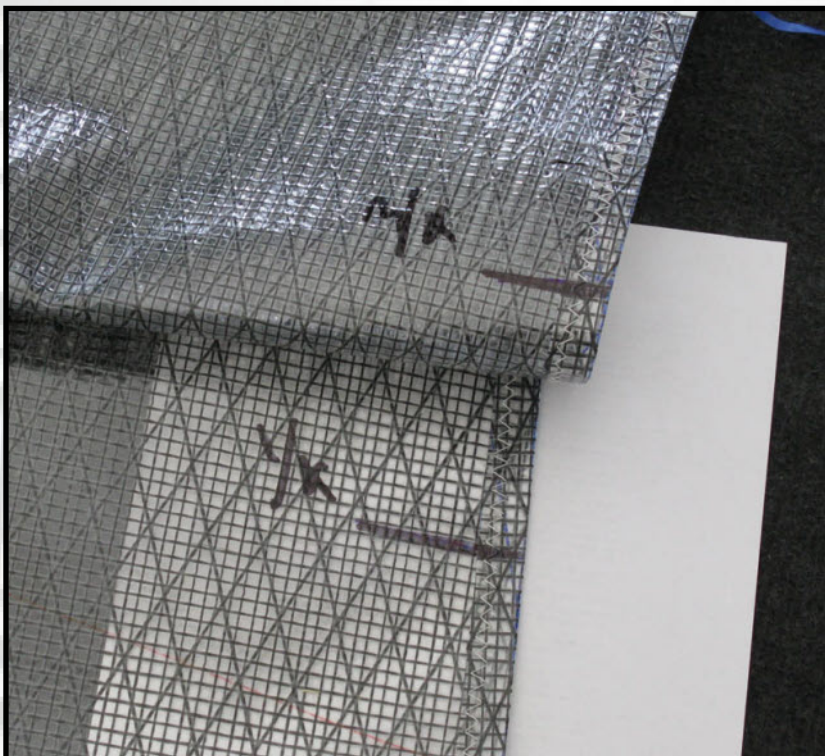
Mark the  $\frac{1}{2}$  height here  
on the inside of the fold

Mark the  $\frac{3}{4}$   
height here on  
the outside of  
the fold



Mark the  $\frac{1}{4}$   
height here on the top  
side of the sail on the  
ground where the  $\frac{3}{4}$   
height fold intersects  
with the leach

By marking the sail as suggested keeps all of the  $\frac{1}{4}$  marks  
on the same side of the sail to enable easy measuring



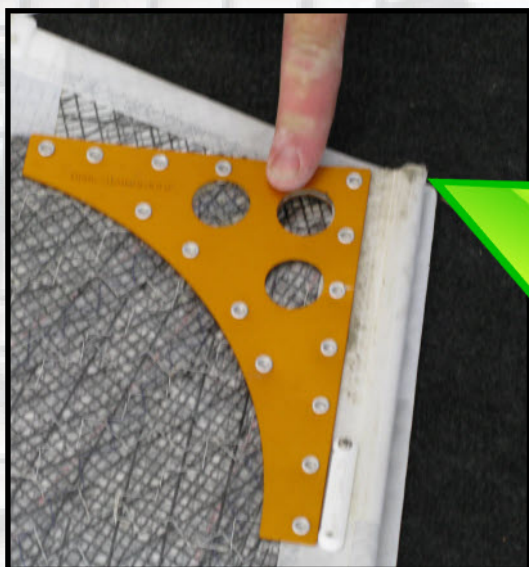
This should give you  
marks on the sail like  
those shown on the left  
- you do not need to  
mark the numbers of  
course



## **Width of Sail at $\frac{1}{4}$ , $\frac{1}{2}$ Height & $\frac{3}{4}$ Height Measurements**

### **Continued....**

Next mark out the measurements on the luff of the sail in a similar manner to the leach

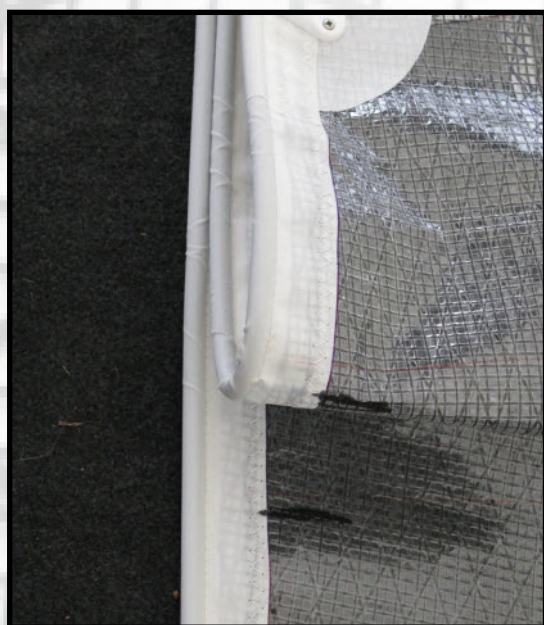


Fold the luff down so that the top of the bolt rope meets the front of the bolt rope at the tack

Mark the  $\frac{1}{2}$  height here on the inside of the fold

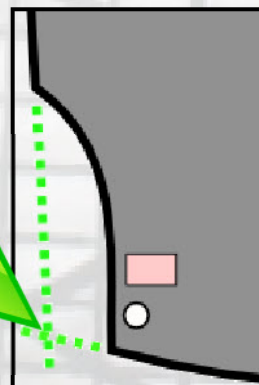
Mark the  $\frac{3}{4}$  height here on the outside of the fold

Mark the  $\frac{1}{4}$  height here on the top side of the sail on the ground where the  $\frac{3}{4}$  height fold intersects with the luff bolt rope



This should give you marks on the sail like those shown on the left

Should the sail have a cut away tack then measurements should be taken from the intersect point as is if there was sail material there





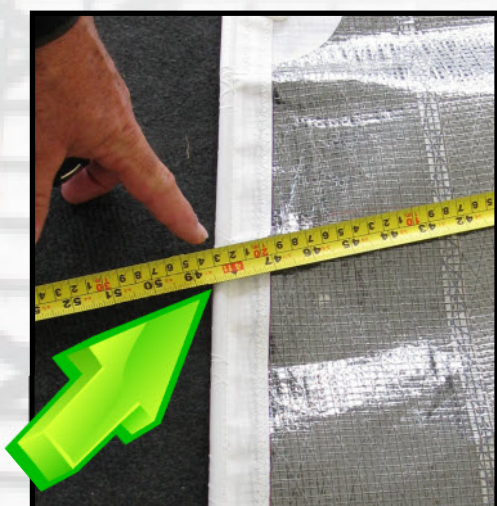


Measure the  $\frac{1}{4}$ ,  $\frac{1}{2}$  &  $\frac{3}{4}$  distances at the marks previously made as follows -

$\frac{3}{4}$  - 1235mm max

$\frac{1}{2}$  - 2025mm max

$\frac{1}{4}$  - 2585mm max

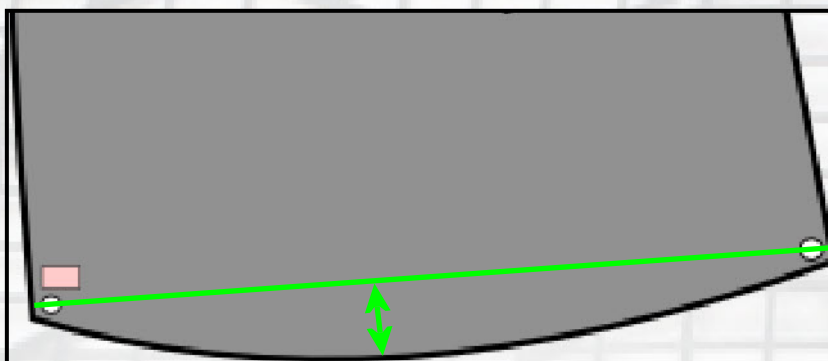


The measurement should be taken from the front of the bolt rope (i.e.. include the it in the measurement) to the back of the leach



## **The Droop of the Foot of the Sail**

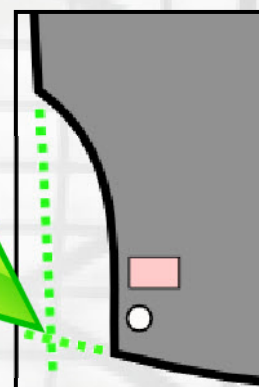
This measurement requires the use of two tape measures, one to form a straight edge across the foot of the sail and one to measure the drop to the bottom of the sail. This dimension shall not exceed 220mm



The underside of the upper tape should join the centrelines of the two cringles at the tack and the clew. The sail should be laid flat.



Should the sail have a cut away tack then measurements should be taken from the intersect point as is if there was sail material there

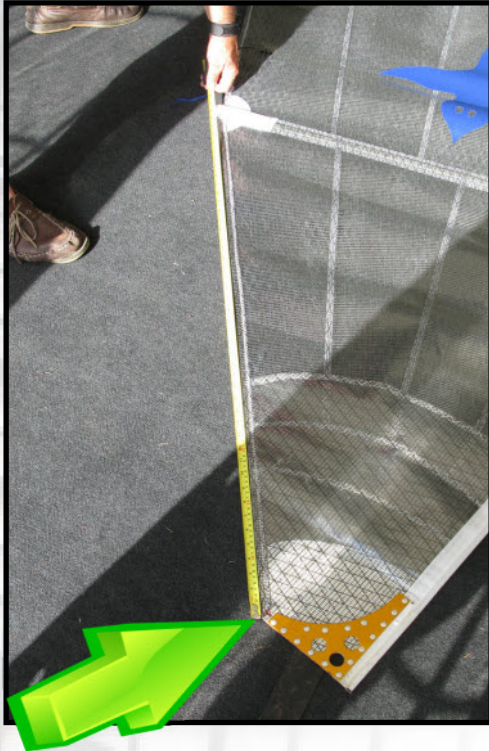


The droop is the distance from the underside of the upper tape and the bottom of the sail at the widest point



## **Batten Spacing**

There will be 4 battens on a Phantom sail which equally divide the leach of the sail with a tolerance of +/- 50mm on each batten - see below for a further explanation of this measurement and how to determine it.



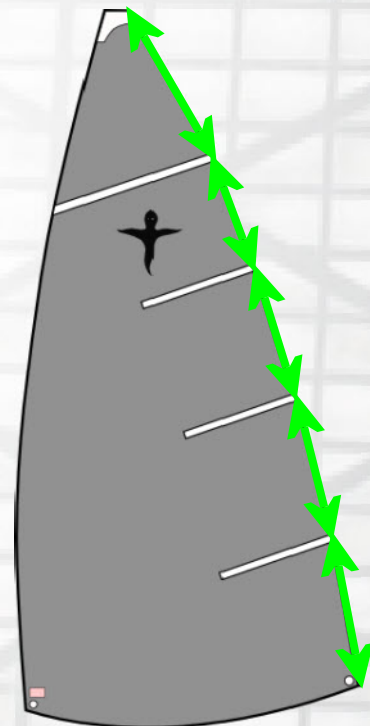
Measure from  
the back of the headboard



Each batten spacing should be  
measured to the centre of the  
batten pocket



Measure between  
all battens and  
also measure the  
the bottom spacing  
to the tip of the  
clew, not the  
cringle

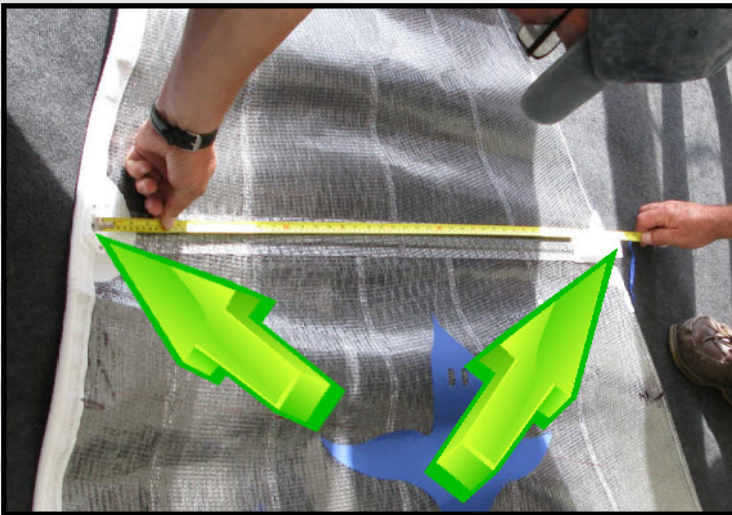
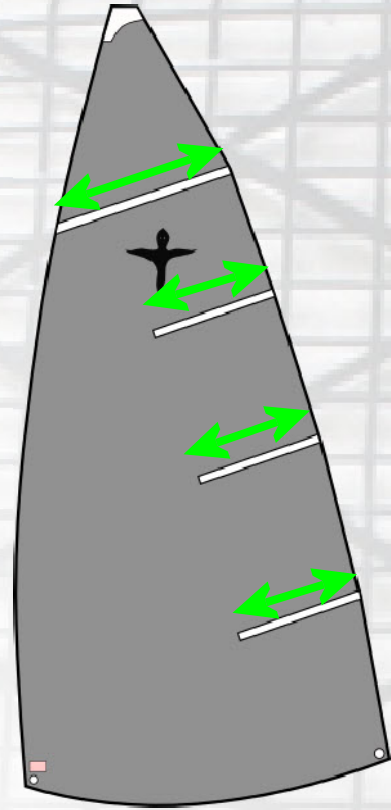


Make a note of each of the measurements and write down on the form the worst case spacing, i.e.. The largest spacing minus the smallest spacing. The maximum spacing therefore is 100mm. The actual figure that you measure should be written on the form.



## **Batten Lengths**

The 4 battens must be measured for length.



Measure the top batten pocket over its length. This is where the batten pocket starts just behind the bolt rope (do not include the bolt rope) to the end at the leach. This measurement should not exceed 1130mm

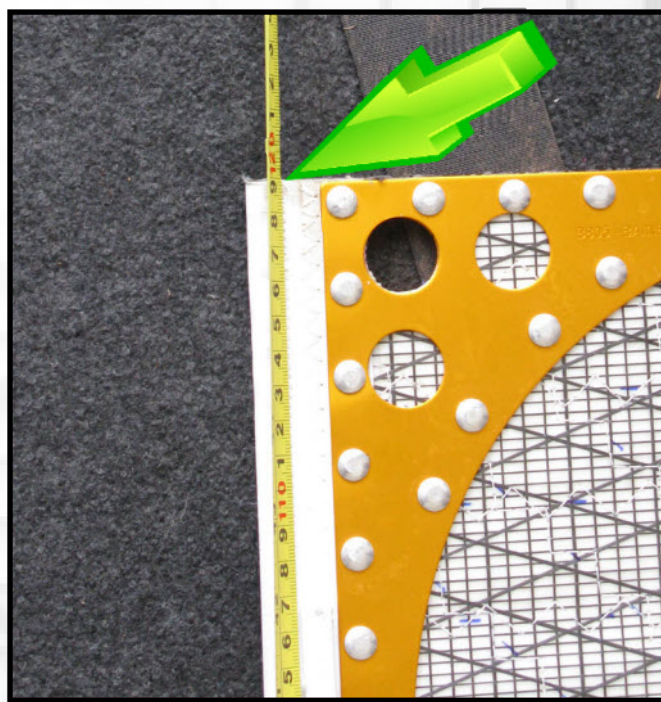
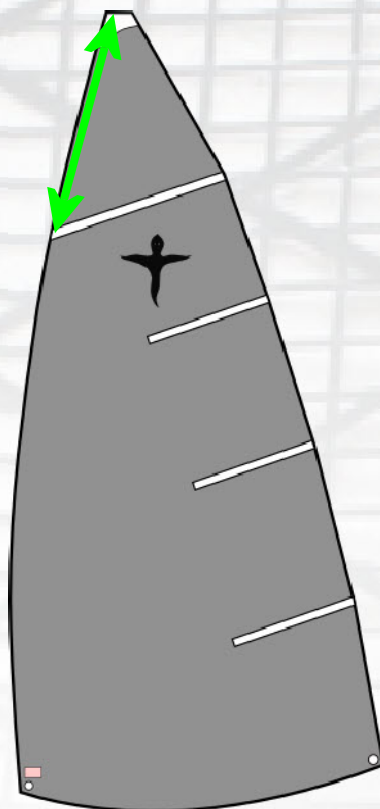
Measure the three other battens. This is where the batten starts in the pocket (not including the length of the pocket) to the end at the leach. This measurement should not exceed 915mm for each of the battens





## **Top Batten Intersect**

This is where the batten intersects the back of the bolt rope from the top of the sail



The top batten should be measured from the top of the luff at the back of the bolt rope (at the headboard) to a point on the back of the bolt rope where the centre line of the batten intersects with the bolt rope. You may need to extend the line of the batten as shown to get this point. The sail should be pulled flat to take out any creases when measuring. This measurement should not exceed 1370mm.



## **Sail Insignia**

The Phantom sail insignia should match that on the form (including eyes) and be positioned on both sides of the sail. It's colour should contrast strongly with the colour of the sail. It should closely measure to 500mm high x 481mm wide.



If the insignia does not comply then there is no need to prevent the owner still using the sail but do not sign the form or the sail and request that it is rectified and returned to you for signature.

## **Other Sail Information**

Also note on the form the sail manufacturer, the sail number and any identifying details such as a serial number or cut of sail, i.e.. North mark their sails with the cut such as CC16+

## **Final Notes**

Once the form is complete sign it and return it to the owner. The owner of the sail must send the completed and signed form along with their payment (currently £5) to Roger Brown. It is not the measurer's responsibility to send the form & money to Roger. Out of courtesy you could contact Roger to inform him that it is coming.

Finally sign the sail in the area of the tack with a permanent marker. The best place to sign to ensure longevity is on the sail makers emblem if there is suitable space. Certainly on P&B sails there is enough space to do this.