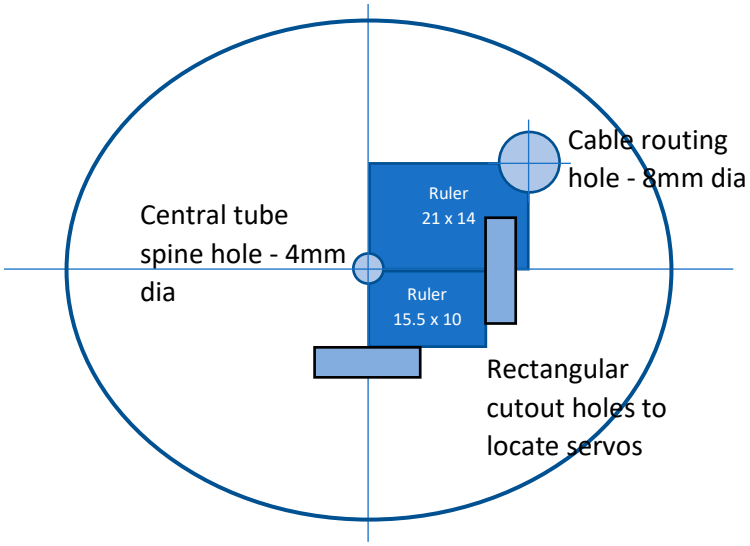
"SnakeBody - EllipseRibPatterns

Designs are on pages 2 to 6, to print, then paste on plyword to cut and drill.
This page is for change documentation, measurement details and MS Word drawing sub groups.

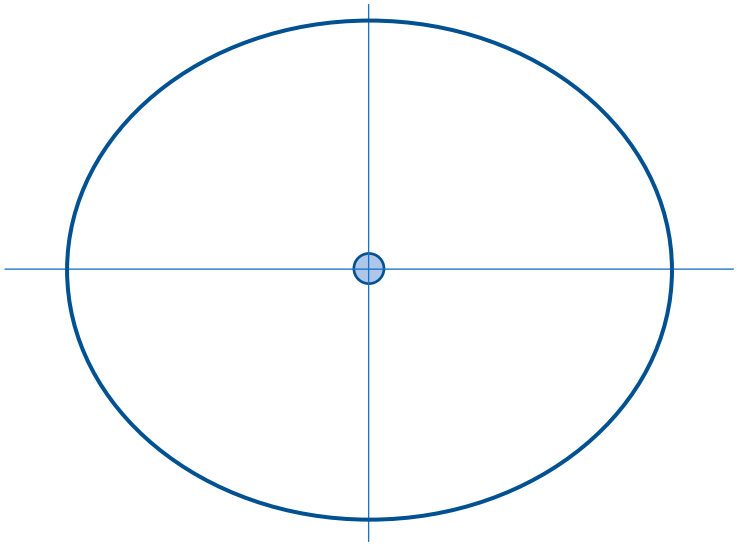
Change documentation

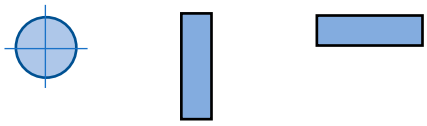
Version	Date	Who	Notes
v20170103	03 Jan 2017	JPC	1. Change rib size from 80mm x 64mm to 80mm x 66mm to make sure of fitting MG90 servos inside the rib edge. 2. Change cable holes from 6mm dia (1/4 inch) to 8mm dia (5/16 inch) 3. Move cable holes further from the centre - hole centre now at 21mm horizontal and 14mm vertical.

Measurement Details



MS Word Drawing Elements for reuse including rib and hole subgroups.





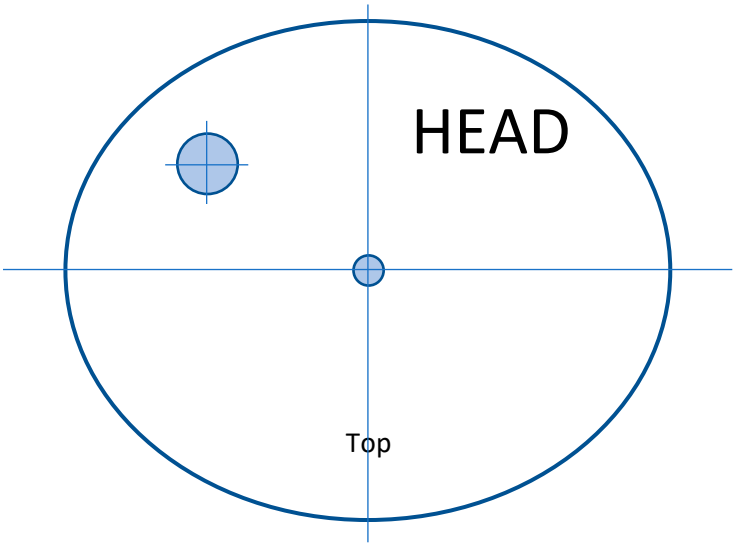
Top

Print.
Rib design size is 80mm x 66mm - check that on printing.
Cut-out the "Head" and "Ribs".
Glue to 3mm (1/8 inch) craft plywood with PVA then cut out.
See photos and notes at the end of this document.
TODO - upgrade to 3D printing for these.

Ruler
21 x 14

Ruler
15.5 x 10

Ruler
8 x 8



Head piece or "neck"
Holds the head items.

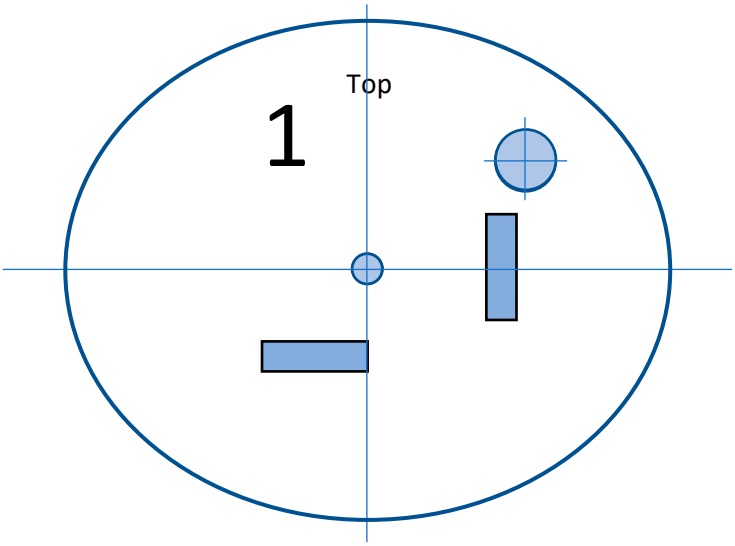
Under discussion:
making this smaller than the "Ribs"

Rib01

Note that Ribs all have a 4mm hole (5/32 inch) drilled in the centre.

The offset hole is 6mm (1/4 inch) for running cables through.

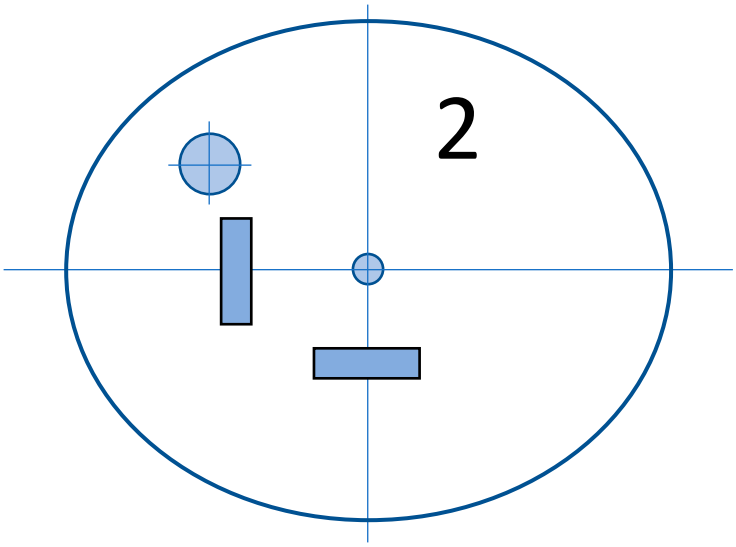
Compare with Rib02 below to see how we aim to "balance" the weights of the servos by staggering their positions rib by rib.



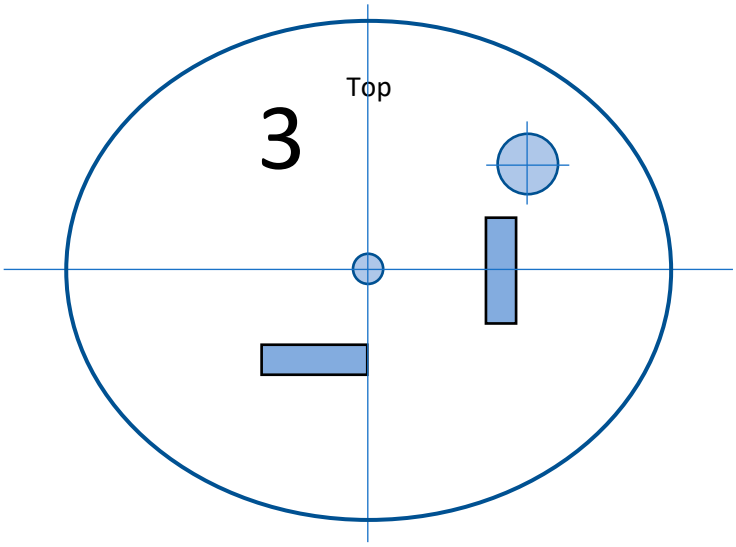
Rib02

Ruler
21 x 14

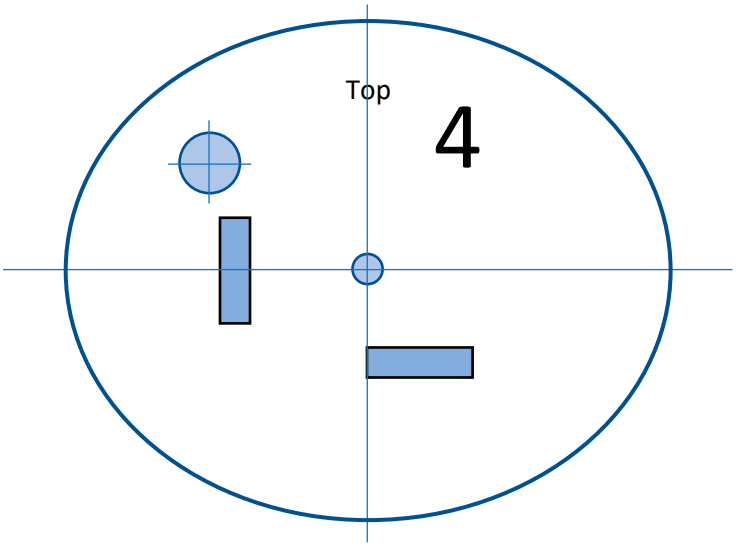
Ruler
15.5 x 10



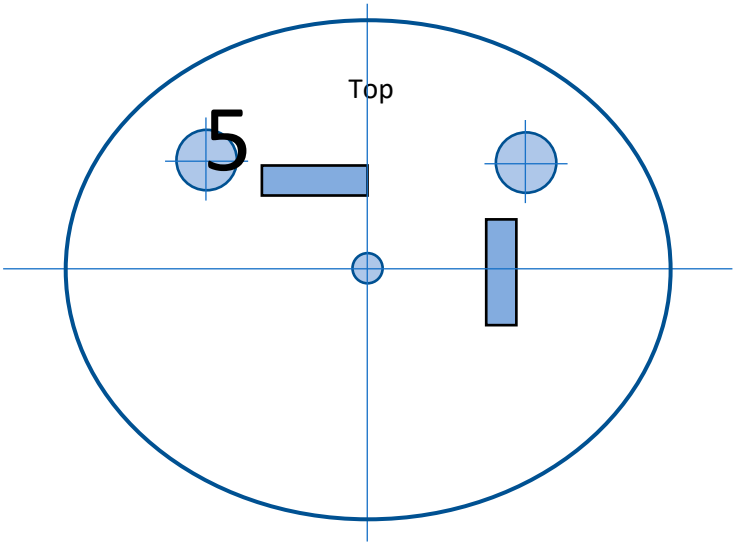
Rib03



Rib04



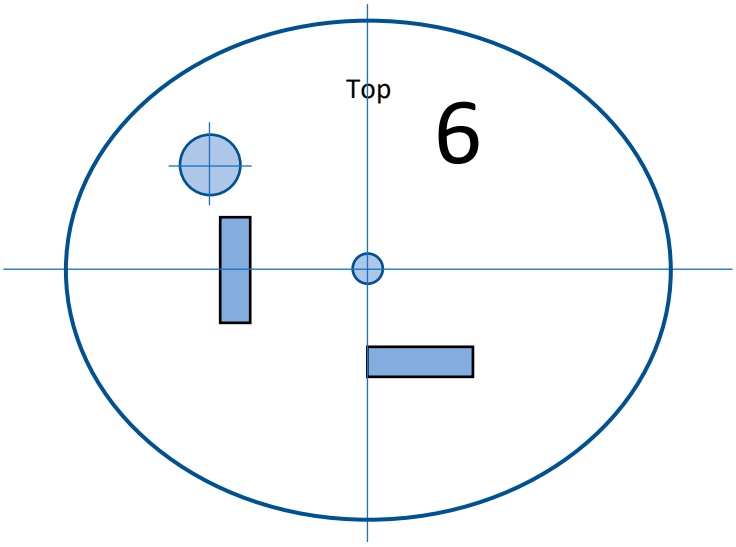
Rib05 is a Battery Holder.
The horizontal movement servo mounts in the top of the rib to make space at the bottom for the battery.



Ruler
15.5 x 10

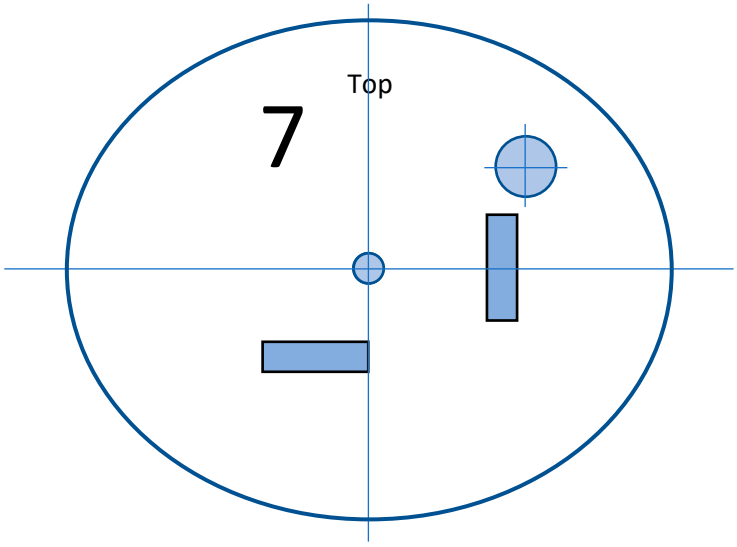
Ruler
21 x 14

Rib06

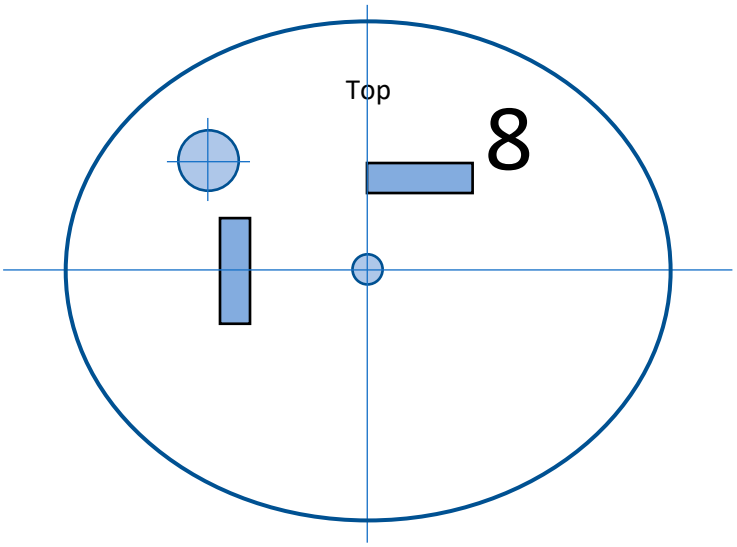


Rib07

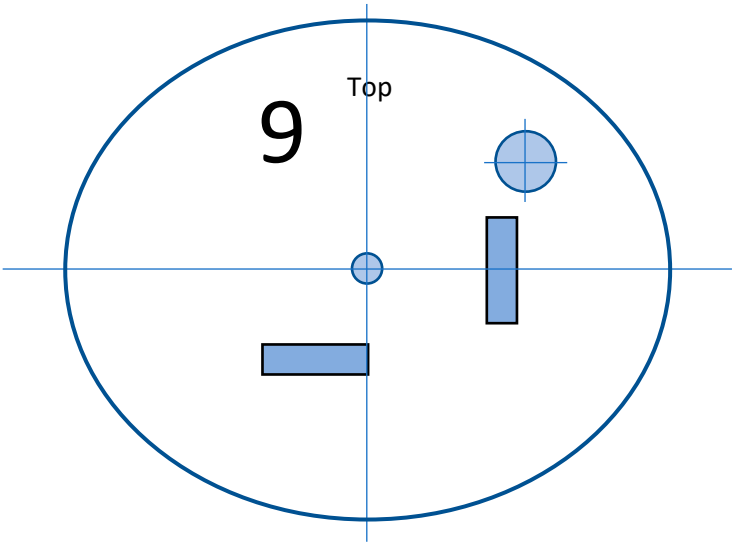
Ruler
21 x 14



Rib08 is the second Battery Holder.
The horizontal movement servo
mounts in the top of the rib
to make space at the bottom
for the battery.

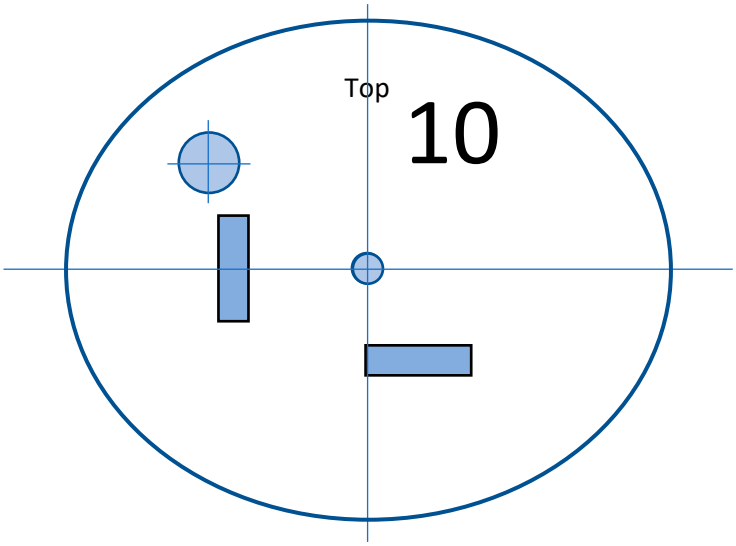


Rib09



Rib10

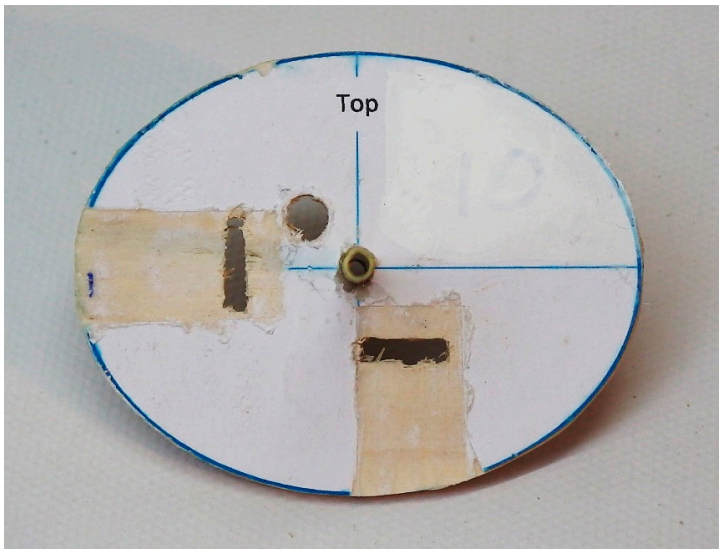
Ruler
21 x 14

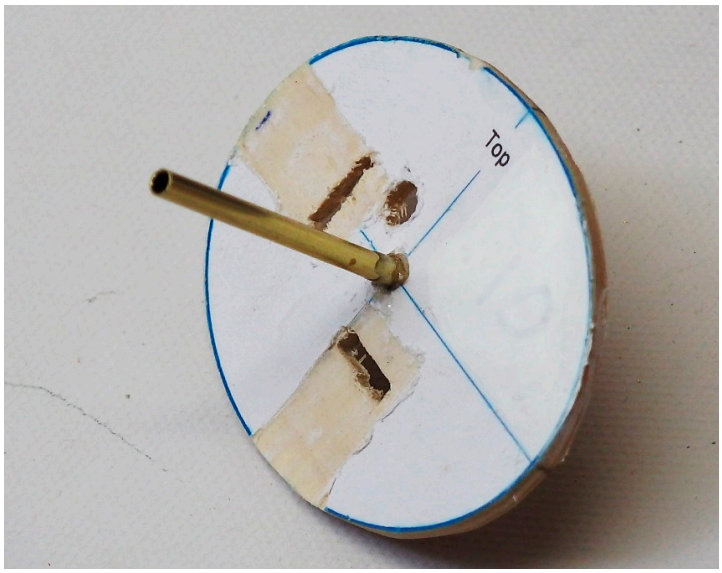


Notes.
Cutting out worked best for me with my basic home workshop resources by:

1. Rough cutting out with a power jigsaw
2. Working around the edge with a sanding disc attachment for my electric drill
3. Taking the pieces to my neighbour to borrow the use of his drill press
   to drill the holes accurately - thanks Dave!

Note - Scraping away the paper design from the plywood so the servos stick better.





SG90 servos shown from my first build. I am now recommending MG90 servos.