

Odyssey HM Build instructions

Jono Wells Designs
Practicalrc.com



Introducing the new Odyssey HM (hollow Moulded) 60-inch glider.

The Odyssey was designed by Ron Broughton for 60" slope pylon racing in the early 2000's, the construction was EPP with golf shaft spars, covered with bullet tape for torsional strength and Solartex.

Odyssey HM airfoils are custom designed to emulate the original foils with improved efficiency. The energy retention of the Odyssey HM is amazing with its nice clean airfoils, but also harnesses the same characteristics as the EPP version.

Model info: -

Wing area - 475.8 sq inches (30.7 dm²).

Wingspan - 60 inches (1520mm).

Maximum chord - 13.5 inches (343mm).

Removable fin - Secured by two cap head screws or you can tape it on.

Maximum servo thickness 12mm.

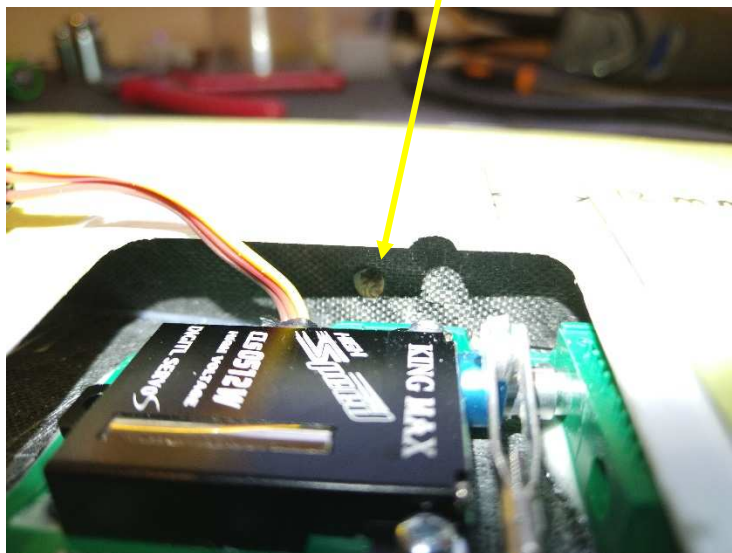
Servo Pockets - 50mm x 42mm.

Weight - from 1200

Preinstalled ballast tube that accepts 10 x 14.75mm diameter, 35mm long slugs.

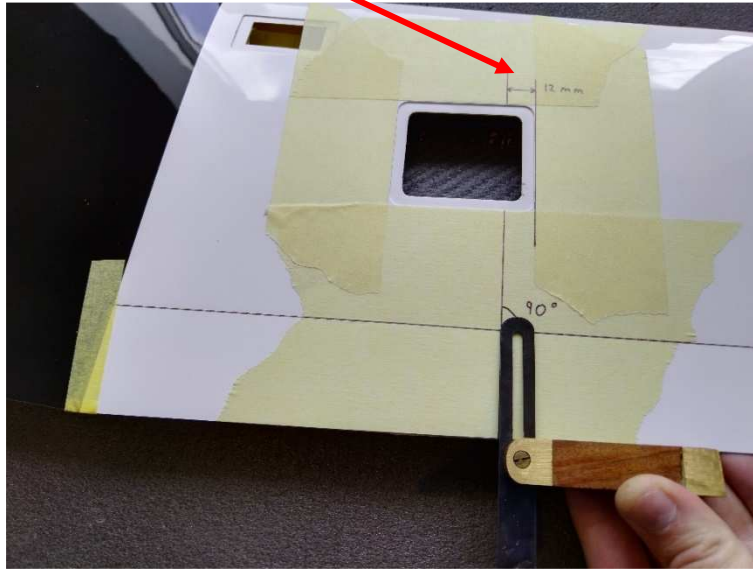
Installing the servo cable – There's a hole through the spar located slightly off the centre of the servo pocket. I used a length of fishing line 1.3mm in diameter 560mm long or approximately 22 inches. Use the natural bend in the line so it faces the direction of the nose of the model and feed one end through the hole. Use a piece of tape to secure the fishing line to your servo cable and PUSH it through. Note* DO NOT pull the fishing line if the cable snags up as it is only used to guide the servo cable, gently push the servo cable and twist if the separate wires unravel, pull the slack servo wire through with the fishing line.

The hole in the spar for the servo cable.

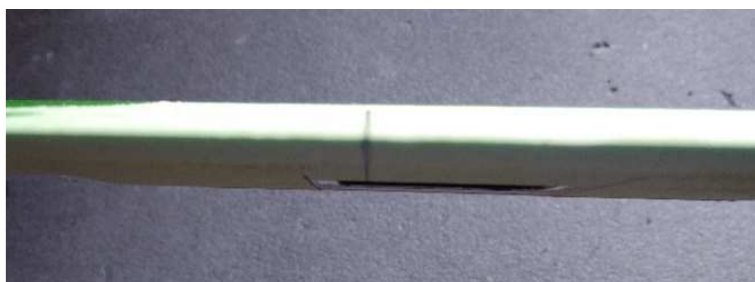
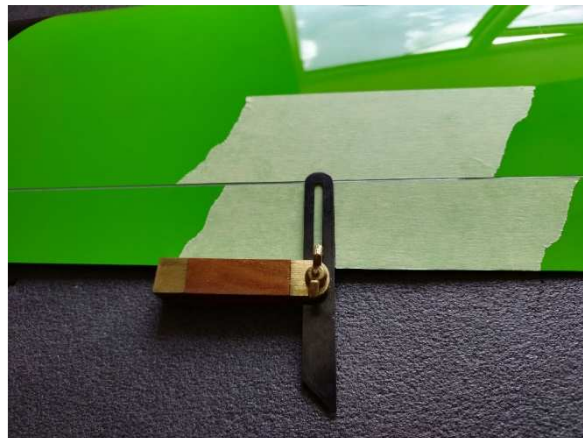


Tutorial on my Facebook Group
'Jono Wells Designs'

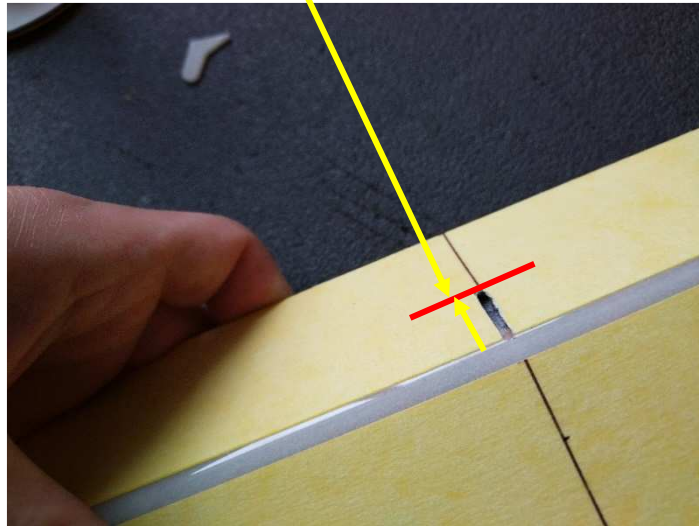
Horns - From the servo pocket measure 12mm and draw a line to the trailing edge, a square would be the best tool for the job here. I used a sliding bevel to get the angle of the marked line in reference to the wing trailing edge, so I could transfer to the top wing. **Note*** In the picture below, the horn goes on the left of this line.



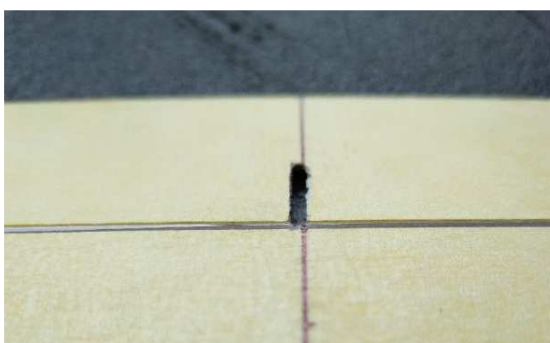
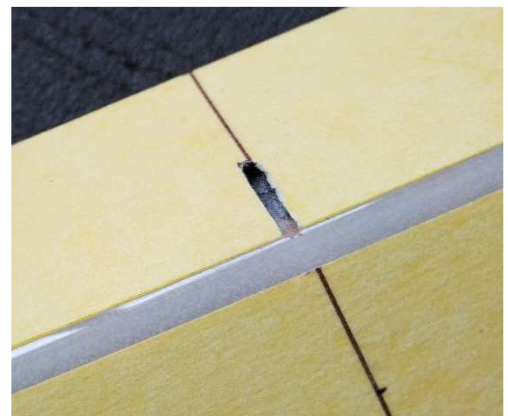
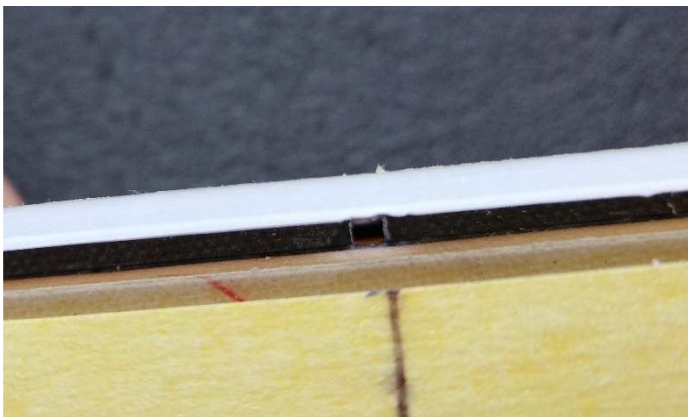
Transfer to the top surface: -



(The wing tip is on the right) On the lefthand side of this line measure 14mm from the wiper, mark the horns width and cut with a slot mill or similar.

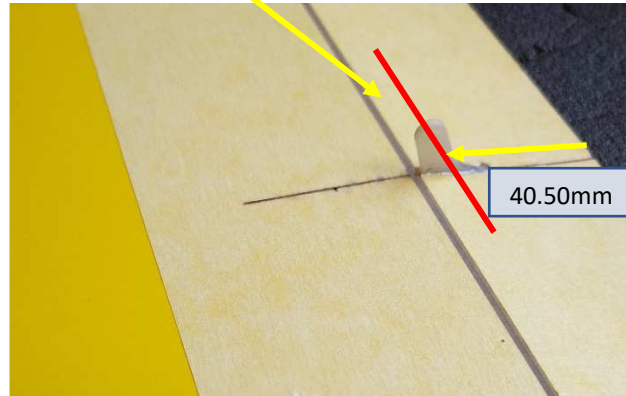


Make sure you remove the elevon stiffener (balsa with carbon shear web) and make the bottom of the slot as flat as possible. The G10 horns have a slightly curved bottom, you can file it to allow the horn to sit flat, don't worry the glue mix will fill any gaps.

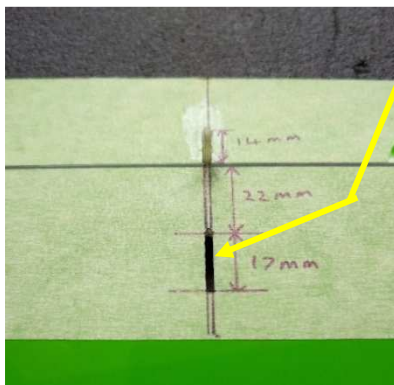


Glue the G10 horn in with 15-minute epoxy mixed with West Systems 403.

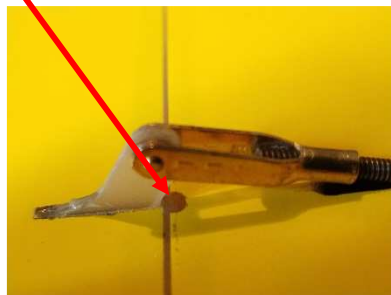
The horns hole should be 40.5mm from the control surface trailing edge.



Pushrod exit hole – From the wiper gap mark the start of the slot 22mm to the end at 39mm and make the width of the slot slightly larger than the width of your pushrod, cut through the skin with a slot mill or similar. I used both flat and round file to tidy things up.



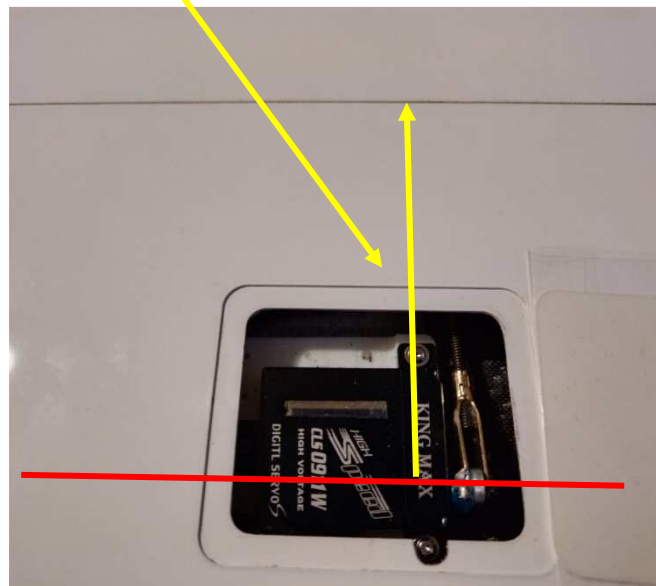
A relief must be cut into the top surface to allow full elevon up travel.



The clevis hole is placed 7mm from the servo arm centre.



With the control surface in its neutral position, the clevis pin should be 87mm from the hinge line.

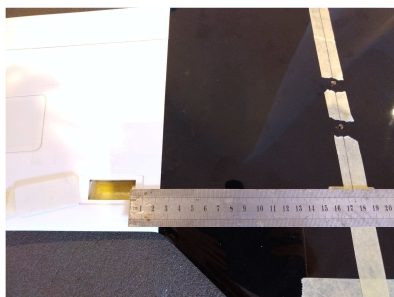


Ballast – The odyssey HM holds up to 10 x 35mm long x 14.7mm diameter ballast slugs across its span, so getting the ballast positioned central is essential. The centre of the ballast is 175mm.



Measure and mark the centre of the airframe by measuring between the elevons and halving the value and/or working from the centre of the fin screw holes.

The ballast kit contains a higher density spacer made to be cut down to size for any ballast tube length discrepancies.

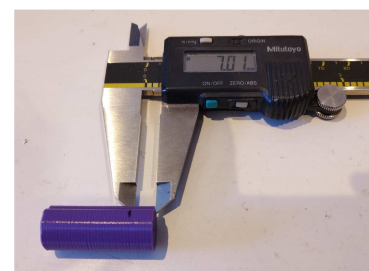
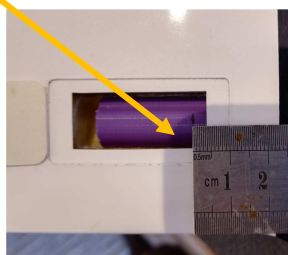
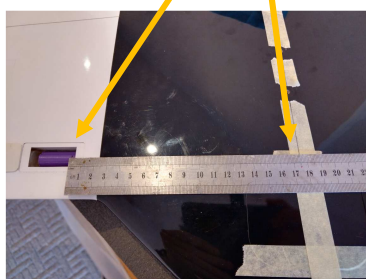


Insert all 10x ballast slugs



Cut down spacer added, and scale lined up to the centre line at 175mm and marked at the scales zero point.

A 28mm must be removed to leave a 7mm spacer.



The result is a 7mm spacer that requires leaving in the bottom of the tube –



CG – 35.5mm from the wing leading edge.



Typical nose weight requirements with a 2s 18650 Li-Ion – 180g of fine lead shot (1mm) mixed with 8g of 30-minute epoxy poured directly into the nose, with 40g of removable lead sheet for fine tuning the CG.

Setup: -

Ailerons 8.5mm Up & Down

Elevator 1.5mm Up & Down

Elevons level for launch, 0.5mm down to fly fast.

CG - 35.5mm from LE, the ballast tube is 3mm in front, but it doesn't effect the CG, it is nice at this but can be moved back ever so slightly.

You can follow my work on my Facebook group – ‘Jono Wells Designs’.

Website – www.practicalrc.com

Instagram - practicalrc_jonathan