Dingo Dual Signal Servo Mount

Assembly instructions.

Please read these instructions right through before commencing.

(There is a useful video on our website showing the assembly of a Micro 8. Many of the steps here are similar.)

Take a little care with the assembly and you will have a really robust servo mount. Remember that you can only bend the aluminium once, so make sure you have the correct orientation before bending. (I cannot stress this enough! Check and double check before you bend.) Bending can be done by hand on the edge of a work bench or on a wooden block.

Before you start make sure that all the parts are in the kit (see diagram on the back page.)

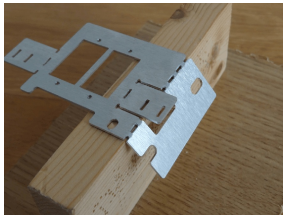
You will need a small pozi screwdriver to assemble the kit.

Check the metal parts for excess flash from the lasercutting and remove if required with a small file or modeling knife. A small amount of burr on the outer edges will not affect operation, however check that the sliders fit easily in both wings as tolerances here are quite tight and they need to move freely for reliable operation. Any pips can be easily filed away.

Determine first which way around you want to make the mount It can either be LH or RH and if you require 4 signal drives in close proximity then you need to make one each way around.

Start by folding the mounting foot of the main mount.

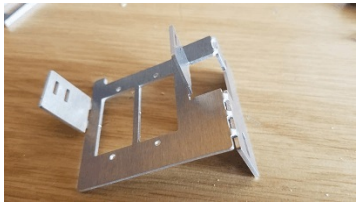
Lay the aluminium part flat on the work bench edge with the fold matrix on the edge.- I use a small piece of planed timber glued to a larger piece(See picture)



Push gently on the overhanging piece while holding the part flat on the bench. It will fold on the line. Once you have pushed this as far as it will go, pick up and gently fold by hand until at right angles.

Now reverse the part and fold the 2 “wings” for the actuator sliders.

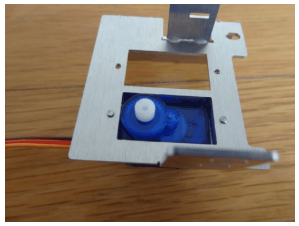
Note that at this point the wings have not folded to 90deg. This will enable the fitting of the sliders at a later stage, after which we will finalise these bends.

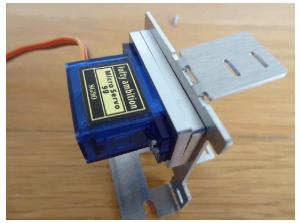


(NOTE THESE FOLDS MUST BE TO THE OPPOSITE SIDE.)

Congratulations ! You now have the finished frame.

Now you can mount the rear motor with 2 spacer plates.



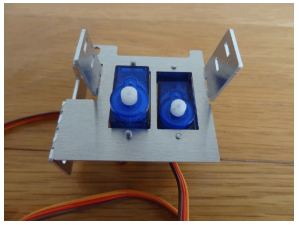


Note the orientation of the motor with the centre away from the ears.

Use the 2 M2x10mm screws to secure.

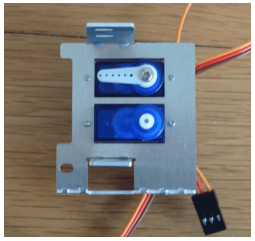
Note that the holes for these screws are tapped into the main plate thus not requiring the use of nuts. Insert the screws from the back of the motor, (A small dab of nail varnish can be applied to the nuts/threads once completed and tested. to prevent any loosening during operation although I have not found this necessary.)

(In the event of the holes not lining up these can be carefully drilled out and nuts used if required.) - (Nuts NOT included in kit)



Fit the second motor without any spacers using the M2 x 6mm screws

Now you need to centre the servo motor. This can be done by hooking up to the servo board you are going to use to drive it or by using a servo test unit like the PMP3 (Pocket money project), or one of the cheapo’s available from places like Ebay.

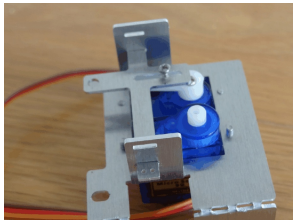


Once this is done, remove power from the servo, carefully remove the servo actuator arm from the servo pack. *(Small screws have a mind of their own and are difficult to replace)* and fit the actuator arm horizontally pointing towards the folded arms and screw in place. (You can reattach the control circuitry to the servo just to check that the movement is in the right quadrant)

Now carefully slide the rear slider into the lower set of slots.

(This is the one with 2 small holes at the top - the side nearest the foot)

Once this is in, you can begin folding the wings up to their proper position so that the slider moves freely.



It can be secured to the arm of the servo motor with the 1.7mm self tap screw.

I suggest the 2nd hole from the motor drive for a useful amount of movement.

It is a good idea to hook up the servo and check the movement now.

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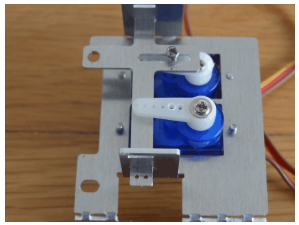
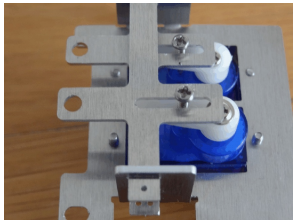
Now centre the second servo as you did for the first one.
Now its time to fit the front servo arm (it should be above the rear slider) and fit the front slider.



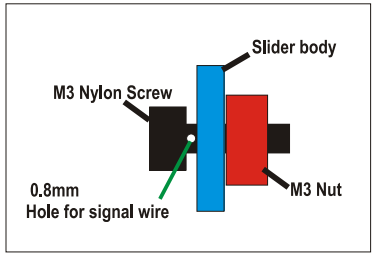
This is the one with 1 small hole which again goes to the foot side.
Fit one side in first and slide all the way home. This can be a bit tricky and you might find the long side goes in easier that the other.



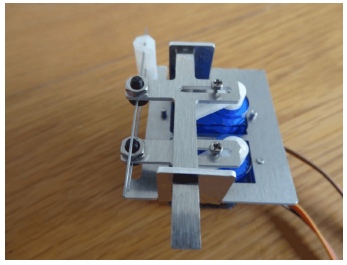
Once the slider is in place and engaging with both slots in the wings, you can gently fold the wings up to their finished position by hand. Note: if you bend them just past the 90 deg point the slider will be trapped. It should move easily from side to side and not fall out at either end. (A bit of gentle tweaking may be necessary to get this moving smoothly)

The Slider now secured to the 1.7mm self tapping screw through the center slot and into one of the servo actuator arm holes. The further you go from the center of the drive shaft - the longer the throw will be.
I suggest the 2nd hole from the motor drive for a useful amount of movement.
(Note that the max throw is 10mm)
There will be some play in the unit which will give a small amount of hysteresis.
This has been designed for.

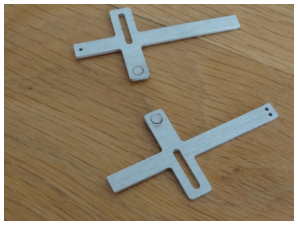
The next step is to fit some form of clamp to hold your signal actuator rods.
The kit comes with 2 M3 x 6mm Nylon screws which have a 0.8mm hole drilled just below the head.

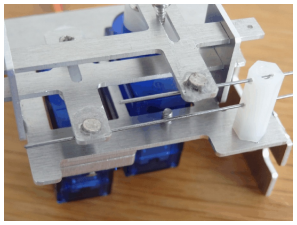


If you fit these over your actuator wire and then push the screw through the 3mm hole in the sliders, you can tighten gently with the M3 nut and it will hold the wire securely.
This is difficult to demonstrate with pictures but if you look closely at the finished units it should become clear.

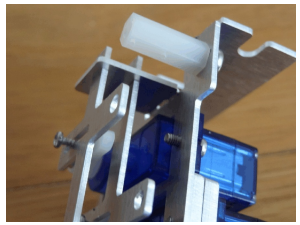


Alternatively you may use the 2 off 3mm dia x 2mm thick rare earth magnets and superglue them into the 3mm holes so that the signal wire can attach to the magnets thus allowing quick removal for portable layouts.

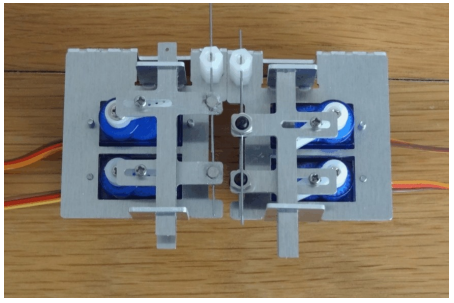




A final support for your actuator wires is included. This is the Hex bar with 2 small holes for the Actuator wires.
It fits with a M3 screw to the slotted hole above the fittings and can be adjusted to get the smoothest operation. This is quite important when using the magnetic option.
Note: If you want to crank the actuator wires to get them closer together, then you can drill additional holes in the spacer part.



Your unit is now ready to install with 2 screws from under the baseboard, wire up and set.
Once everything is moving correctly, tighten the clamp screws and it should be good to go.



This picture shows a pair of mounts in opposite hands for use on a 4 signal gantry.

I hope you have many trouble free hours operating this unit.
I welcome feedback so as to improve the units in the future.

Please forward any comments, issues to me.

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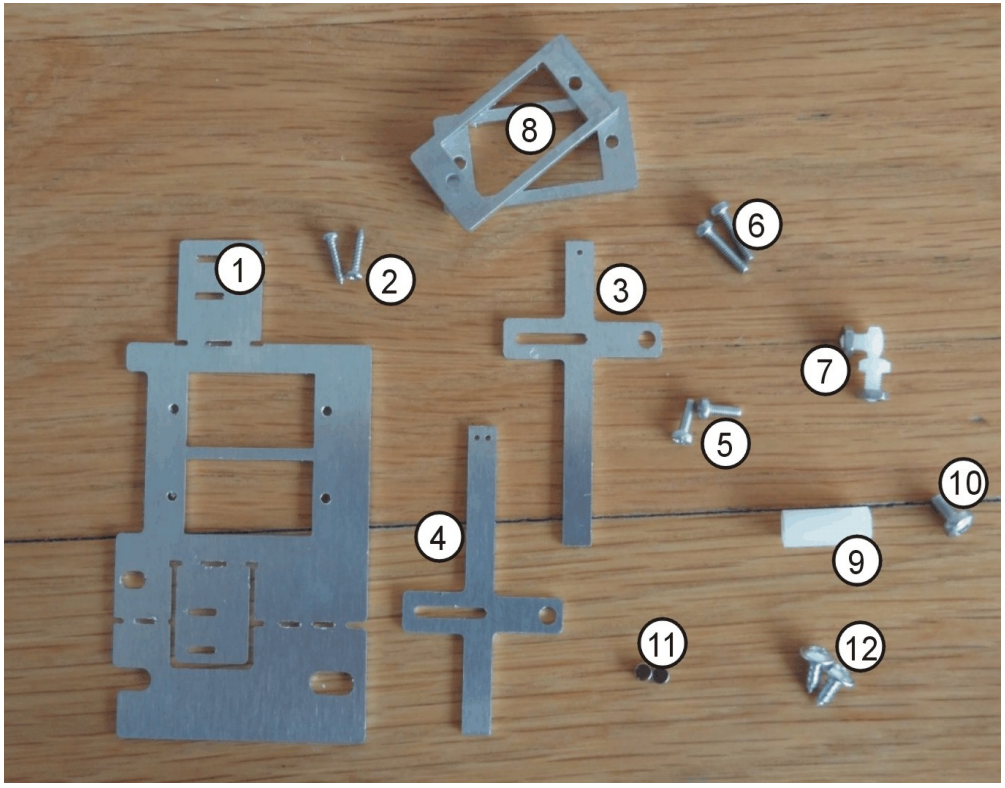
Parts List



No	Description	Qty
1	Main Body	1
2	1.7mm Retaining Screw	2
3	Slider (Front 1 small hole at top)	1
4	Slider (Rear 2 small holes at top)	1
5	M2 x 6mm Screws	2
6	M2 x 10mm Screws	2
7	M3 Capture Screws and Nuts (Can be Black or White)	2
8	Packing pieces 3mm thick	2
9	Plastic Hex Spacer (Can be Black or White)	1
10	M3 x 5mm Screw	1
11	3mm dia Magnets (On rear of insert)	2
12	3mm x 6mm long Flange fixing Screws.	2