

Dingo Low Profile Servo Mount

Assembly instructions.

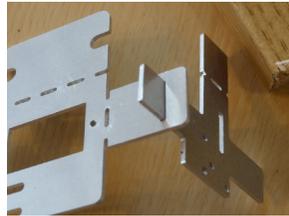
Please read these instructions right through before commencing.

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.)

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 edges will not affect operation, however check that the slider fits easily in both wings as tolerances here are quite tight and it need to move freely for reliable operation.

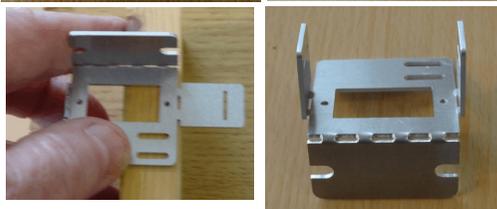
Any pips can be easily filed away with a small needle file.



Start by folding the mounting footing of the main mount.

Lay the aluminium part flat on the work bench edge with the fold matrix on the edge. (See picture - Note the 2 slots for the micro-switch)

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 fold by pushing on a hard surface to achieve a 90 deg bend.



Now reverse the part and fold the 2 wings in the opposite direction and finish by hand to 90 deg,

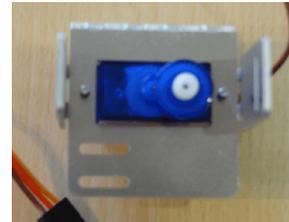
(NOTE THESE FOLDS MUST BE TO THE OPPOSITE SIDE TO THE FOOTING.)

Congratulations !

You now have the finished frame.

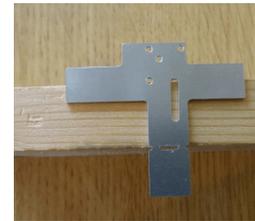
Now you can mount the motor making sure that the drive shaft is at the end of the slot furthest away from the 2 slots.

Use the 2 M2x6mm screws (the frame is tapped M2 for this). The screws will need to be inserted from the back of the motor. A small dab of nail varnish or thread lock can be applied to the threads after fixing to prevent any loosening during operation although I have not found this necessary.



The next part we need to prepare is the slider.

Firstly this need to be bent to form an actuator for the micro switch.



It is very important to get this bend correct. Please see the pictures and double check before you bend. As you will see the shorter arm is to the right along with the motor drive slot.

The top 4 holes in the slider are tapped M2, but we will only use 3 of them. You need to decide now which way you will

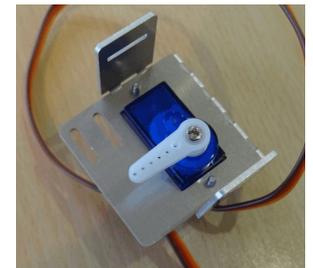
use the screws to hold you actuator. (See picture) the 3 very small M2x3mm screws are used here - anything longer may interfere with the actuator arm of the servo. You may also turn the slider over so that the straight arm is on the right but always put the screws in from the top.



This completes the slider assembly. The actuator wire can be adjusted at any time by slacking off the screws, moving and re-tightening once in the correct position. I suggest tightening the centre screw first.

Now you need to center 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 tester unit like the PMP3 (MERG Pocket money project) or the small blue ones found on 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 pointing away from the footing side.



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Parts List

No	Description	Qty
1	Main Body	1
2	Slider	1
3	Actuator wire (20swg)	1
4	Nut Plate	1
5	Switch (SPDT)	1
6	M2 x 3 mm Pozi Pan Head Screws	3
7	M2 x 6 mm Pozi Pan Head Screws	2
8	M2 x 10 mm Pozi Pan Head Screws	2
9	1.7mm Retaining Screw	1
10	3mm x 6mm long Flange fixing Screws.	2

Now its time to fit the assembled slider.

Fit the short(right) side in first and slide all the way home then fit the other side.

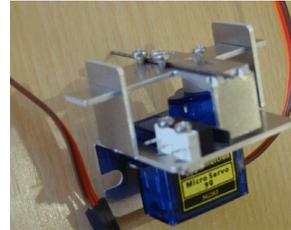
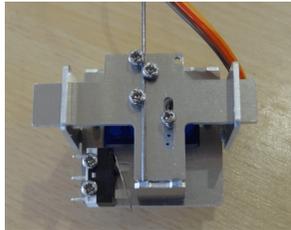
Note: Check that the slider moves easily and adjust the wings slightly if this is not the case. If you bend them just past the 90 deg point the slider will be trapped.

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. For most points in n or OO gauge the hole closest to the drive shaft will probably suffice. This will also give you good

travel on the servo motor and make setting the switches easier.

There will be some play in the unit which will give a small amount of hysteresis.

This has been designed for.



You can now fit switch to the

base using 2 M2x10mm screws and the nut plate. The nut plate has 2 threaded holes spaced at exactly the right pitch for the switches. This allows the switches to be adjusted very easily without having to resort to spanners etc.

Make sure that the switch is facing the bottom of the mount ie. Away from the footing.

Move the switch towards the end of the slots away from the centre before fitting the slider assembly.

We can set the switch positions later but you may like to operate the servo to make sure everything is working as planned.



Your unit is now ready to install with 2 screws from under the baseboard, wire up and set. Once everything is moving correctly, slack off the switch screws and move to the right position so that the switch just activates at the end of travel.

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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