Dingo Signal Servo Mount

VER 1A

Assembly instructions.

Note: VER 1A no longer requires M2 nuts for servo mounting as the frame is tapped to accept the M2 screws.

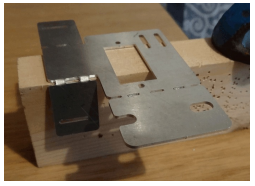
Please read these instructions right through before commencing.

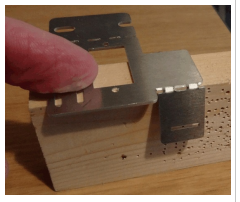
Take a little care with the assembly and you will have a really robust servo mount. Remember that you can only bend the aluminium once, so make sure you have the correct orientation before bending. (I cannot stress this enough! Check and double check before you bend.) Bending can be done by hand on the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

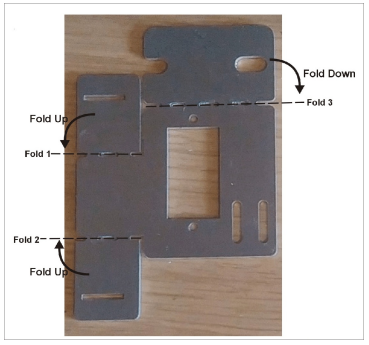
Before you start make sure that all the parts are in the kit (see diagram on the back page.)

You will need a small pozi screwdriver and a pair of longnose pliers 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 slider fits easily in both wings as tolerances here are quite tight and it needs to move freely for reliable operation. Any pips can be easily filed away.





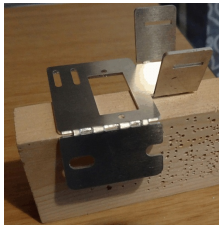


Start by folding the 2 wings of the main mount.

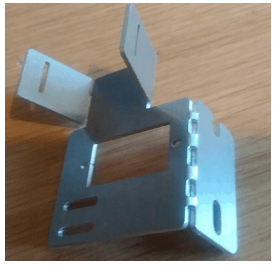
Lay the aluminium part flat on the work bench edge with the fold matrix on the edge.- I use a small piece of planed timber clamped to my workbench (See picture)

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 fold the other side..

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



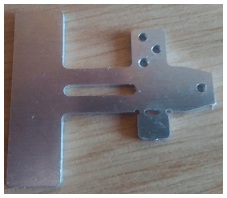
Now reverse the part and fold the mounting foot down and finish by hand to 90 deg,



(NOTE THIS FOLD MUST BE TO THE OPPOSITE SIDE.)

Congratulations ! You now have the finished frame.

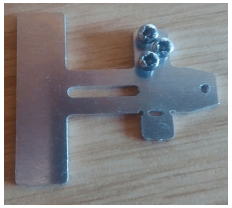
Now you can mount the motor making sure that the drive shaft is at the bottom of the mount (Away from the mounting foot plate). Use the 2 M2x6mm screws to secure, screwing into the pre-tapped holes in the frame. *(If for some reason the holes don't line up with your particular servo, you can drill them out and use M2 nuts)* Insert the screws from the back of the motor, A small dab of nail varnish can be applied to the nuts/threads after fixing to prevent any loosening during operation although I have not found this necessary.



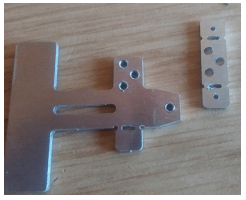
The next part we need to prepare is the slider.

All 4 holes in the slider are tapped M2, 3 for the connection to the signal arm and one at the end to accept the standoff which will activate the switch.

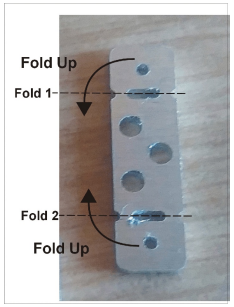
You need to decide now which way you will hold your actuator. (See picture) the 3 very small M2x3mm screws are used here - anything longer may interfere with the actuator arm of the servo.



If you are going to clamp the push rod into the slider arm, then fit the 3 screws as shown - they will allow up to a 1mm wire to be gripped between them and adjusted later.

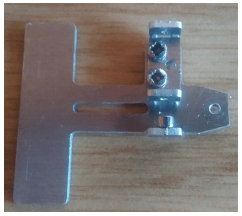


If you want to use the magnetic option then you have a few options.



1. Using the bracket as shown in pictures.

You will need to carefully fold up the small lip on the slider (Use a pair of long nose pliers for this)



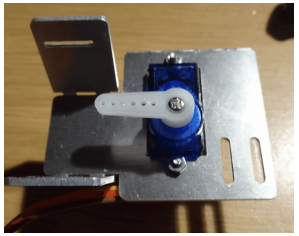
You will also need the small "U" shaped bracket folded.

Be careful to fold this the right way around so that the holes line up with the holes on the slider. (2 screws are all that is needed to hold the 2 parts together.

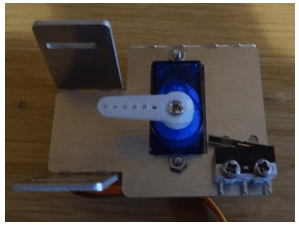
The magnet can be fitted to the lip on the slider with a small amount of Superglue.

2. Just glue the magnet to the slider arm as shown here and allow the actuator wire to "stick" to the magnet. This allows you a very easy adjustment of the actuator wire but is subject to moving without notice. (You may also want to use the "U" bracket as a guide in this option.

Also screw the standoff into the opposite side through the bottom hole from the other side and fit an M2 nut to hold in place and tighten.
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.



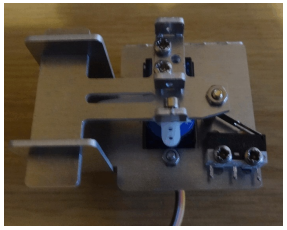
Now you need to center the servo motor. This can be done by hooking up to the servo board you are going to use to drive it or by using a servo test unit like the PMP3 (Pocket money project). Once this is done, remove power from the servo, carefully remove the servo actuator arm from the servo pack. *(Small 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 thatr the movement is in the right quadrant)

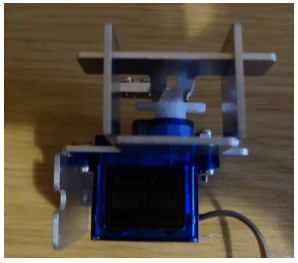


You can now fit the switch to the base. Use the 2 M2x10mm screws and a nut plate to fit the switch. The nut plate has 2 threaded holes spaced at exactly the right pitch for the switch.
This allows the switch to be adjusted very easily without having to resort to spanners etc.

Make sure that the switch is at the outer limits of travel before fitting the slider.

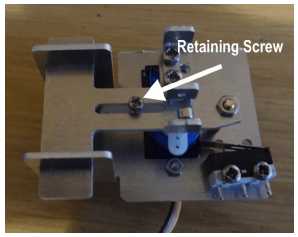
Now its time to fit the assembled slider.





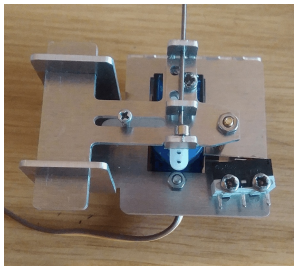
Fit one side in first and slide all the way home. This can be a bit tricky and you might find one side goes in easier that the other.
Once the slider is in place and engaging with both slots in the wings, you can gently fold the wings up to their finished position by hand. Note: if you bend them just 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 centre)*



(Note that the max throw is 10mm) 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.

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.

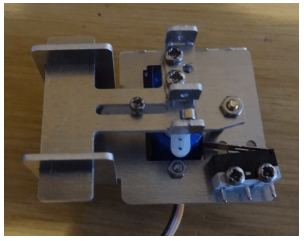
If using the magnetic option ensure that your connecting rod from the signal is magnetic.

Tools required.

My Bending station

You may want to check out the Micro8 assembly video on the web.

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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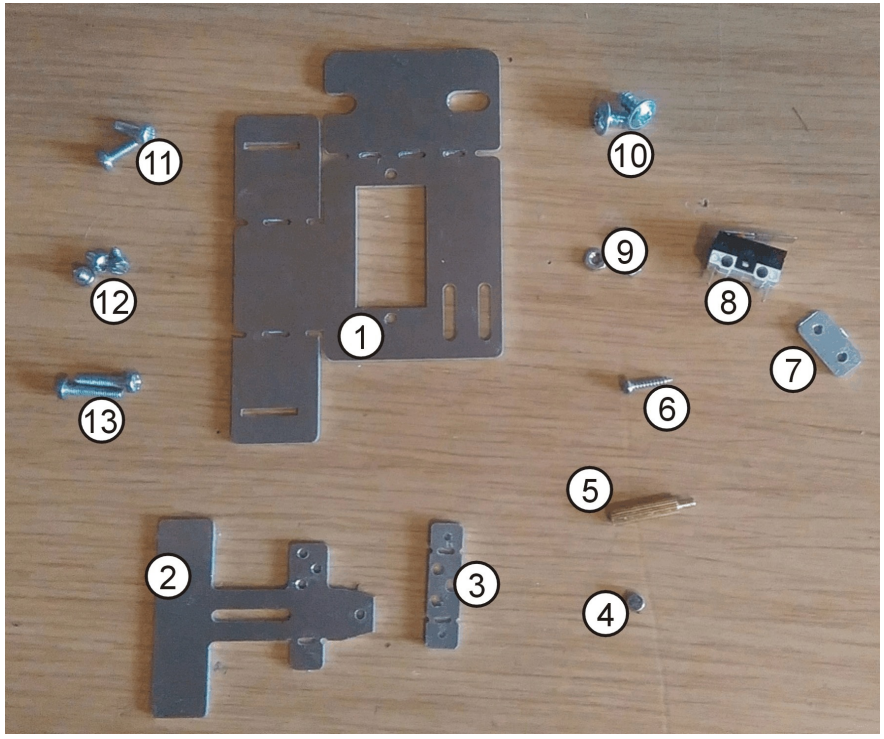

Dingo Signal Servo Mount

VER 1A

Parts List

No	Description	Qty
1	Main Body	1
2	Slider	1
3	U Bracket (for magnet guide)	1
4	Magnet (Taped to back of paper insert)	1
5	M2 Standoff (Brass)	1
6	1.7mm Retaining Screw	1
7	Nut Plate	1
8	Switch (SPDT)	1
9	M2 Nut *(Note: No nuts for Servo mounting)*	1
10	3mm x 6mm long Flange fixing Screws.	2
11	M2 x 6 mm Pozi Pan Head Screws	2
12	M2 x 3 mm Pozi Pan Head Screws	3
13	M2 x 10 mm Pozi Pan Head Screws	2

New Magnetic adapter fitting.
The new Magnetic adapter can be fitted to this mount quite easily.
It fits using just the 2 screws on the slider arm.

Setting up a magnet clip for Omni Mount, Signal Mount or Mini Signals.

Put magnets together

Insert from Rear

Remove small magnet

Insert operating wire

Push down Magnet

Drop in Small magnet