

# Dingo Servo Mounts

## Mini Crossing Gate Mount Assembly Instructions.

Note that the switch option is an additional kit and must be purchased separately.

Please read these instructions right through before commencing.

Take a little care with the assembly and you will have a really robust servo mount.

**This Mount is specifically designed for the Power HD HD 1370A servo.**

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 modelling knife. A small amount of burr on the edges will not affect operation. Any pips can be easily filed away.

This mount comes pre-folded so you do not need to fold the metal as in some of the other mounts

Next take the top Flange "Grey" and fit it through the round hole in the top of the mount from inside the "U" and secure with the 2 M2 x 3mm screws. (Note all holes are pre-tapped for the screws.) The screws should finish more or less flush with the top of the mount and not protrude at all.



Now fit the larger tube into the top bracket.

At this point you might need to cut the tube to the required length so that it just fits flush to

the top of the baseboard. (Note you will need to drill a 5mm hole through the baseboard to accommodate this tube)

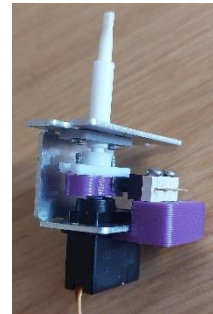
The tube should be a press fit, but can be secured with a small drop of glue if required.

Now prepare the Servo horn to drive the dog.

Start by inserting the 2 x M1.6 x 8mm screws through the purple replacement horn as shown in the picture.

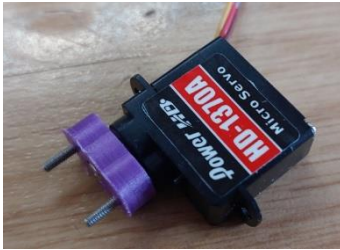
The screws are fitted from the side with the 3 large holes.

These 2 screws will engage the dog which will be attached to the gate.



# Dingo Servo Mounts

## Mini Crossing Gate Mount Assembly Instructions.



Now the servo motor needs to be centred by means of a servo tester or the control software.

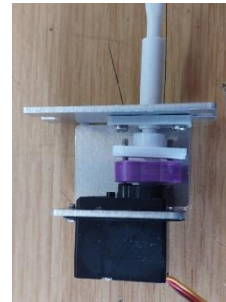
Attach the modified horn with the small screw provided by the servo manufacturer. (Be careful with these screws as they have a mind of their own and are hard to find replacements for)

This should be lined up parallel to the servo body – it does not matter which way around you put it on.

Now we need to balance the dog on top of this arrangement and carefully fit the whole lot through from the bottom of the mount such that the dog is directly underneath the top flange.

Use the 2 M1.6 x 3mm screws to secure the motor.

The smaller tube will then pass through the outer tube and fit snugly into the dog. Test the unit to make sure that everything is moving smoothly.



Now all that remains to be done is to fit the unit to the layout with the 2 supplied flanged fixing screws and set up the end positions using the control software of choice.

Replacement tubes can be cut from styrene tube – 3/16" tube Evergreen Item No 226 and the 1/8" tube is Item No 224

You could also use 1/8" brass tube for the centre if you were soldering the whole unit together or you might want to glue a wire into the small tube and then operate the gate from that.

I know you are all very talented modellers and will come up with the right solution to suit your needs.

Dingo Servo Mounts have a single RED servo board unit and a Twin Red servo board which will operate this unit.

Other control boards are on offer from MERG (in kit form) or from companies like Megapoints and Tam Valley Depot.

The New Switch pack is available for this unit



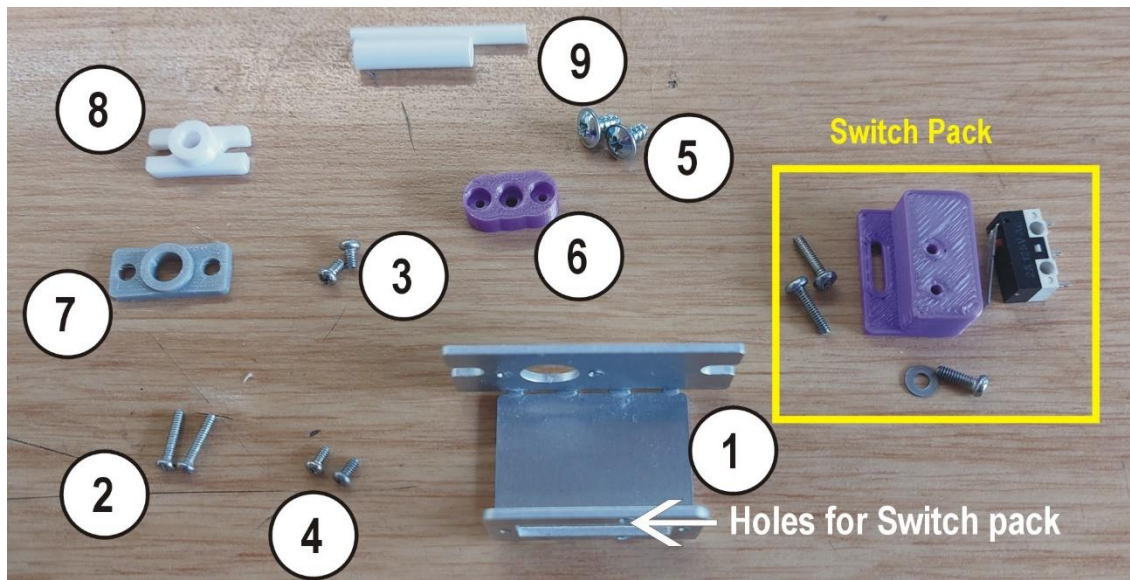
# *Dingo Servo Mounts*

## Mini Crossing Gate Mount Assembly Instructions.

### Parts List

No	Description	Qty
1	Main Body	1
2	M1.6 x 8 mm Pozi Pan Head Screws	2
3	M2 x 3 mm Pozi Pan Head Screws	2
4	M1.6 x 3 mm Pozi Pan Head Screws	2
5	3mm x 6mm long Flange fixing Screws.	2
6	Modified horn 3D printed "Purple"	1
7	Top Flange "Grey"	1
8	Drive Dog "White"	1
9	Tubes 1x 1/8" dia and 1 x 3/16" dia	1+1
	2mm dia x 2mm Magnets (On back of Insert)	2

**Note :** The switch pack is a separate kit.



I hope you have many trouble-free hours operating this unit.  
 I welcome feedback in order to improve the units for the future.  
 Please forward any comments or issues to me.  
 David Ingoldby  
 Email - [dingoservo@gmail.com](mailto:dingoservo@gmail.com) ,  
 Mob 0775 4901324. [www.dingoservo.co.uk](http://www.dingoservo.co.uk)

# Dingo Servo Mounts

## Mini Crossing Gate Mount Assembly Instructions.

### Adding a Clutch *(this should work OK with OO and N gauge models)*

I have had some comments since creating this mount especially about the problems encountered if the gate has not been moved and an expensive loco derails or worse falls on the floor after hitting the gate.

So here is the method of modifying the unit to contain a magnetic clutch so that the gate will **“Get out of the way”** when the train comes.

Grateful thanks to my friend Howard Watkins for demonstrating this method to me some years ago.

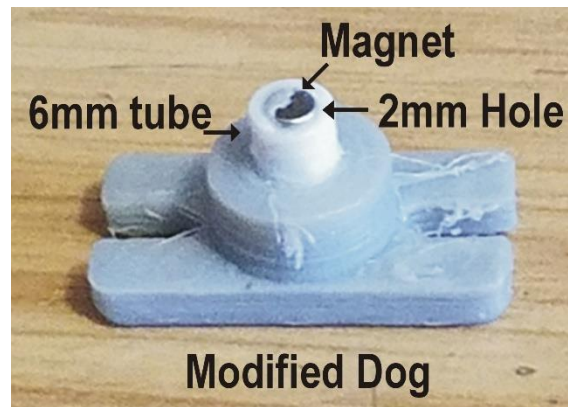
Firstly, you will need to modify the dog so as to contain a small magnet

Cut a short length of the 1/8” tubing to about 6mm – Once this is in the dog it should protrude by about 3mm from the top.

Carefully drill a 2mm hole in the top end for approx. 2mm into the tube.

Now fix a 2mm x 2mm dia rare earth magnet into this hole.

This tube can now be glued into the dog without getting any glue on the outside of the tube as this needs to run smoothly in the outer tube.



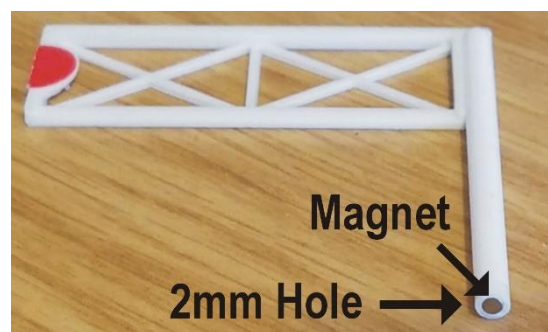
Now take the gate post (which has been cut to the correct length) and drill a 2mm hole carefully into the bottom of it to about 2mm deep.

We need to get the 2 magnets to pull together and not push apart.

My simple method of getting this right is to put the second magnet on top of the dog so that they connect, and then carefully push the gate post over this magnet.

They will fit snugly and should now pull apart easily. Reassemble the unit with the dog just entering the outer tube and when all is tightened up you can drop the gate post in from the other side.

The gate will now be able to move quite freely to position, but should have enough tension to operate freely with the servo, however, if a loco bumps into it the gate will swing away and can easily be reset once the offending loco has moved on.



Note: The magnets will be taped to the back of the pack insert card.

# *Dingo Servo Mounts*

## Mini Crossing Gate Mount Assembly Instructions.

### Adding a Switch

Starting with a parts list which is an **additional kit** to add to the Mini Crossing Gate Mount.



Description	Qty
Switch holder	1
Switch SPDT	1
M2 x 6mm Pozi Panhead screw	1
M2 Washer	1
M2 x 8mm Pozi Panhead Screw	2

Assemble the switch to the switch holder with the 2 M2 x 8mm screws



You may need to take some time to decide which way you want the switch to operate and fit the switch accordingly.

It can be mounted either way up and fitted to the mount with either of the 2 tapped holes in the mount.

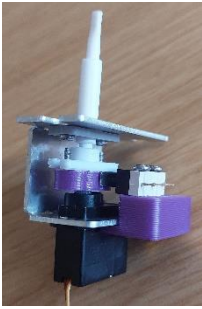
This done to offer a wide range of options.

The switch holder is also slotted to allow for adjustment.

I find it useful to offer up the holder to the mount and find the best possible mounting point. Beware of having the switch positioned such that the cam comes into the switch from the open end of the lever as this could destroy your switch or your servo.

# *Dingo Servo Mounts*

## Mini Crossing Gate Mount Assembly Instructions.



The completed switch unit can now be fitted to the mount with the M2 x 6mm screw and the M2 washer

Adjust it to suit while moving the servo slowly with the servo tester.

The switch should operate when the servo reaches the end of the travel.

Put the mount into service and do final adjustments when the gate is operated by your control board.

You can use the switch for feedback from the gate mount to operate ancillary equipment or provide indicator lights, signals etc.

This could also be used for feedback from a rotating ground signal which could also be operated with this mount

As this is a new design, I always welcome feedback as to its effectiveness

Regards Dave