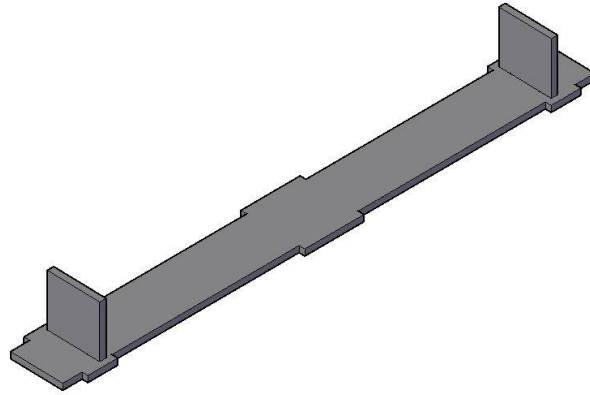


INSTRUCTIONS, familiarise yourself with all parts before removing from board

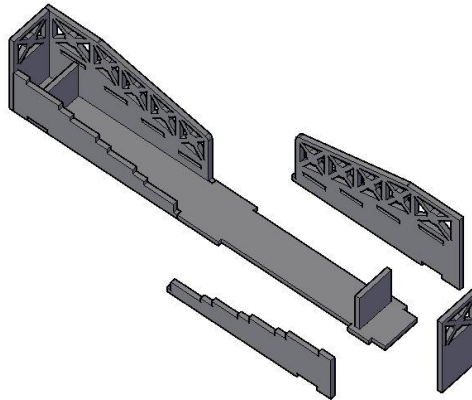
Staircase assembly

Glue in 2 support pieces G, into the stair base plate K



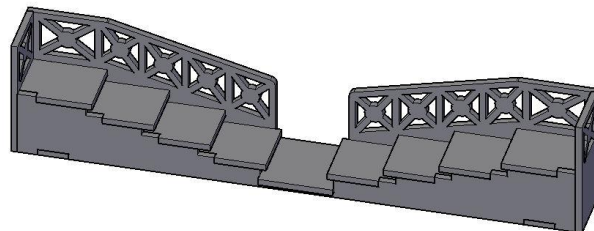
Glue on the rear tread supports F and the front rail/tread supports H

Glue on the rear rail panels



Glue in the treads D, note the 2 top treads I are different than the rest

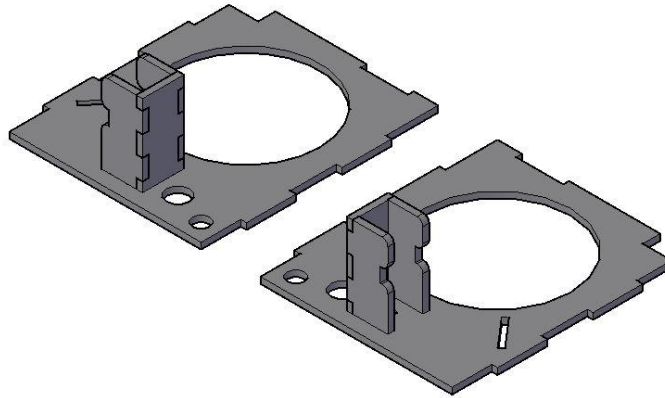
Glue in the lower platform flush with back



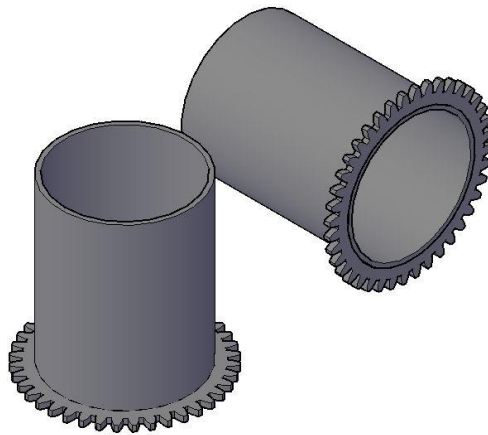
Main assembly

Remove Tube support panel 4 and lay number side downwards, remove Tube support panel 7 and lay number side upwards.

Assemble and glue motor mount E in each panel as laid on table. Can be a bit fiddly but leave to set before proceeding.

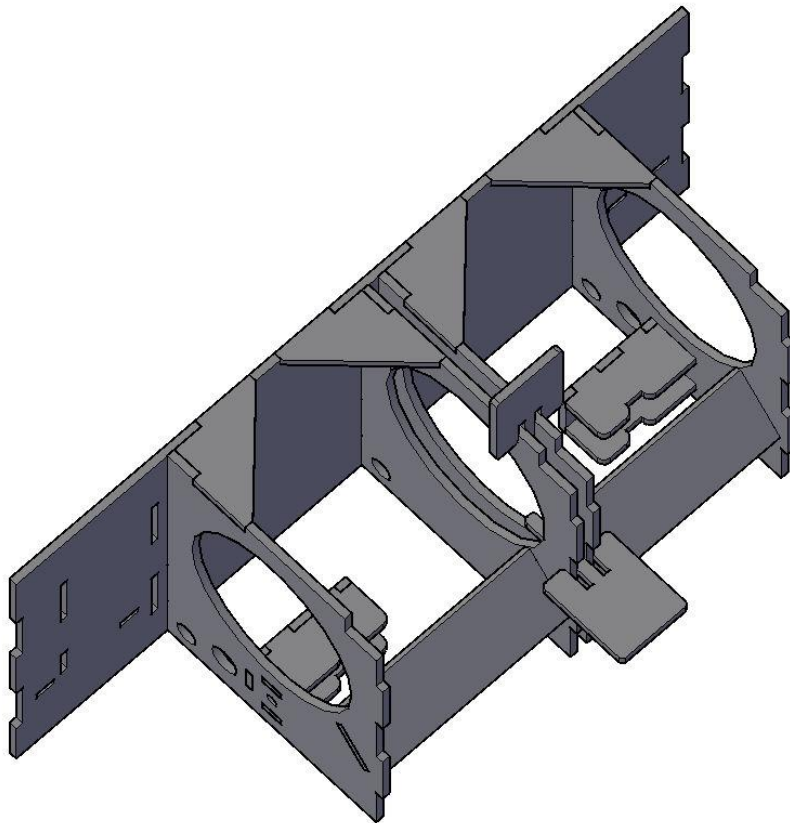


The supplied Tubes should be sanded on the ends to make sure there are no rough bits. Carefully sand the large gears C and lay them on a non stick surface with the laser cut side up – flatter side down. Fun a small amount of superglue around the edge of the tube and place in the cog keeping the end of the tube and gear flat to the worktop while it dries to ensure the gear is level with the gear all the way around.



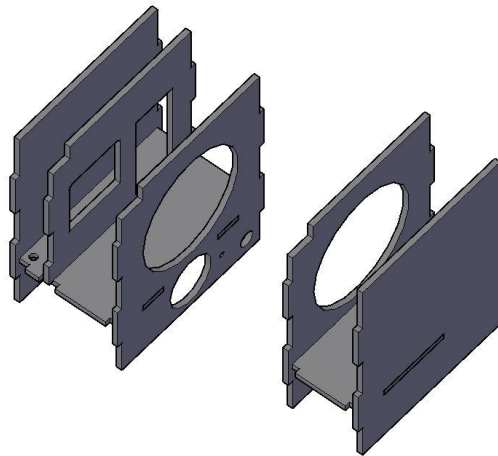
Remove the tube support panels 4 and 5 with the four corner brackets, the back panel A, the lower tube covers L and the four assembly aids.

Glue the tube support panels 4, 5, 6 and 7 to the back with the lower tube covers between. Glue the top corner brackets in and use the assembly aids to help with spacing. Note all numbers are towards the back corresponding with the back plate numbers



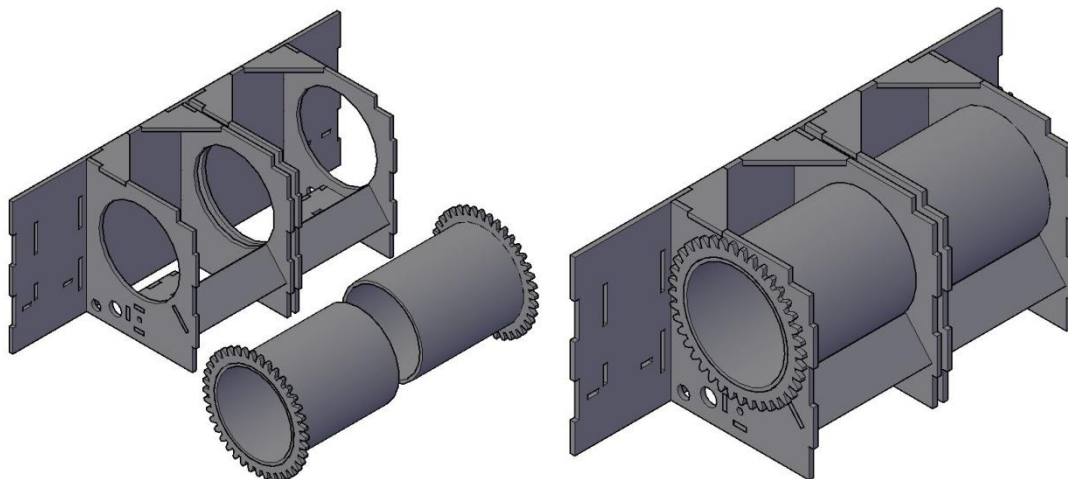
Glue the remaining left and right side sections ready to attach to the back plate

Panels 1, 2, 3, 8 and 9.....Floor sections B and B. Note all numbers towards the back as they will marry up with the back plate numbers.

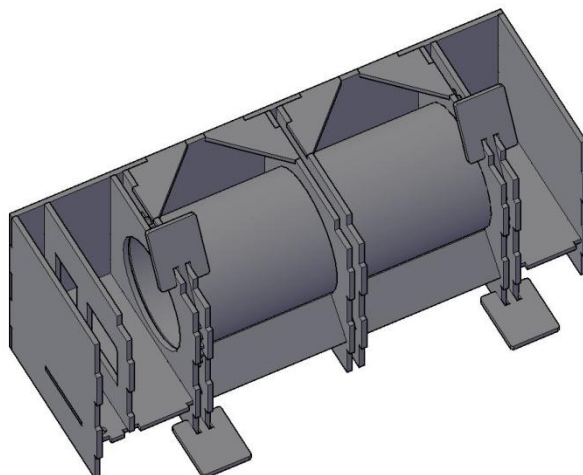


While these are drying you may want to decorate the insides of the tubes with a printed paper roll glued in or just painted as these will be hard to get to when installed.

Fit the tubes in from the left and right, at this point if this is to be motorised then check that the tubes turn very freely if not sand a small amount from the tube support panels to allow the tubes to be an ever so slightly baggy fit. Don't proceed until you are happy the tubes are free turning and don't get snagged anywhere.

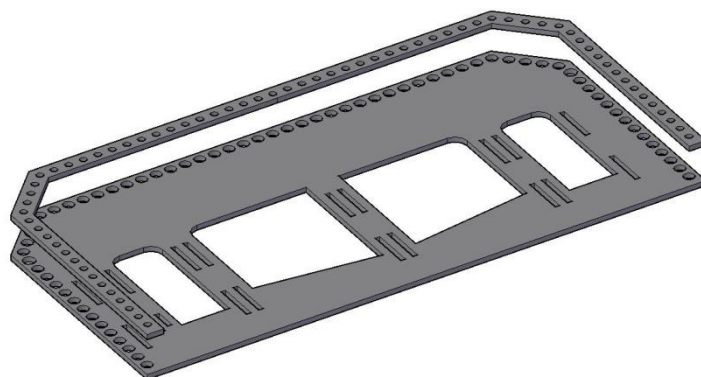


Glue in the left and right assemblies and use the assembly guides to help with spacing

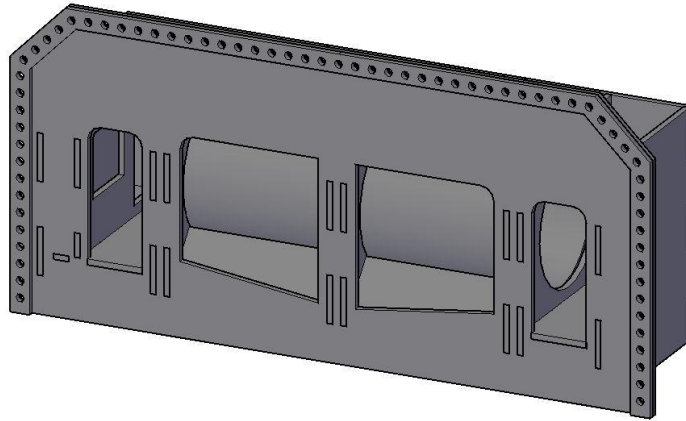


Glue the LED carrier bar onto the front panel flush with the edge, clean holes before dry to remove any glue residue that may prevent LEDs fitting correctly.

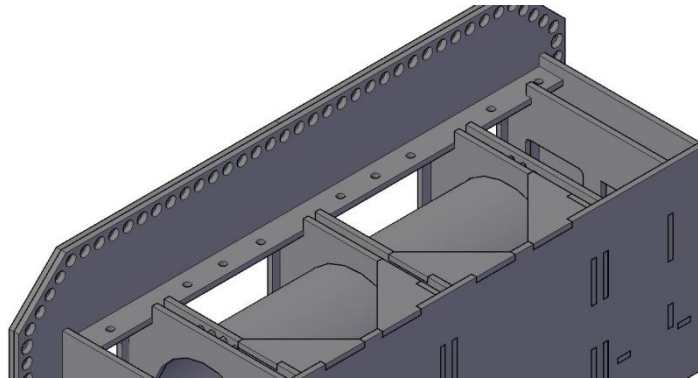
(If you intend to use false gems instead of LEDs, draw around carrier on some card and glue this on top of carrier to hide the holes)



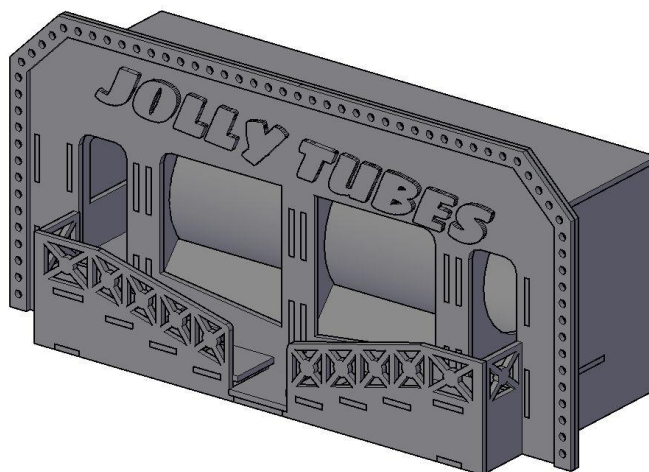
Glue the front to the assembly, test fit first to make sure all lines up correct



Glue in the lighting rail J where LEDs can be added to illuminate the separate parts, this only fits in one way



The top can be left loose for access, glue on the letters and either glue or place the staircase to finish main assembly.



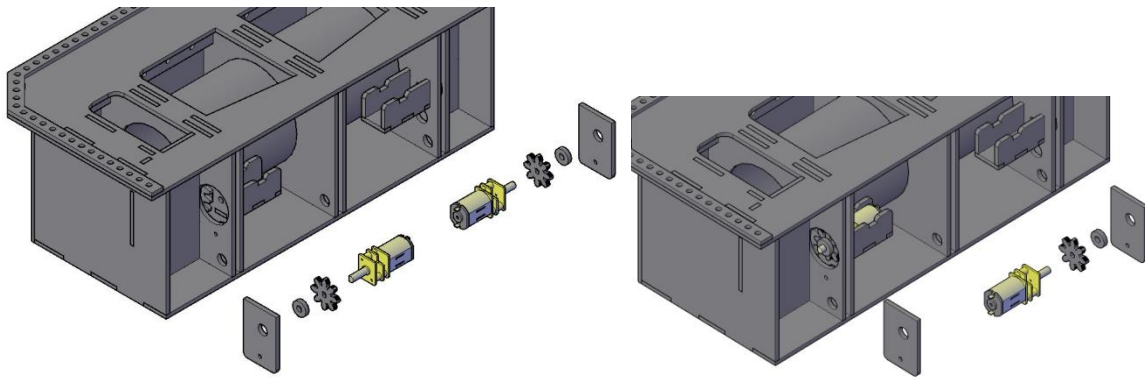
Motorising the tubes

To save complications rather than have a complex gear system this model uses 2 separate motors for the tubes. These are purchased from eBay etc quite cheap.

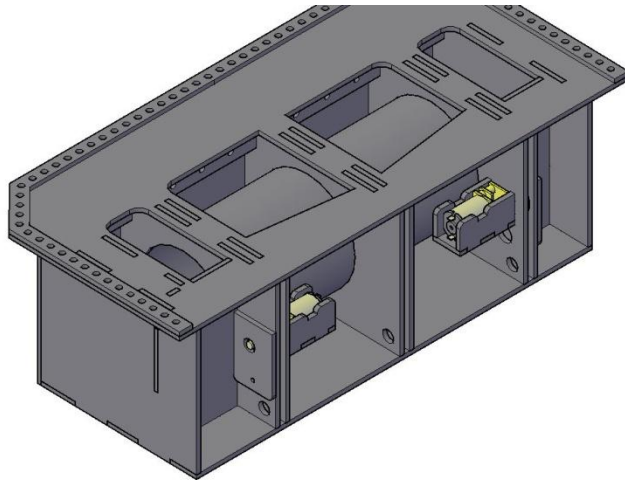
If you opt for 100RPM version at the voltage of your choice i.e. 12v or 6v then the motor should turn the tube one rotation every 3 seconds, if you are not happy with this then you can get a speed controller.

The motors use very little power so could be controlled from the same controller

The motors are installed in the holders and held in place with a small zip tie of tape, the small gear is slid on to mesh with the big gear teeth – turn the tube to align the teeth. The spacer ring is then slid on and finally the cover is fitted and held with a small nut and bolt, this stops the gear and spacer falling off.

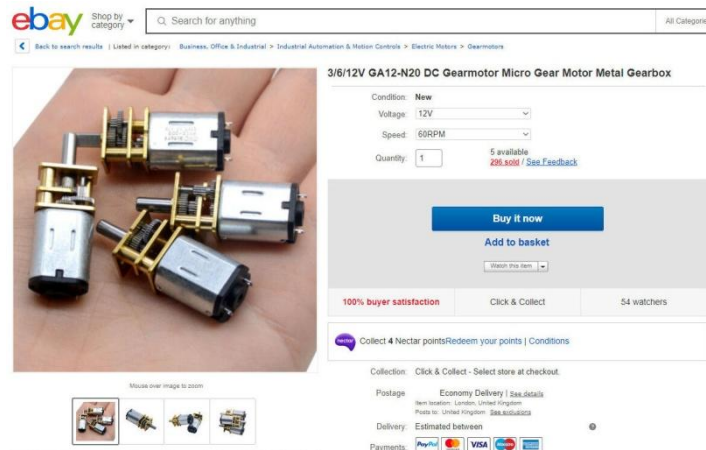


There are plenty of holes for wiring in the panels

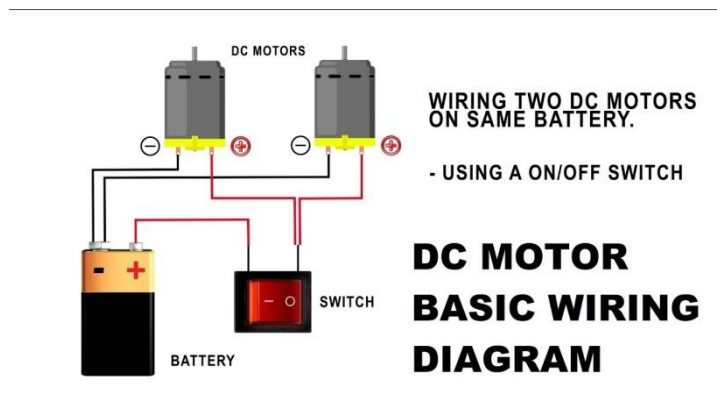


Motor wiring guide

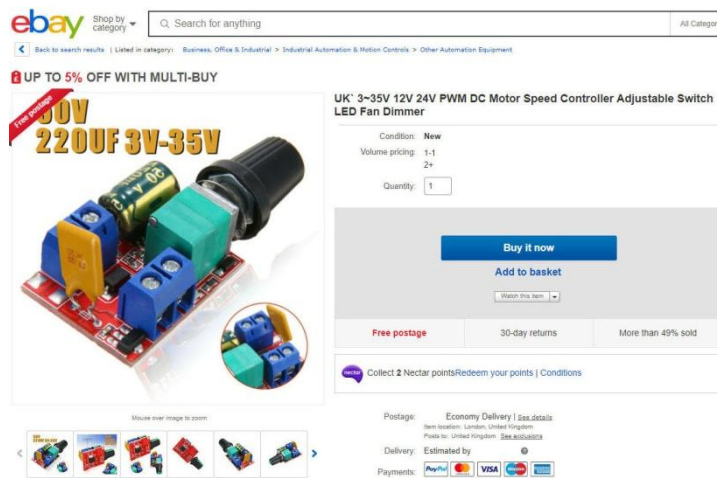
This is a small guide to wiring the motors



The motors can be wired together as in both + go together and to the + of the battery or power supply and both – wired together and to the – of the battery or power supply, a switch can be added on to disconnect the + wire



Read the manufacturer's instructions if using a speed control



Working with Laser cut MDF

If you are new to this type of kit then the following may be useful

The burnt smell is common on all MDF laser cut kits; you can wear gloves if you are concerned about getting charcoal marks on your hands from the edges or the burnt wood smell on your hands

You may wish to spray a primer/undercoat on the sheets before cutting out pieces or if you would rather undercoat the model once assembled.

Cut the holding tabs to free the pieces with a sharp utility knife, snap off blades are good.

File the remnant of the holding tabs with a sanding block or fine file

Make sure you undercoat the burnt edges; you may need more than one coat of primer/undercoat to seal the MDF

You can paint the parts before assembly but either way make sure the parts easily slot together, if not don't force them as small parts easily break – if they are a little tight then file the slot open more.

Once you are satisfied with the fit apply a wood glue or suitable glue and allow parts to set where needed before commencing the rest of the model.

You can use a small stiff bristle brush or old toothbrush to aid removing excess glue as you work, just have some water and a rag to keep cleaning your brush as you go.

Any gaps or places you need to hide the tab edges coming through slots just use ready mixed wood filler and sand/undercoat.

Some edges on corners etc can be made more attractive if rounded slightly with a sanding block or sanding sponge block before painting.