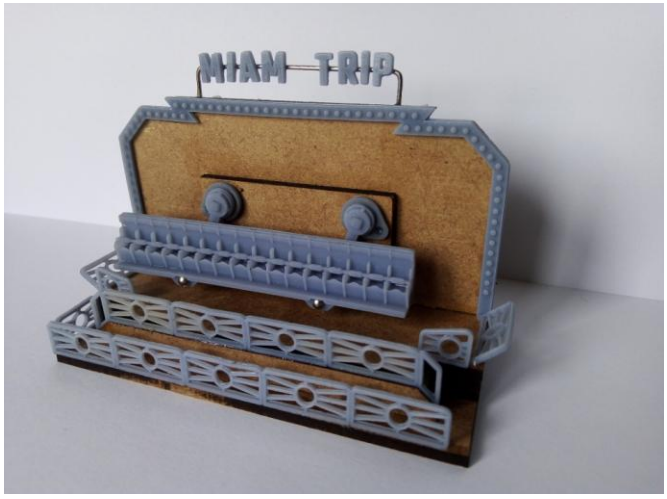
1:148 Scale – N Gauge Miami fairground ride model

INSTRUCTIONS

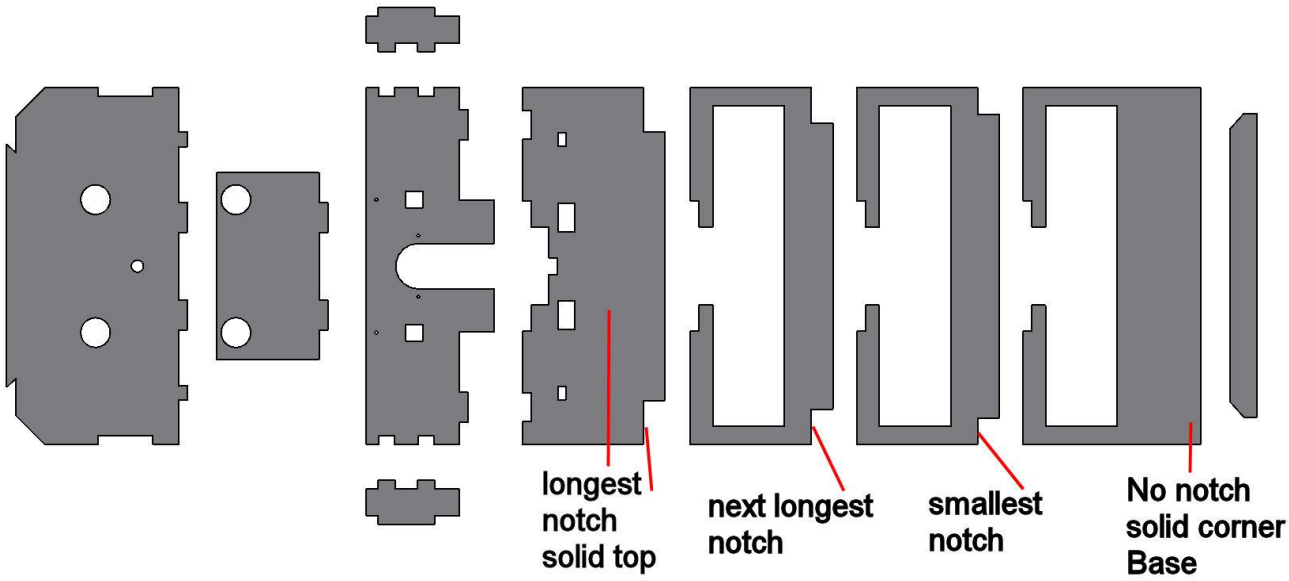
Important! DO NOT over bend any of the printed parts

They will break if bent to far



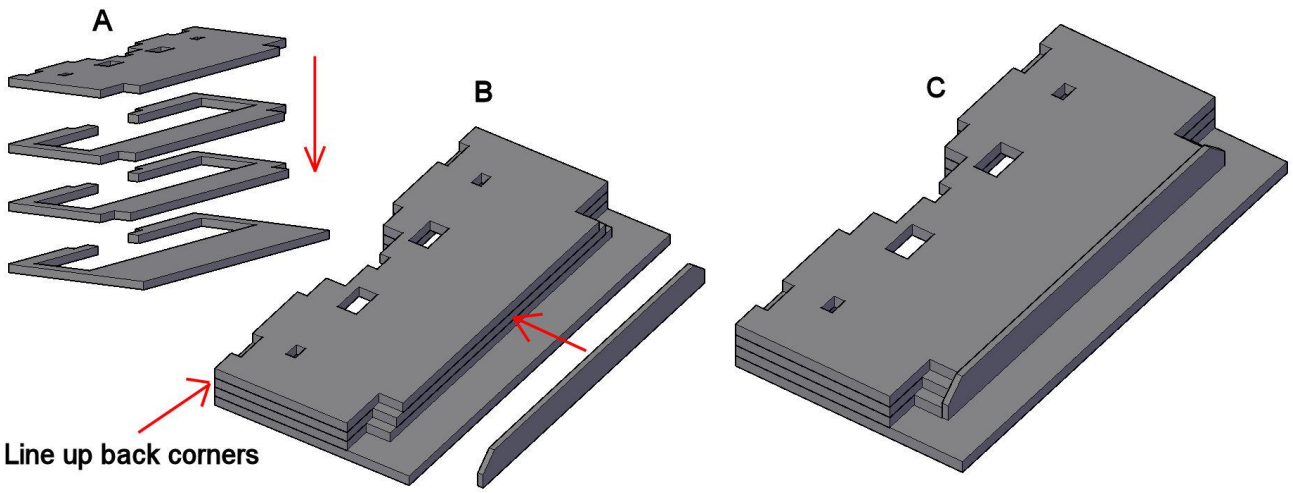
Remove all wooden parts from carrier board, cut the small holding tabs with a sharp snap off blade type knife and sand the remaining stubs before gluing.

Lay out the parts as below

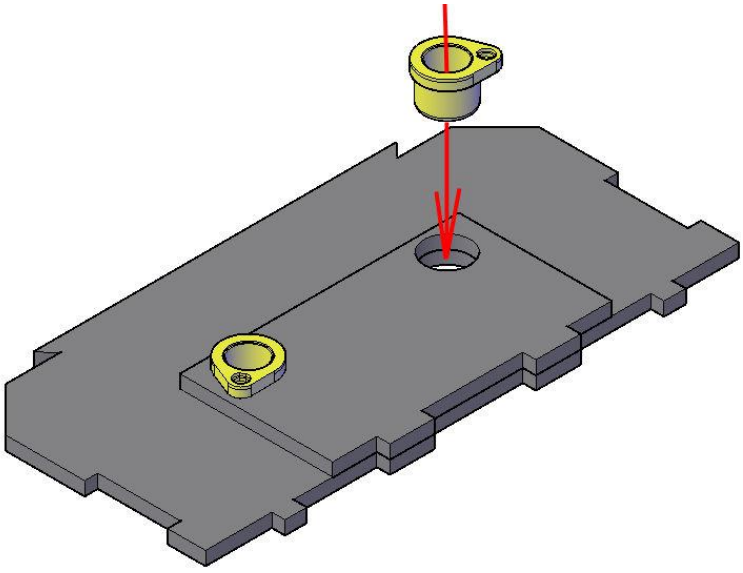


Glue the 4 base parts on top of each other starting with the base

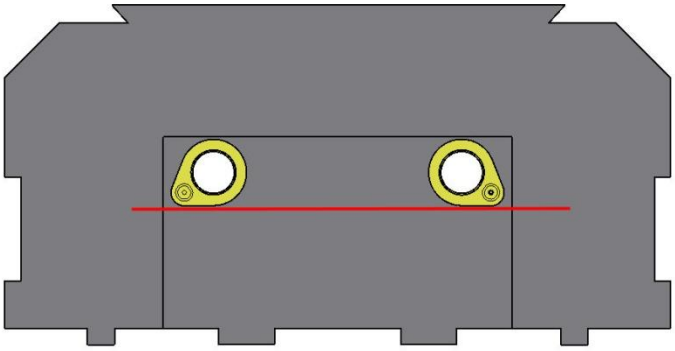
To form the steps then glue on the step front cover



Glue the upright front to the back using the 2 bearings to keep them aligned, you can temporarily fit into the base to hold things while glue dries if needed.



Glue the bearings in to the upright, to replicate the real ride – keep the bottoms as straight as you can



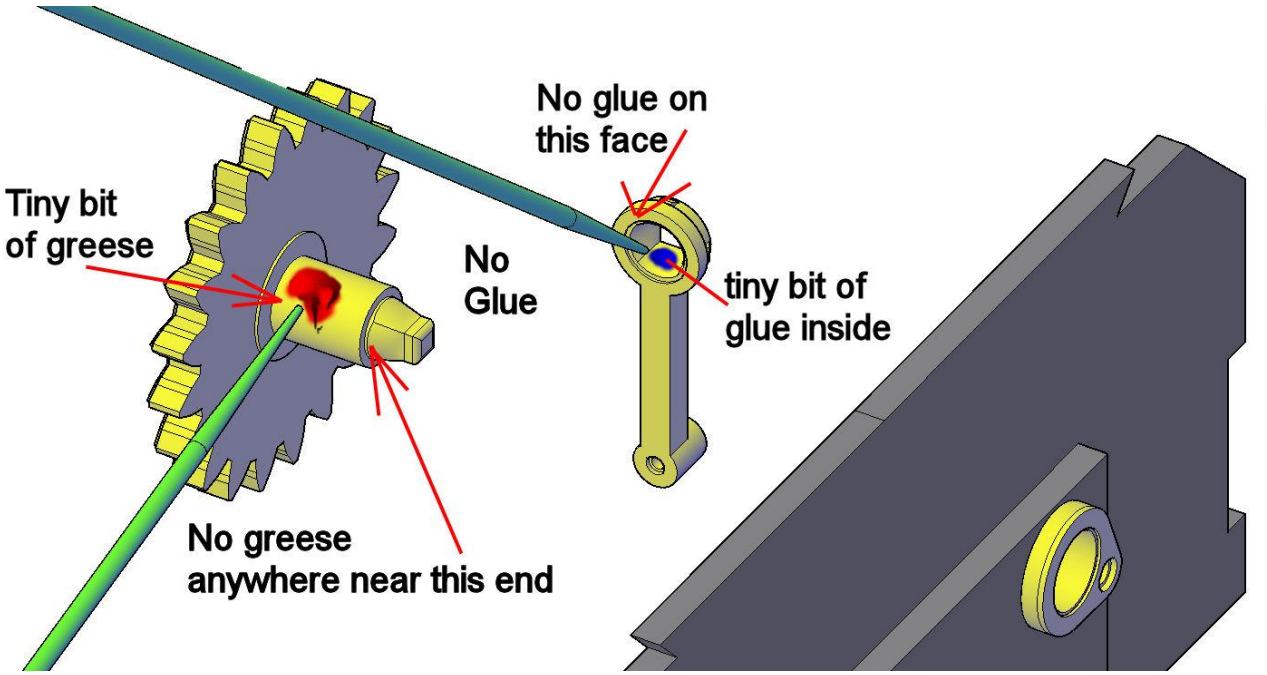
When all is dry, push the big gear shafts through the bearings – use light pressure and rotate to and fro as you go. Do this from the front also and keep blowing away any dust created as you go.

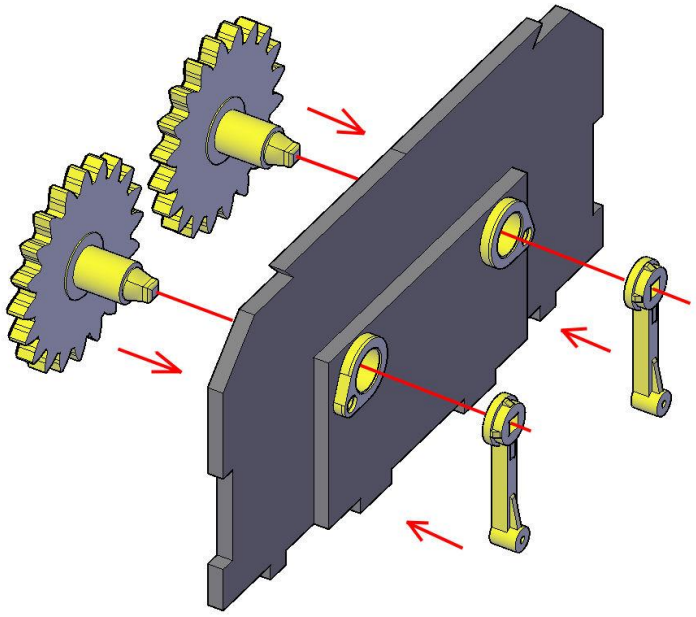
You need to make sure the shafts go all the way through the bearings and if there is a slight ridge in the bearing this will wear it off so it goes all the way in.

The gears should turn freely, to help stop any squeaks and make the shafts last longer you can put some light grease on the shafts – only put the smallest dab on the shaft and don't let it go on the front square part or glue will not stick

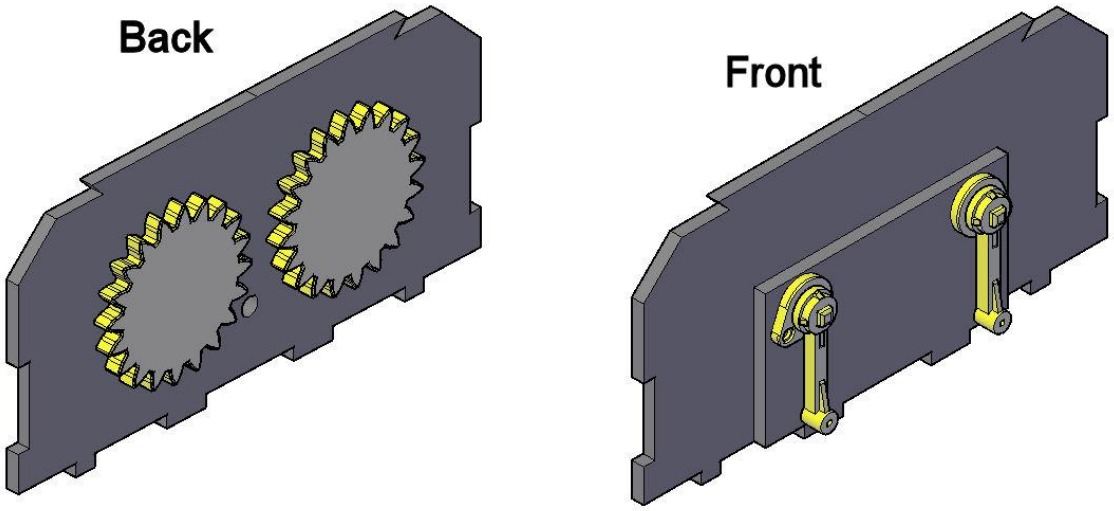
Make sure the arms will fit on the ends of the gears OK, they are tight to get off you may need to wiggle them ever so slightly to get them back off.

Once all is checked put the grease on the shaft and put through the bearing, put a tiny bit of glue on the inside of the arm socket using a cocktail stick making sure not to get any on the face. Push the arm on the end of the shaft; make sure it's all the way on. Keep turning the gear while the glue sets to help avoid it locking up if you have overspill on the glue. (Arms can fit any orientation on the gears)

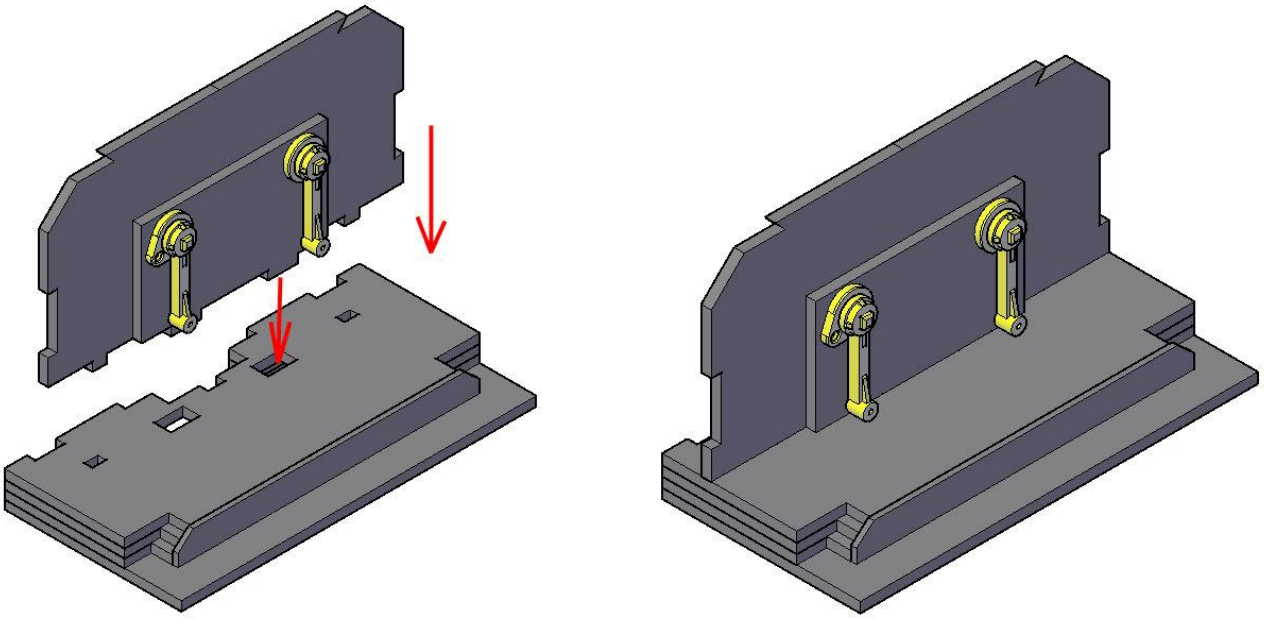




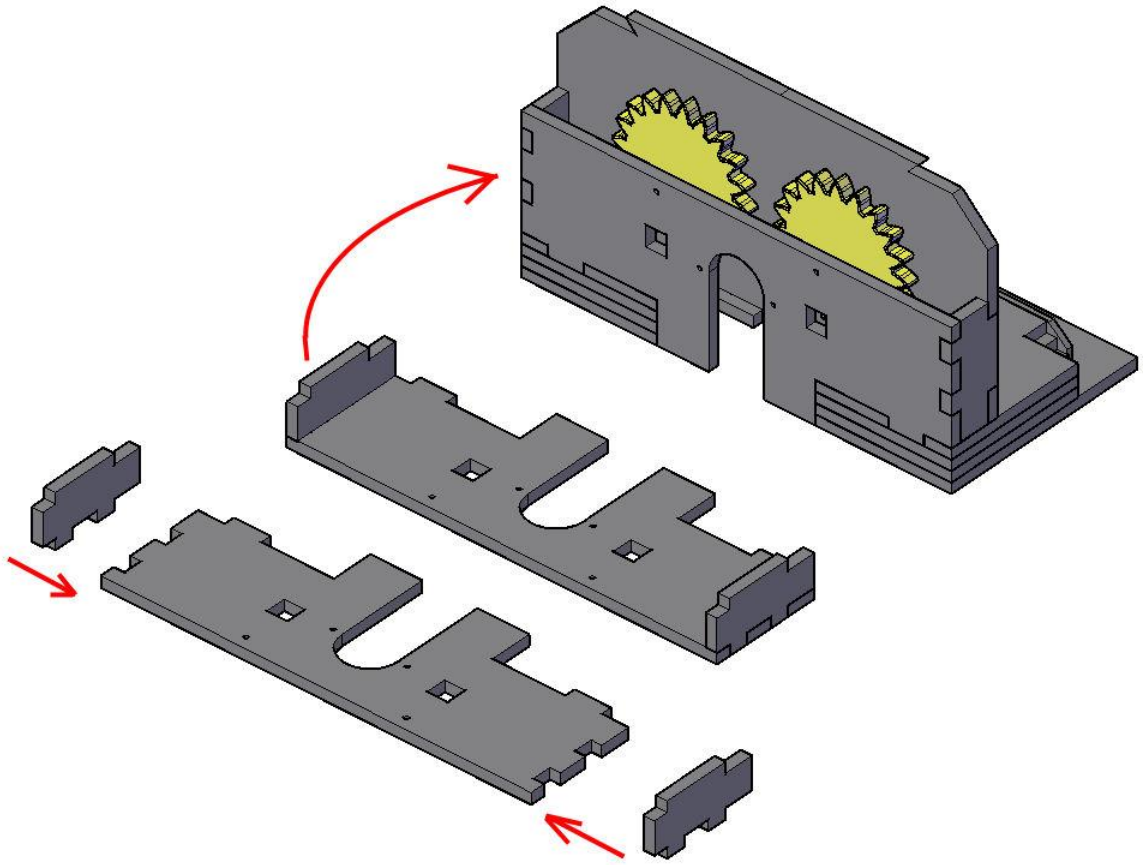
You should end up with 2 arms and gears that rotate freely.



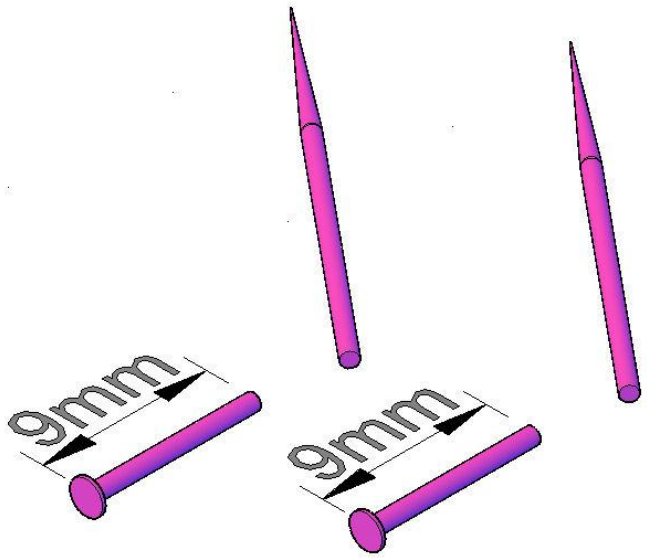
The top assembly can now be glued into the base.



Next assemble the rear cover and glue in place



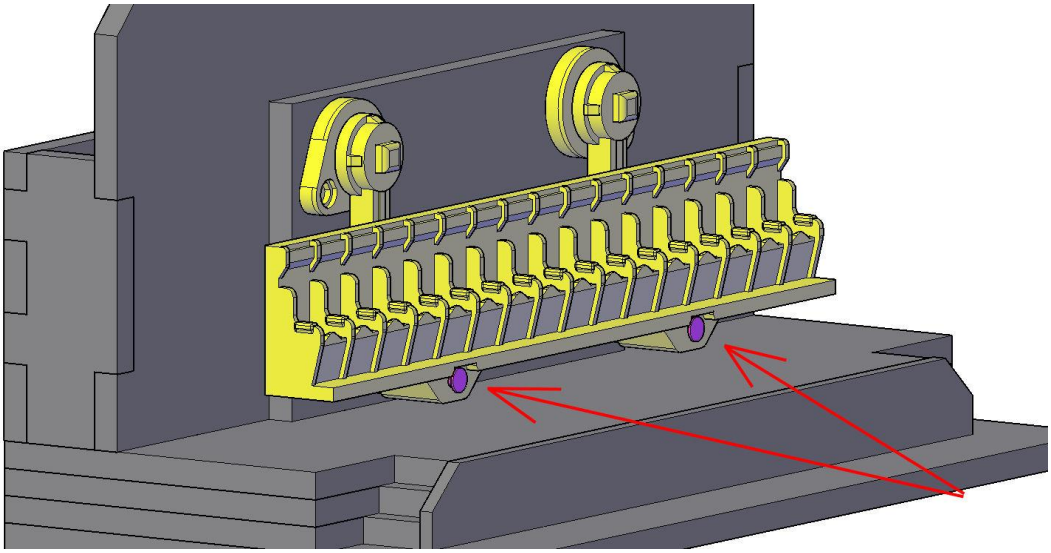
Using 2 small pins - cut them down to 9mm approx and clean the end up with a file

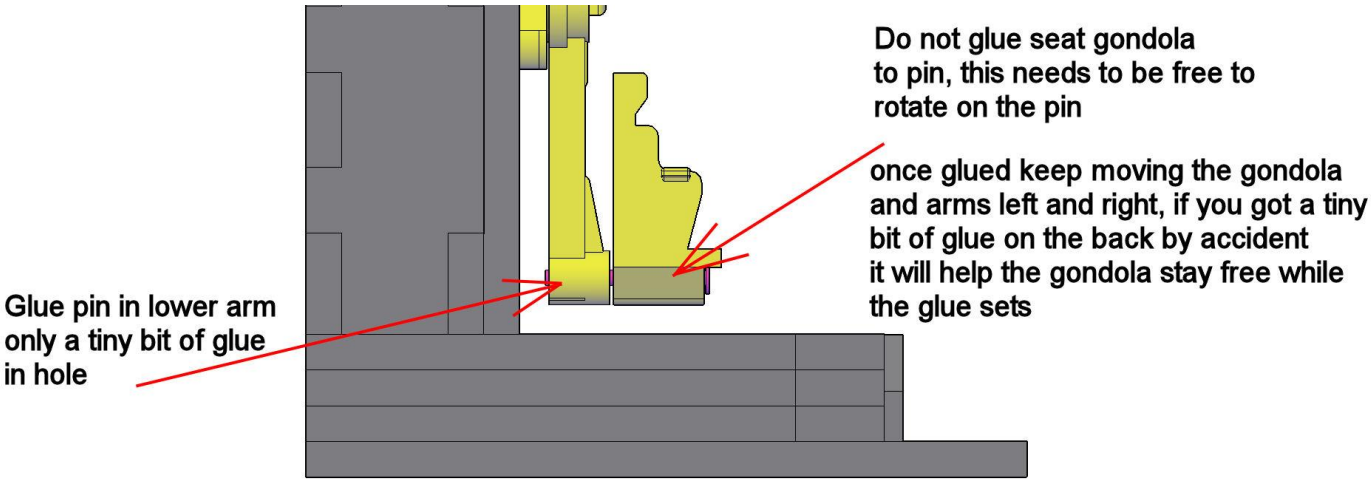


Use the pins as pivots for the gondola. The pins go through the holes in the gondola with no glue and then are glued into the holes in the arms.

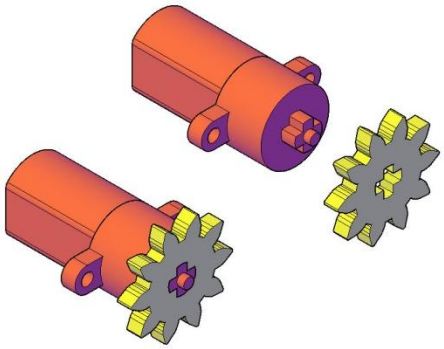
Make sure the pins are free to rotate in the gondola holes and are a snug fit in the arm holes. You may need to drill these to fit your pins and they may not be quite all the way through due to the print process.

Again be very sparing with the glue on the very tip of the pin making sure there is a slight gap left between the gondola and arm. Again keep moving to and fro as the glue dries to help stop any glue overspill grabbing

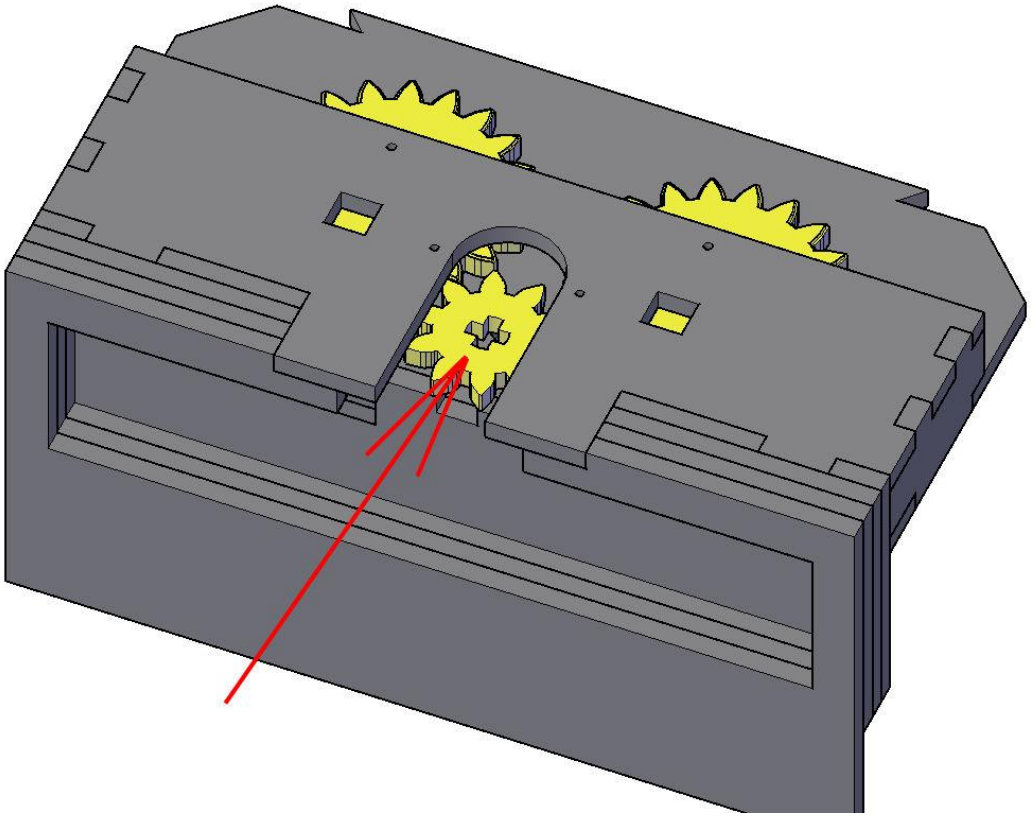




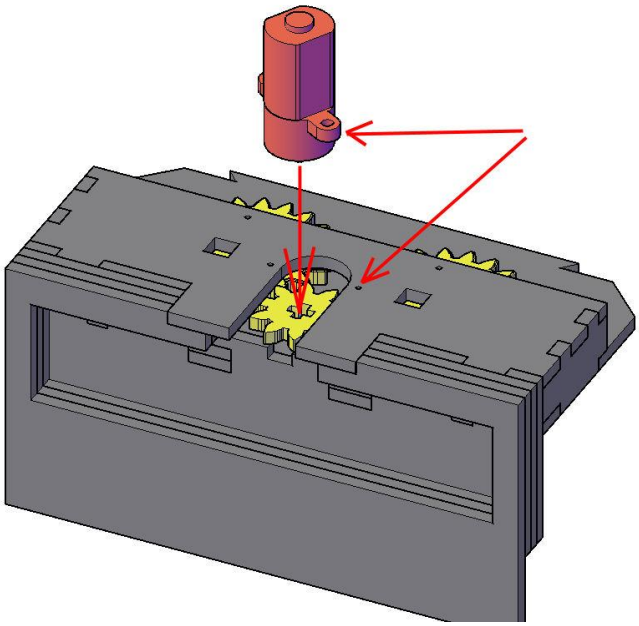
Make sure the small cog fits on the end of the motor, it may only fit one way around.



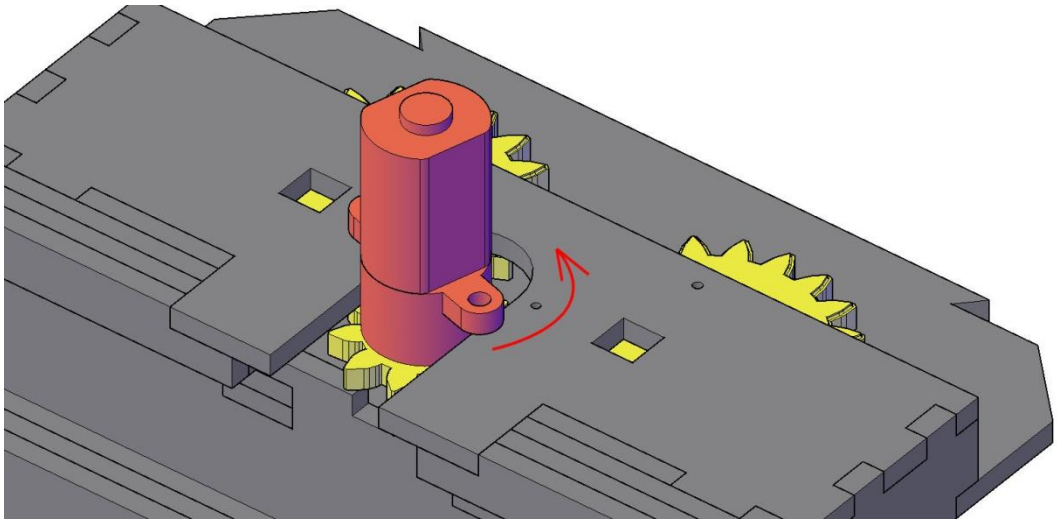
Starting with the gondola at the bottom position – slide the cog up though the back and fit it into the teeth of the other 2 big gears allow the gondola to move slightly as you do this.

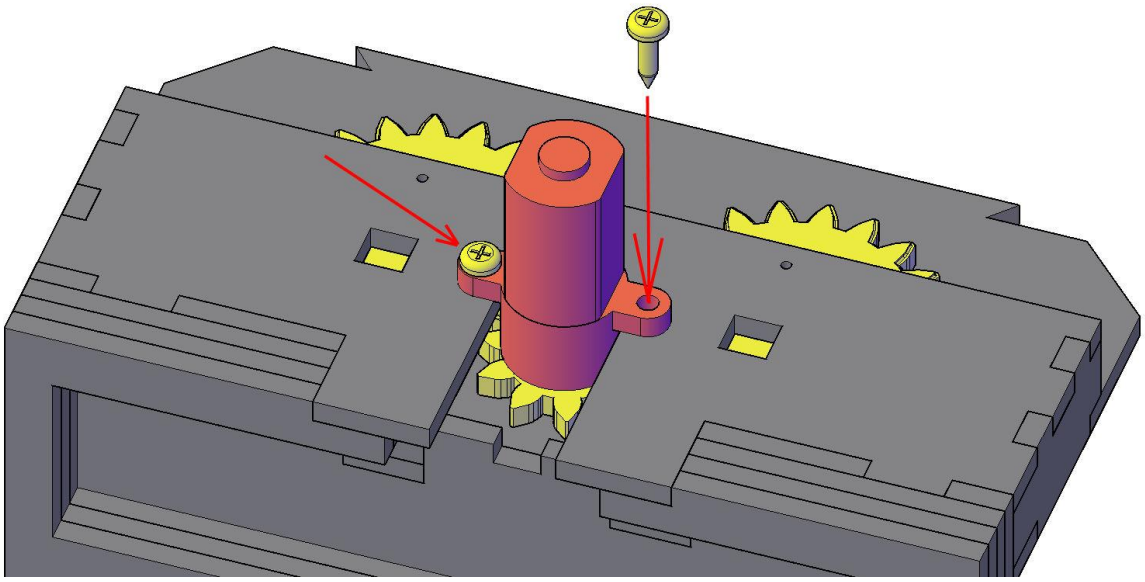


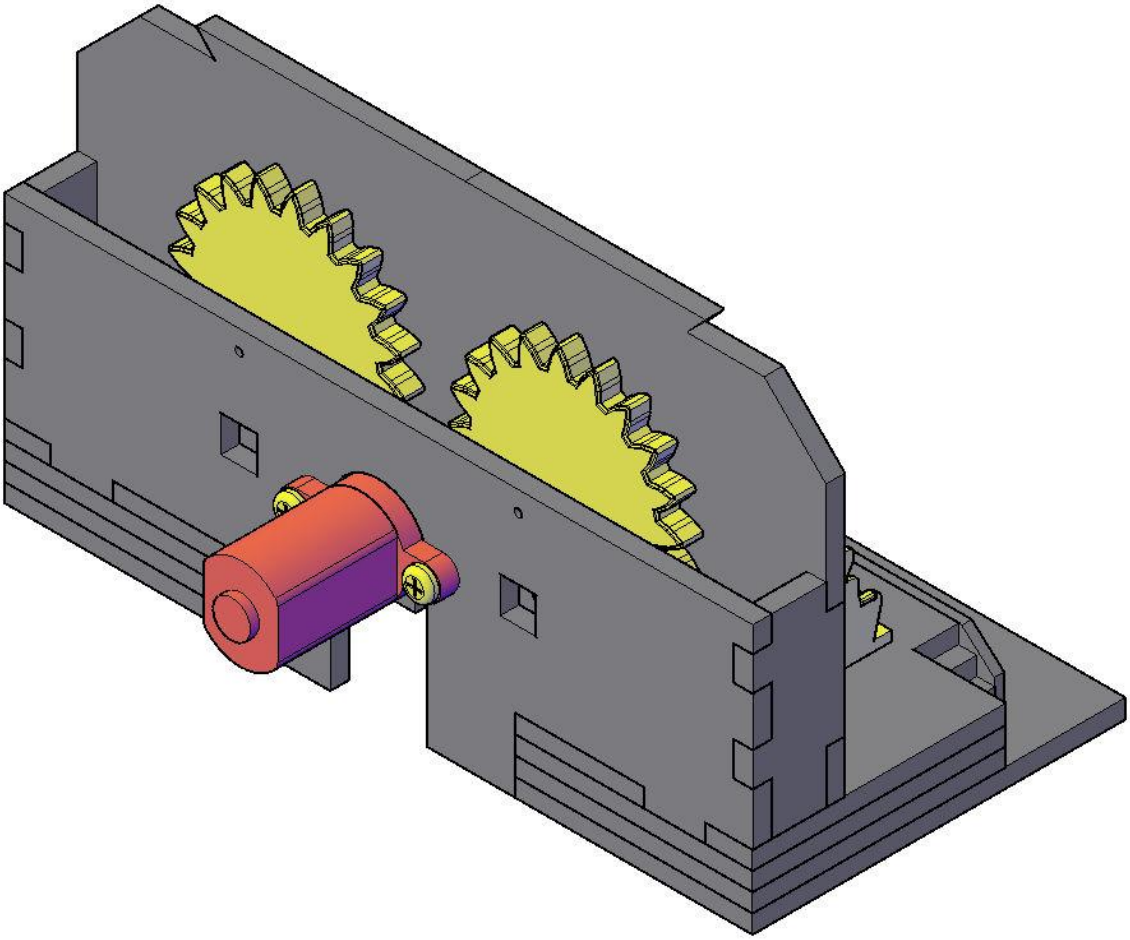
Once you are happy the cog is located in both of the big gears teeth, fit the motor cross into the small cog making sure you keep the cog teeth located (The motor may be turned and not be in line with the screw holes at this point.



Once it is located, turn the motor until the screw holes line up, allow the gears and gondola to move while this is done. Now fit the 2 screws – it is best to allow the motor to be a bit loose and wiggle very slightly rather than tight.





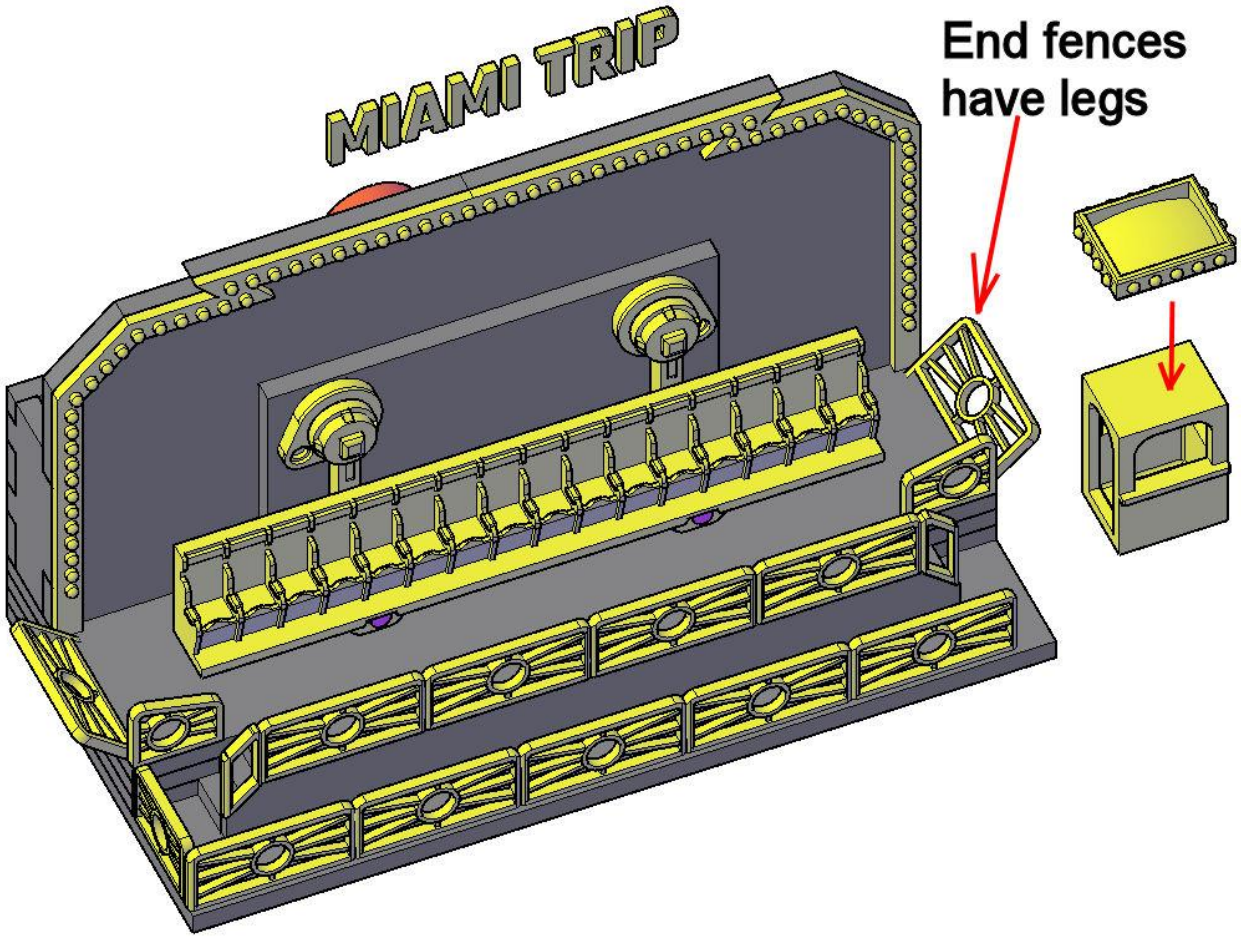


When all is fitted the gondola may be to one side off centre **DO NOT FORCE THIS BY HAND** – from now on this can only move by applying power to the motor – if you force it by hand you will break something or damage the motor.

You should be able to apply power to test. Wire the motor to power and just reverse the wires to go the opposite way only give a maximum of 5V DC to the motor.

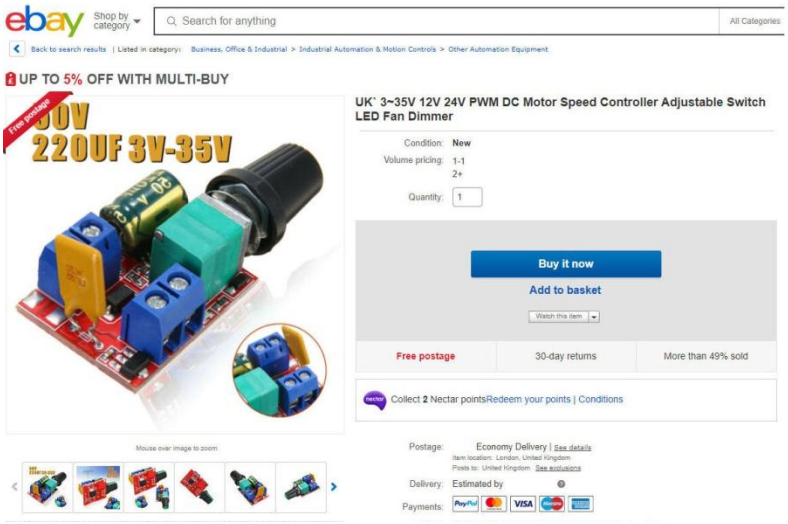
Fit fences as in the picture, the 2 end fences have small legs – file these and glue angled so the gondola misses them.

Glue top on pay box. The letters can be glued on top or on flat card or a cut and shaped paperclip etc.



OPTIONAL

If you want to try and control the model with electronics – you can use just a cheap controller from ebay and have a switch to swap the motor wires to change direction



If you are feeling more adventurous,

There are 2 holes on the back where you can locate small Hall Effect sensors such as the 3144 and glue 2 magnets on the big gears – this will allow you to determine the top and bottom positions so you can control this with an Arduino or Raspberry pi etc and motor driver module