



Custom Hot Wheels Track System



Frikandel321

[VIEW IN BROWSER](#)

updated 2. 6. 2024 | published 2. 6. 2024

Summary

A collection of custom Hot Wheels track parts that fit together to create a rigid race course. More parts coming soon.

[Toys & Games](#) > [Building Toys](#)

Tags: [hotwheels](#) [hotwheelstrack](#)

I don't have enough Hot Wheels track to make a cool stunt course, and the track packs are expensive, so I made my own track system. It is slightly wider than standard Hot Wheels track. The barriers are about the same height and more angled, which allows it to be printed sideways. This model includes straight road, banked road, a ramp and a turn. More parts coming soon.

Edit: I added the connector V3 with thinner connecting arms, step 250-100 without support beam and I replaced the turn with a version with more precise chamfer (for better compatibility with future models) and a circular curve instead of a b ezier curve. I have also tried printing the connector in PETG and decided it is the way to go. In the DIY folder I also added the negative for the connector (clearance included) to make it easier to create custom track. All the old files are still available.

Here are a few notes for every model

Connector:

PLA works well enough with some trial and error, but PETG is way more durable and easier to use.

Insert them into the slots by putting one corner in the slot, and then pushing the other corner inwards. (see pictures)

You can remove them by pulling straight, but off-center.

It is easier to remove connectors by inserting a screwdriver through the hole and pulling, but this is only necessary when printed in PLA.

To connect two pieces of track together simply insert the connector in one of them, and then fit the other onto it at an angle.

Straight Tracks:

Can be printed flat at 0.2 mm layer height, or sideways at 0.1 mm.

I recommend adding mouse ears or brim to avoid warping.

You can create custom lengths in slicer by splitting a track into three sections and stretching the middle one. You can't stretch the entire part, because the connectors need to fit.

Step and Bridge:

I recommend you to print these sideways at 0.1 mm layer height to avoid support material or small contact area. The step also benefits from sideways printing as it will have a smooth driving surface. Both files are still optimized for both orientations.

Turn:

I don't know if it is necessary, but I always print this one with a brim. I also printed this one slightly angled, because otherwise the brim wouldn't fit on the build plate.

Bank:

(To bank to the other side, simply mirror the model)

This one took a few iterations, because the cars kept hopping over the barrier. I eventually ended up raising the inner barrier and lengthening the piece to 200 mm instead of 150. This part can only be printed flat and therefore can't have a completely smooth driving surface. The cars seem to be unaffected by this.

Slicing settings (Prusaslicer, optional):

0.1 mm Layer height

0.2 mm first layer

2 perimeters

10% support cubic infill

Combine infill every 3 layers

Model it yourself:

I highly encourage everyone to make their own track pieces either for specific small adjustments to your own track, or elaborate stunt pieces for everyone to enjoy! Feel free to take an item from the list below and beat me to it. Just be sure to upload your model as a remix.

I make most of these models by duplicating the straight track in Fusion 360, and with offset planes at 15 and 235 mm splitting the object in three. I then remove (not delete) the middle part and move the 2nd part to it's final position. This way I can ensure that the connections are straight and that the driving surface remains smooth(/tangent). Then I 3d sketch a path for the loft/sweep command that joins the parts back together again. Then some lofts from the ground up to support the model from below, and some holes to reduce material cost (optional).

The .step file I included already has the construct planes you need to use as splitting tools.

I am by no means an experienced modeler, but by trial and error it always works out well enough.

There is also an .stl of the start and end of the track, that might be useful for creating a custom shape with simpler 3d modeling software.

Message me:

If you need a specific model but you can't make it yourself, or you have a cool idea, feel free to message me or leave a comment. If it's simple, I might make it for you when I have the time, or I'll add it to the list.

Future Parts / Expansions







I already have a few other models in the works or already finished, but I will upload them separately of the basic parts included here. Some special parts I have planned for the future are:

- Quarter helix (finished model)
- Flat turns
- Jumps and landings
- Looping (working prototype)

- Corkscrew
- Over-banked turn
- Side-by-Side track
- Modular support beams
- Wall mount
- Merge
- Switching diverge
- String-pull activated start

Be sure to follow me for more.

Model files

 Custom Hot Wheels Tracks		8 files
	straight-250.stl	
	straight-220.stl	
	connector-v3.stl	
	step-250-100.stl	
	step-250-100-no-support.stl	



bridge-75-100.stl



bank-200-40.stl



turn-200-90-40.stl



Old

2 files



connector-v2.stl



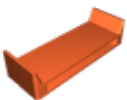
turn-40-90.stl



Make Your Own Tracks

3 files

hot_wheels_track_straight_250.step



track-start.stl



connector-negative.stl

License

This work is licensed under a
Creative Commons (4.0 International License)



Attribution—Noncommercial—Share Alike

- ✗ | Sharing without ATTRIBUTION
- ✓ | Remix Culture allowed
- ✗ | Commercial Use
- ✗ | Free Cultural Works
- ✗ | Meets Open Definition