

## RC CAR Differential #3



Prism08

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### Summary

This new version is ... smaller; it is compatible with my RC CAR V2 but should be used in other (future) designs



3.45 hrs



1 pcs



0.30 mm



0.40 mm



PLA



32 g



Prusa  
MK3/S/S+

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This time it's a full redesign including the gears... And obviously in order to reduce the size, I had to make some compromises. So I no longer use ball bearings for the spider gears which are now directly on a tiny PLA axle.

As the spider gears rotate only when the car is turning this should work. I was a little worried because the power is transmitted through this tiny axle (which locks the diff cup and the drive gears together when the car is going straight). But I didn't break it !

I have kept the same ball bearings for the diff cup axle (or main axle) and for the drive gears and for the pinion : 6700ZZ (15x10x4) (QTY 2) and MR-117 (11x7x3) (QTY 5)

Well this thing now looks the part (pun intended) !

### Printing tips:

I retain my naming convention for parts:

XXXnn-kk-name

XXX = sub assembly

nn part number within this assembly

kk number of instances needed in one single instance of the sub assembly

The housing is printed floating in the air and I used variable layer height for all parts.

This helps to make the inside of the housing and gears more accurate and barely slows the print.

I'm providing adapters for my RCCAR V2. <https://www.printables.com/model/281110-new-design-rc-car-v2-almost-fully-printed>

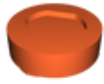
I've replaced the rear differential with this new version and it works perfectly as the reduction is still 1:2...

## Model files





**dfc09-01-pinion-shaft.stl**



**dfc05-01-diff-cup-cover.stl**



**dfc03-01-spider-axle.stl**



**dfc08-02-drive-axle.stl**



**dfc02-02-spider-gear.stl**



**dfc01-02-drive-gear.stl**



**dfc11-02-diff-bracket.stl**



**dfc10-02-diff-housing-half.stl**



**dfc07-01-pinion.stl**



## V2 adapters

2 files

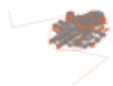


**dfc12-01-v2-adapter-r.stl**



**dfc12-01-v2-adapter-l.stl**

## Print files



**dfc01-02-drive-gear\_03mm\_pla\_mk3s\_3h27m.gcode**

🌀 PLA 📏 0.40 mm ⚖️ 0.30 mm ⌚ 3.45 hrs ⚖️ 32 g 🖨️ Prusa MK3/S/S+

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