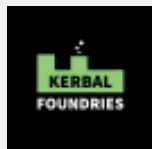


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# [1.0.x] [V1.9f] Kerbal Foundries wheels, anti-grav repulsors and tracks

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By lo-fi, June 25, 2014 in Add-on Development

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## WHAT TO WORK ON NEXT?

[1,268 MEMBERS HAVE VOTED](#)

### 1. What to work on next?

More wheels	9.75%	121
More tracks	36.18%	449
Rover bodies	19.18%	238
Landing gear	10.96%	136
Landing legs	8.7%	108
Something completely different	15.23%	189

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The 'Wheel Collider' guy



Posted June 25, 2014 (edited)

[Report post](#)

## 1.1.x & 1.2.x NOTES:



Members

+ 811

2,415 posts

It is being  
worked on,  
but there is  
currently  
no 1.1.x or  
1.2.x comp  
atibility. Do  
not ask for

an ETA or  
you will be  
slapped in  
the face  
with a fish.  
You have  
been  
warned..

We're working on it, but as Squad found, U5 wheel colliders in KSP are about as stable as a stack of ping-pong balls. It's being working on by some very clever people, so please be patient. In fact, we're working on an entirely new wheel collider (the bit of U5 that's given Squad so many problems). As you may imagine, this is not easy or quick, but progress is being made. Please do not ask when it'll be ready or badger us to update. Such requests will b met with a slap around the face with a wet fish. You have been warned - we have the Holy Mackerel primed and ready, and it won't be pretty.

By all means, stay tuned, offer encouragement, post what you're doing (in previous KSP versions) with KF stuff and do suggest whacky stuff we might be able to have fun creating when we've got working wheels again.

**DOWNLOAD:** KF v1.9 which is 1.0.x compatible can be downloaded [here](#).

### 1.9 Changelog:

#### New parts:

Giballed repulsor. Less crashy-crashy-boom-boom.

Simple track (quite small)

More to follow shortly when textures/IVA's have been finished!!

#### New features/enhancements:

DustFX! This is similar to the CollisionFX mod, but totally re-purposed specifically for wheels

Dust colour can either be updated by biome information, or in realtime by sampling the ground colour.

Repulsor effects. They throw dust too, as well as creating eerie blue light... New animated texture as well.

Gui: you can toggle various things like the repulsor lights, dust, VAB/SPH orientation marker from the simple GUI

Wheel acceleration is now affected by vessel mass. Bet you never noticed it wasn't before 🤖

Control input improvements. Hopefully you'll feel rovers are

a little less.... arcade-ish.

APU now has configurable target battery state. Sound has been improved too.

Memory footprint reduction. It's about 40M. Less than a third of the previous release.

Various performance improvements, which I won't bore you with.

You may notice that the simple track is not an asymmetric part, which is not common in KSP. More like this will follow now the plugin stuff is in place to enable this.

Logging has been improved to show KF related things clearly.

TweakScale support has been vastly improved. Everything that should, I believe, now scales with the parts

Rebalance of cost/weight/speed/tech node (Community Tech Tree too) for all parts. This may need some more work.

Support for alternate resources added.

Information, description, EC usage is all now displayed in editor

Icon size fixes for the tracks is now built in

Tracks no longer make the craft appear larger than it really is in the engineers report.

Track textures flip over to create symmetrical track patterns on opposite sides. Neat, huh?

Probably a bunch of stuff I've forgotten too, as well as stuff that enables forthcoming parts....

[Javascript is disabled. View full album](#)

### **Install Instructions:**

Delete existing 'Kerbal Foundries' folder. Unzip new version into KSP folder. You will end up with  
GameData\KerbalFoundries. Enjoy the Kerbal mobility goodness 🤖

Optional:

[TweakScale](#): No further explanation should be required. Nothing bad will happen if you don't have it.

### **FAQ & Troubleshooting:**

*This mod crashes my game.* There are a few possibilities:

You're running KSP Win64. **DON'T**. It doesn't work correctly, Squad don't support it and neither do I. Some people manage; bad luck if you're not one of those.

You're running active texture management. It hasn't crashed, be patient while it compresses the textures for the first time. Startup will be quicker subsequently.

You're running too many mods and you're out of memory. Trim down your install, force OpenGL or run Active Texture Management (or similar).

I've yet to run into anything that isn't caused by one of those things listed about. Crashing is usually memory related.

*The wheels don't work and sink into the ground:*

You've put them upside down. Download 1,8d and you'll have nice orientation markers.

*The repulsors behave a little quirky:*

They're anti-gravity devices, what do you expect 🤖

### **Filing bug reports:**

If you run into trouble, please do the following: Post an output\_log. This can be found in the KSP\_Data directory. Preferably stuffed into dropbox or similar, rather than pasted into the thread (between SPOILER tags please, if you must) as they can get quite lengthy. Screen grabs are helpful, as are craft if they're mostly stock apart from KSP parts. A detailed description of the problem too, please. Just saying 'hey, (whatever part) isn't working' is not helpful.

If you have an issue with odd behaviour, rather than something that's likely to be revealed by a log file, please post screen shots, KSP version & platform and KF version,

along with as much info as you can give.

### **General release notes:**

AGAIN!! Everything has changed. I've completely ditched the stock wheel module in favour of my own home-grown alternative. Some might say this is a bold move, and rightly so. There will be bugs, there will be certain situations where the wheels behave a little differently to stock. If you don't want to deal with that and file sensible bug reports should you run into something strange, please don't update for the moment. The new plugin is mostly helpful because it greatly simplifies creating new parts, as the stock modules are rather fussy. However, subtle differences do exist and you should find that the dynamics are much better now. Parts have all received a CoG tweak which has also helped.

Apologies for breaking saves, I found that the old and new versions are simply not compatible and weird, weird bugs occurred. Forcing fresh craft files is about the only way to deal with this, so that's what I've done. If you want to re-use existing craft files, just remove KF parts and re-save before updating the mod, then add the new versions.

### **Groups:**

You'll notice a UI slider called Group Number, along with an Apply Settings button. This does several things. For repulsors, it changes the hover height of all other repulsors on the vessel in the same group number as the selected part. For wheels, steering ration and direction calculation will happen for parts in the same group. Useful for multi vehicle vessels and those with docked rovers. Group 0 is special! A part set to group zero will only update its own setting, and will not receive settings from other parts (even in group 0). Sounds complicated, but it's easily understood when you're in-game. Parts default to group 1.

### **Repulsor notes:**

- 1) They do levitation. Nothing more!!  
Propulsion, braking and control are all up to you. Get inventive!
- 2) The height adjustment and retract/deploy function has now been rolling into one.  
Setting to 0 height turns the repulsors off.  
There are two action groups to change the height, as well as the UI slider to change individual units. The action groups change the height .5 for each activation.
- 3) Surface mount repulsors are now smaller and uni-directional. They have no stability of their own, so you'll want to use at least three if you want a self stable craft. I've added TweakScale support to facilitate easy placement. It makes them a little trickier to use, but much more flexible when using lots of them.
- 4) Effects are on the way. Lights and emissives are all in the works.
- 5) Energy usage depends on hover height.
- 6) Fixed a major bug where repulsors would randomly switch off due to low energy when there was plenty available.
- 7) You will need the TweakScale plugin if you don't already have it and would like to use this feature:  
[http://forum.kerbalspaceprogram.com/threads/80234-24-2-TweakScale-Rescale-Everything!-\(v1-33-2014-07-28-20-00-UTC\)](http://forum.kerbalspaceprogram.com/threads/80234-24-2-TweakScale-Rescale-Everything!-(v1-33-2014-07-28-20-00-UTC))

#### **Wheel notes:**

- 1) I've done some funky stuff detecting each wheel's position in the vessel and calculating how much it should be steering. If you make a truly whacky vessel with the root part in a strange orientation this may not work correctly (Should now be fixed in 1.7).
- 2) Docking/undocking needs some attention,



especially if rovers are mounted on a launch craft in an odd orientation. This will be fixed, I just need some time to work out how KSP handles the tree rebuild and get my code to recalculate accordingly. Groups will help with this.

### **Track notes:**

1)There is a KSP bug in the bounds detection of the skinned mesh that the tracks are made of. This means the editor icon is \_tiny\_. It's a known KSP issue and something I can do nothing about at the moment I'm afraid.

2)Steering is slightly different to wheels. Pressing D, for example, tells the vehicle to rotate clockwise (looking down), rather than steer right. This might sound like the same thing, but you'll find the controls are reversed compared to driving with wheels. This is by design. Otherwise there is a nasty crossover region between forward and backward motion when rotating on the spot.

3)There is a UI slider and action groups to change the torque, along with an action group and button to disable steering. This hopefully opens up the design possibilities. Energy consumption is related to torque.

4)I've hopefully nailed the direction detection code. It works for all of my designs, I'll wait to here if it works for everyone.

A massive, massive thank you to the RBI guys for open-sourcing the originals. I can't tell you how helpful it's been 🙏

5) The steering on the re-released RBI unit can get a little funny when mounted upside down. I'll fix later. For the moment, enjoy them right side up, please 🙏

### **APU notes:**

This is designed to be used alongside anything that requires ElectricCharge. By default, it will spool up and down depending on battery state and current load. Having too small a battery can cause problems, though, so take at least one small pack, rather than relying on tiny charge storage from command pods etc.

*We could really use another hand with the texturing. Justin does a cracking job, but it's time consuming compared to everything else so there's now quite a backlog of untextured parts. Any offers greatly appreciated!*

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OUT OF OR IN CONNECTION WITH THE  
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DEALINGS IN

The SOFTWARE.

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Publicly released plugin code is covered by GNU GPL3.

Anything else to be considered all rights reserved.

Edited October 27, 2016 by lo-fi

Unlocked as per OP's request

R3QUIT3D, Mycroft, Zuqq and 37 others like this



[Kerbal Foundries](#): Wheels, tracks and anti-grav repulsors



*The real art in creating anything is keeping those who know a thing can't be done away from those who are doing it.*

*"...and the battle of the lost staplers begins. Many deaths."*

## BrutalRIP

Sr. Spacecraft Engineer



Members

+ 57

446 posts

Posted June 25, 2014 (edited)

Report post

wow i want NOW but think we wont see this released before .24;;;

im also offering to help test it for you

Edited June 25, 2014 by BrutalRIP



Sacrificing Kerbals in the name of science.



Coffee Anyone ??

## Gaalidas

Capsule Communicator



Members

+ 266

1,707 posts

Posted June 25, 2014 (edited)

Report post

So, I must say those wheels are really "purdy" and I really want them. The hover "wheels" are interesting. I worry about keeping the craft oriented properly for long-distance, but I sorta have an idea of what you did there. I looks like something similar to the omni-wheel, but without the visual element and with your new suspensions. Even as it is now, you've definitely filled the bill for something I've been trying to do for quite some times using other hover-related mods... and failed miserably.

Edited September 15, 2015 by Gaalidas



*...It all made a LOT more sense when it was still in my head.*

Official mascot of Kerbal Foundries.

## Neutrinovore

Junior Rocket Scientist



Members

+ 130

776 posts

Posted June 25, 2014 (edited)

Report post

Hmm, I like the look of what you're doing here. I'll be looking forward to this release. 🤖

Edit: Thanks for fixing the spelling error. I don't like to be 'that guy', but it's simple things like that that can make the difference between a professional-looking presentation and an amateurish one. 🤖

Edited June 25, 2014 by Neutrinovore



Some of my favorite quotes:

"Attention: National Procrastination Week has been postponed until next month."

"A lack of preparation on your part does not constitute

## YANFRET

Astromonkey



Members

+ 733

1,350 posts

Posted June 25, 2014

Report post

This looks great I'd like to test it out



## lo-fi

The 'Wheel Collider' guy



Members

+ 811

2,415 posts

Posted June 25, 2014

Report post

Thanks guys 🤖

I've got a few things to work through, but I'll post links up (hopefully) later this eve. It's actually quite nerve-wracking setting something up for public release... about a million thoughts of 'what if someone does this, that or the other'... But, Squad do it, and having a few other bods trying trying to break stuff will actually save me some of the testing, so here goes... Let's do this Kerbal style! Watch this space.

Thanks for the heads up on the spelling btw 🤖



[Kerbal Foundries](#): Wheels, tracks and anti-grav repulsors

*The real art in creating anything is keeping those who know a thing can't be done away from those who are doing it.*

*"...and the battle of the lost staplers begins. Many deaths."*

## Robotengineer

Aerospace and Mechanical  
Engineering, 2020



Posted June 25, 2014

Report post

These are really cool, especially the anti-grav repulsors. I would like to make some parts for this mod if that is all right.



Members  
+ 1,495  
3,133 posts  
Location: Mars

B.S. Aerospace and Mechanical Engineering, 2020.



*"Two things are infinite: the universe and human stupidity, and I'm not sure about the universe."* – Albert Einstein

PSA: This post may contain humor that has learned how not

lo-fi

The 'Wheel Collider' guy



Members  
+ 811  
2,415 posts

Posted June 25, 2014

Report post

▼ Gaalidas said:

I worry about keeping the craft oriented properly for long-distance

The joy of it is you don't have to keep the craft oriented! You can just have fun drifting around as you please, using tiny amounts of RCS. Private testing has been positive so far. I never set out to create something like the repulsors; they're the result of a silly conversation, a 'hmm, what if' sort of idea, trailblazing through the KSP API while learning C# and *abject* abuse of Unity physics objects. I've loved every minute 🤖



[Kerbal Foundries](#): Wheels, tracks and anti-grav repulsors

*The real art in creating anything is keeping those who know a thing can't be done away from those who are doing it.*

*"...and the battle of the lost staplers begins. Many deaths."*

lo-fi

The 'Wheel Collider' guy



Posted June 25, 2014

Report post

▼ Robotengineer said:

These are really cool, especially the anti-grav repulsors. I would like to make some parts for this mod if that is all right.



Members  
+ 811  
2,415 posts

Thanks 🐼

If you've got some ideas, that would be awesome! The Unity hierarchy changes from standard wheels are significant, and I've written no documentation on my plugin yet, but I'm trying to put together a live stream tutorial on how it's all set up. Again, watch this space! I have to get some meshes sorted for texturing this eve, after that I'll try and martial everything together for a soft release.



[Kerbal Foundries](#): Wheels, tracks and anti-grav repulsors x ▾

*The real art in creating anything is keeping those who know a thing can't be done away from those who are doing it.*

*"...and the battle of the lost staplers begins. Many deaths."*

## nli2work

Geriatric 3D Artist



Members  
+ 1,030  
2,836 posts

Posted June 25, 2014

Report post ↗

3 weeks! Amazing! Looking forward to this. Will be reading your source codes closely. 🐼



[1.1 Orbital Utility Vehicle](#) x ▾

[Dr. Kermnassus' Parts Emporium](#)

[Error messages in KSP or Unity? check this!](#)

v0.9 [Video tutorials: Airlocks; Ladders; IVA; Internal Props; Engines](#)

[Old mod assets for Unity you can use for your own projects](#)

## lo-fi

The 'Wheel Collider' guy



Posted June 25, 2014 (edited)

Report post ↗

▼ nli2work said:

3 weeks! Amazing! Looking forward to this. Will be reading your source codes closely. 🐼

That's probably the bit I'm dreading the most!!!! Comments



Members  
+ 811  
2,415 posts

appreciated. If I can do anything better, please, please, please chime in. Abject newbie, so I'm sure I've done some horrible things to C#. That being said, what a beautiful language!

That's three weeks of 3am finishes and I learn fast, mind you 🤖

Edited June 26, 2014 by lo-fi



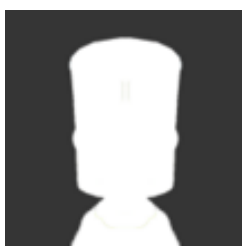
[Kerbal Foundries](#): Wheels, tracks and anti-grav repulsors x ▾

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*"...and the battle of the lost staplers begins. Many deaths."*

## Pondafarr

Sr. Spacecraft Engineer



Members  
+ 16  
278 posts

Posted June 25, 2014 (edited)

Report post ↗

Those. Are. AWSOME. Just sayin.

I am a little concerned on having suspension movements on the anti-grav units, doesn't seem like it should be required, as the anti-grav field should be absorbing the suspension motion, not the mechanical support for the generator units.

also, is the ride height going to be tweakable? Sometimes, ya wanna ride low. Some times, you need more ground clearance....

Derp, saw the line in the code specifcily calling out the tweakable...should read before speaking 🤖

Edited June 25, 2014 by Pondafarr



## lo-fi

The 'Wheel Collider' guy

Posted June 25, 2014

Report post ↗





Members

+ 811

2,415 posts

▼ Pondafarr said:

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also, is the ride height going to be tweakable?  
Sometimes, ya wanna ride low. Some times, you need more ground clearance....

I really, really need to make a new video.... That was a muck-about after literally five minutes in Unity to prove the concept. So busy trying to get everything debugged and out of the door.

Yup absolutely hear you with the suspension travel - now fixed, will update video.

Yep, it's tweakable alright! In-flight too...

And thanks -really glad people are liking the concept.  
Makes all those hours worth it 🤖



[Kerbal Foundries](#): Wheels, tracks and anti-grav repulsors ✕ ▼

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*"...and the battle of the lost staplers begins. Many deaths."*

## Boomerang

Sr. Spacecraft Engineer



Posted June 25, 2014

Report post ➦

Those parts look great. The hover parts seem like they'd be fun and if the rover wheels perform like in that video sans bugs, I could see them becoming the go-to wheels for med-sized rovers for a lot of people. Can't wait to try them.

Members

+ 79

499 posts



## Robotengineer

Aerospace and Mechanical  
Engineering, 2020



Members

+ 1,495

3,133 posts

Location: Mars

Posted June 25, 2014

Report post



Just downloaded the dev and played around with it, really like that all wheels switch between repulsor and wheel at once. These may have replaced BahamutoD's critter crawler as my new favorite ground transport 🤖



B.S. Aerospace and Mechanical Engineering, 2020.



*"Two things are infinite: the universe and human stupidity, and I'm not sure about the universe." – Albert Einstein*

PSA: This post may contain humor that has learned how not

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Geriatric 3D Artist



Members

+ 1,030

2,836 posts

Posted June 25, 2014 (edited)

Report post



lo-fi said:

That's probably the bit I'm dreading the most!!!!  
Comments appreciated. If I can do anything better, please, please, *please* chime in. Abject newbie, so I'm sure I've done some horrible things to C#. That being said, what a beautiful language!

<https://github.com/Lo-FiOrbitalScience/KerbalFoundriesDev/tree/master/SRC>

You'll be most interested in SteeringTest.cs. Enjoy 🤖

That's three weeks of 3am finishes and I learn fast, mind you 🤖

I am as a newb as you are! I've been thinking over how to take advantage of the wheel system for a while. trying learn up on all I can. between your system a bahamuto's there is a wealth of information.

Any reason why the deploy and retract code is in Wheel.cs; Repulsor.cs; and SteeringTest.cs? different versions of the whole system?

Edited June 25, 2014 by nli2work



[1.1 Orbital Utility Vehicle](#)



[Dr. Kermnassus' Parts Emporium](#)

[Error messages in KSP or Unity? check this!](#)

v0.9 [Video tutorials: Airlocks; Ladders; IVA; Internal Props; Engines](#)

[Old mod assets for Unity you can use for your own projects](#)

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Aerospace and Mechanical Engineering, 2020



Members

+ 1,495

3,133 posts

Location: Mars

Posted June 25, 2014

Report post

Here are some pics, I will take it to the moon next 🙄

[Javascript is disabled. View full album](#)



B.S. Aerospace and Mechanical Engineering, 2020.

*"Two things are infinite: the universe and human stupidity, and I'm not sure about the universe." – Albert Einstein*

PSA: This post may contain humor that has learned how not

## Neutrinovore

Junior Rocket Scientist



Members

+ 130

Posted June 25, 2014

Report post

I'm surprised that so many people are interested in the hover repulsor thingies. The maker of the RollKage system had experimented with this exact same thing quite a while ago, and got absolutely ZERO interest on it. I still have the mod in my downloads folder, but I don't have it installed anymore because of one very simple reason: since there's no sideways friction or tracking of any kind, combined with no 'traction' for the hover system, it's virtually impossible to

negotiate even a very gentle slope. It's like trying to push a ball bearing up a ramp with nothing more than the tip of a ballpoint pen. You end up going every which way EXCEPT up the hill. 🤖

Try it. Drive your experimental hovercar thing out into the hills west of KSC. You'll see what I mean.

I'm not trying to discourage you btw, lo-fi. I'm just pointing out some potential pitfalls that you may want to take into consideration. 🤖

Anyway, I'm VERY much looking forward to the wheels. I hope that they'll have some sideways slip like the RollKage wheels do, so that one doesn't instantly flip their rover over when steering at speeds above 5 m/s the way the stock wheels do. I find the stock wheels to be utterly useless for this reason alone.

So again, good luck, and I'm eager to see what develops next.

Later! 🤖



Some of my favorite quotes:

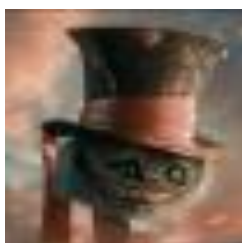


"Attention: National Procrastination Week has been postponed until next month."

"A lack of preparation on your part does not constitute an emergency on my part."

## Mekan1k

Harbinger



Members

+ 87

2,215 posts

Posted June 25, 2014

Report post

I volunteer for testing! (I use most mods, so if there is an incongruity, I will probably find it)



My stories :



1)

2)

**lo-fi**

The 'Wheel Collider' guy



Members

+ 811

2,415 posts

Posted June 25, 2014

Report post

▼ **Robotengineer said:**

Just downloaded the dev and played around with it, really like that all wheels switch between repulsor and wheel at once. These may have replaced BahamutoD's critter crawler as my new favorite ground transport 🤖

That's a real honour to be mentioned alongside that mod. Incredible piece of work, it's absolutely stunning.

▼ **nli2work said:**

I am as a newb as you are! I've been thinking over how to take advantage of the wheel system for a while. trying learn up on all I can. between your system a bahamuto's there is a wealth of information.

Any reason why the deploy and retract code is in Wheel.cs; Repulsor.cs; and SteeringTest.cs? different versions of the whole system?

I've been working on a lot of stuff, need to move some things to utils. Yep, lots of stuff in the pipeline 🤖 Including a Star Wars speeder bike for Kerbals..

▼ **Robotengineer said:**

Here are some pics, I will take it to the moon next 🤖

<http://imgur.com/a/YgpqX>

Superb! You'll find some strange issues with the anti-roll in very low grav though, I need to create a bigger dead-zone. The control loop fights itself and gets KSP all in a tiz... Hell, I'll call it a 'feature' not a bug. Dealing with ant-grav, right 🤖

Also some null-refs in VAB/SPH if you flick back to it, I'm

still trying to figure that out. Had something go really strange with one of my saves too, so use with caution! Everything went in time-warp, speeds were all wrong and I had to start a fresh save. May just be a KSP thing and unrelated, though..

Go break stuff:D My testing has been limited and I tend to forget after adding new features. It's all very, very early stage with lots of finishing touches and bug fixes needed.



[Kerbal Foundries](#): Wheels, tracks and anti-grav repulsors ✕ ▾

*The real art in creating anything is keeping those who know a thing can't be done away from those who are doing it.*

*"...and the battle of the lost staplers begins. Many deaths."*

## Robotengineer

Aerospace and Mechanical Engineering, 2020



Members

**+ 1,495**

3,133 posts

Location: Mars

Posted June 25, 2014

Report post

Another thing, (if possible) could you make it so that in repulsor mode it can go over water?



B.S. Aerospace and Mechanical Engineering, 2020. ✕ ▾

*"Two things are infinite: the universe and human stupidity, and I'm not sure about the universe." – Albert Einstein*

PSA: This post may contain humor that has learned how not

## lo-fi

The 'Wheel Collider' guy



Posted June 25, 2014

Report post

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Members

+ 811

2,415 posts

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I'm not trying to discourage you btw, lo-fi. I'm just pointing out some potential pitfalls that you may want to take into consideration. 🤖

Anyway, I'm VERY much looking forward to the wheels. I hope that they'll have some sideways slip like the RollKage wheels do, so that one doesn't instantly flip their rover over when steering at speeds above 5 m/s the way the stock wheels do. I find the stock wheels to be utterly useless for this reason alone.

So again, good luck, and I'm eager to see what develops next.

Later! 🤖

Cheers! Absolutely fair comments. I took the 'throw some RCS or small engines at it and it works fine' approach. Simply an anti-grav; the propulsion is up to you. Hillclimbing has not been an issue so far, you just need an appropriate amount of power 🤖 I've been merrily hacking my way around the mountains, but they're really for low-grav where wheels just don't work too well and a little goes a long way.

I wasn't aware of the rollcage version, I'll look it up.

I think you'll be pleasantly surprised with the handling characteristics in wheel mode - that was the whole point of making a mod really. I too got fed up with silly flipping over, which is why I've gone to such lengths. I always used to



use Rollcage wheels instead of stock, but I wanted tweakables. The only way was to bake my own... Then things got out of hand...



[Kerbal Foundries](#): Wheels, tracks and anti-grav repulsors

*The real art in creating anything is keeping those who know a thing can't be done away from those who are doing it.*

*"...and the battle of the lost staplers begins. Many deaths."*

## Drew Kerman

KSA Operations Director



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Posted June 25, 2014

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DO WANT! Great work on getting all your goals accomplished with so little coding experience. Coding makes you feel so powerful doesn't it? You can do ANYTHING! MWAHAHAHAHA!!

Anyways, the KSA will be putting in an order for your parts for sure

Squishydoo likes this



**Kerbal Space Agency**

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## lo-fi

The 'Wheel Collider' guy



Posted June 25, 2014

Report post

Robotengineer said:

Another thing, (if possible) could you make it so that in repulsor mode it can go over water?

That's WIP. There is some stuff in the API that deals with buoyancy, but it's WEIRD. I'm on it, but that's going to take



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some time I'm afraid



[Kerbal Foundries](#): Wheels, tracks and anti-grav repulsors



*The real art in creating anything is keeping those who know a thing can't be done away from those who are doing it.*

*"...and the battle of the lost staplers begins. Many deaths."*

**nli2work**

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How did you get to look at the KSP API? adding the KSP dlls to your project?



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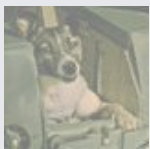
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