[1.7.x] ReCouple - Monocouple your bicouplers!

By Boosts, February 28, 2017 in KSP1 Mod Development

Boosts — Posted February 28, 2017 (edited)

Ever want to use 3x or 5+ couplers but want to recombine the stacks before the next stage? Ever wish you could make creative stacks in the VAB without having to use some spare stock to keep the open end closed?

Here's the answer you've been looking for: **ReCouple!** works around the Vessel tree by identifying attach nodes that would have been converted into part without a part having multiple parents or creating a circular structure. Once those nodes are identified, it hides them in the editor so that you don't accidentally connect something else to that node. Then, it applies a structural fix identical to the ones that normally hold parts together.

But wait! There's more! When decoupling (or explosions) happens, it detects if one of the virtual connections would continue holding the vessel together and magically makes that the real connection point as if no funny business had been happening!

They as a picture is worth a thousand words, here's what it does: http://imgur.com/a/LxFfb (Pending picture isn't working for me. Just go to the album. It's worth it.)

Interested? It's in release! Get it from SpaceDock or GitHub if you want to try it out! Or head over to the release thread:

[1.7.x] ReCouple Release Thread - Monocouple your bicou...
March 28, 2017

Ever want to use 3x or 5+ couplers but want to recombine the stacks before the next stage? Ever wish you could make creative stacks in the VAB without having to spare stock to keep the open end closed? Here's the answer...

0 Replies
Mar 28, 2017

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Bugs? Don't say bugs? I meant, er...

Known bugs:

- Not a bug, necessarily, but it only works for stack attach nodes.

Future plans:

- Make a decoupler that connects to 2x or more decoupling ports and makes them forings work with it. Thanks Making History!
- Possibly working magic to make surface attach nodes work in some circumstances.

My bug list is short enough for a release!

Edited June 22, 2017 by Boosts

Quote

Boosts — Posted March 1, 2017

"Slow impressed applause"

This is really neat, I didn't know there was even a way around this, trickery or otherwise. Very clever!

Quote

MaverickSawyer — Posted March 1, 2017

Ahead breaking time someone did this! Will keep an eye on this for future use once it gets a little further along.

Quote

komodo — Posted March 1, 2017

"Slow impressed applause"

This is really neat, I didn't know there was even a way around this, trickery or otherwise. Very clever!

Quote

martimq11 — Posted March 1, 2017

This is the best thing since sliced MechJeb.

Quote

Boosts — Posted March 2, 2017 (edited)

Trickery indeed! When I saw that the multi-docking port thing worked, I realized similar trickery of having physical joints where no new connection existed must be possible.

Thanks for your encouragement so far!

Development for today:

- Fixed crossfeed normally works across the trickery joints.
- Fixed a bug where the trickery joints in the editor (except the crossfeed display)
  - Nodes reliably disappear and reappear when they're supposed to, even after reverting. (But not undoing, for some reason...)
  - Downside is that it uses up helper PartModules to the .craft file and then throws up warnings in the log on launch because that module isn't in the parts. I need to figure out how to intercept the save and remove the PartModule in time.
- Discovered some things to fix (like zero being prefferred by all this)

Now back to an OrbitSim for anyone interested.

Edited March 2, 2017 by Boosts

Quote

rasta013 — Posted March 2, 2017

I gotta say, this is super clever and impressive to trick the game in this way. I've grabbed it and thrown it in a testing install. Will also start doing some testing against other mods (I know it was early for this but I have to start somewhere) so want to see this in some other snapshots.

Quote

JadeOfMaar — Posted March 3, 2017

Just a few days ago I found and installed a parts pack for a single giant part because I have a ring station and it suffered from what RoCouple came to cure. **Boosts** I don't know if it is a bug or feature for the station but something else will come up, and this mod will make waves once it gets a drive from the spotlight.

Quote

Boosts — Posted March 2, 2017

Author

> On 3/1/2017 at 10:08 AM, rasta013 said:
>
> I want to see this in some rather unsophisticated.

I am excited to see what except wave you can come up with! Hopefully it can be made to work for the most fun ways.

Development for today:

- Reverting flights no longer breaks.
- Auto-connect to the docking ports when the trickery connections are red.
  - Hopefully if my connections bug out or are removed it doesn't break.
- Undoing in the editor seems to work. I don't know what I did to fix it. Maybe it worked all along? Haven't tested redoing in a while.

The only critical bug before I'm willing to do a pre-release is that the trickery joints in the editor sligh/breaking thing when the switching to being a real attachment node gets triggered. I'm having no luck figuring that one out, though. Any tips will be greatly appreciated.

As always, newest beta and code are on GitHub. Cheers!

NotreDame and TheKurgan like this

Quote

Boosts — Posted March 7, 2017

Author

Development for today:

- Fixed the staging issue! I've taken the coupling method that the new KASx1 uses. **Update!** It's public domain so that's cool, right?
- Fixed the previous bug in loading that my fix for zero attach nodes broke. Now both zero and persistence works.
- Reduced spam in release (pending only any more bug reports and maybe tracking the fuel flow overlay in the editor before becoming a full-on release).

Check out the release on SpaceDock Yippy!

Any feedback is appreciated as always. Cheers!

SumoSQ, rasta013, ProPrep, and 2 others like this

Quote

ZoloAA — Posted March 7, 2017

OI ME GI When you was all that time! The pain!

Quote

TheKurgan — Posted March 7, 2017

Nice!! This is great! "game" changer

Great work!!

MegaCorp(dot) KTech My YouTube uploads!

Quote

Ipsi2 — Posted March 7, 2017

> On 3/7/2017 at 12:30 AM, Boosts said:
>
> Fixed the staging issue! I've taken the coupling method that the new KASx1 uses. **Update!** It's public domain so that's cool, right?
>
> Absolutely! It's the whole point of the public domain license.

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KJR Fan - some cool fan-made videos showing a now-old Dev's (the dev) ...

Quote

Psycho_Jo — Posted March 7, 2017

A game changer indeed.

Martian gardens will bloom after we kick that medieval bickerger out of our heads.

Quote

Raptor22 — Posted March 7, 2017

Hm...

This might cause problems with some more complex creations, such as those with a lot of part clipping.

Well, I'd have to do some trials.

Great concept, though!

Quote

Boosts — Posted March 7, 2017

Author

> On 3/7/2017 at 6:21 AM, Raptor22 said:
>
> This might cause problems with some more complex creations, such as those with a lot of part clipping.
>
> Well, I'd have to do some trials.
>
> Great concept, though!

Yeah, if someone does weird clipping with surfaces attached things that also have stack nodes such that stack node overlaps with another one, unintended joints may be created. I did limit the relative angles between attach node orientations that it will accept, though. I mostly did that so that it could handle cargo bays, but it should help with this.

If you find anything in your trials, let me know! Thanks!

Quote

Starslinger999 — Posted March 7, 2017

This is all I could say about this mod, having no way to reconnect a bicoupler/couple to a 1.25 (1.7 the base was a problem) wished cannot. You have saved my day!

Quote

phasee — Posted March 7, 2017

Wow

Quote

greenturtle1134 — Posted March 7, 2017

Upon seeing mechjeb, I instantly thought what a coding guain in the ass circular structure would be.

Then I saw this!

Quote

shelvid — Posted March 8, 2017

Thank you, thank you, thank you for this. Now I can use the 1.25 and quad couplers here I actually want to use them.

Quote

Raptor22 — Posted March 8, 2017

If only there were a way to select which joints connect, like, you click one node, then click another, using some sort of plugin. If using nodes doesn't work, perhaps just clicking on the joint.

If you decide to do that, perhaps you can use something similar to the welding mod, in the way how it recognizes what parts to join. However, instead of making it all one part, it simply connects the joints.

Who knows. There's bound to be a way to be able to specify which parts to connect. Perhaps have it only work with certain parts (ie. in-, and quad couplers), or have it so that it automatically connects all of them, but you can specify parts in the ship that you don't want connected. Either the blacklist or whitelist approach could work. Blacklist would be the best since it automatically does it, and only needs to be turned off for some complex builds that involve part clipping and rotation and stuff.

Either way, it's a fantastic concept. It both cuts down on part counts and makes your rocket look nicer. No more ugly circular structures!

By the way, I realized that I've been under the impression that it affects almost all parts. Is that the case, or is it only with the couplers and a few others?

Big or petite, can't a rocket be decided to break, and it get cooked. As a result of that and the unfortunate fact that you can't play KSP as an Phoenix, I haven't been able to check and see what the mod really does.

Quote

Raptor Aerospace Industries:

"Tomorrow's Technology, Today." https://kerbals.com/RaptorIndustries

linuxgurugamer — Posted March 8, 2017

It's now in CKAN, I just merged the PR

Download Beta Mirror

Support me on Patreon: https://www.patreon.com/linuxgurugamer
Stream on Twitch: https://www.twitch.tv/linuxgurugamer
Read this BEFORE asking for support: http://forum.kerbalspaceprogram.com/index.php/topic/92212-how-to-get-support-read-first

Browser

Quote

Apollo13 — Posted March 8, 2017

Broken for me. When installed, I cannot decouple from my space stations. Upon removing, I was able to do so. What info do you want from me to help you debug?

Edited March 9, 2017 by Apollo13

Quote

Boosts — Posted March 9, 2017

Author

> On 3/8/2017 at 9:42 AM, linuxgurugamer said:
>
> It's now in CKAN, I just merged the PR

Thanks!

> On 3/9/2017 at 10:59 AM, Apollo13 said:
>
> Broken for me. When installed, I cannot decouple from my space stations. Upon removing, I was able to do so. What info do you want from me to help you debug?

Thanks for the bug report. I hadn't tested docking/undocking with this. I'd do that when I get home from work. When you say decouple, do you mean undock, or are you using the 'Decouple' option on the docking port? Were the vessels docked when you installed it, or does it also do this when you dock and then try to undock?

I have some ideas on why it might be doing this, and it "should" be a relatively easy fix. Hopefully!

Quote

Apollo13 — Posted March 9, 2017 (edited)

I am using Decouple/Undock on the docking port. Vessels were docked when I installed ReCouple. As an experiment, I created a "vessel" in the VAB whereby I coupled two docking ports together, then undocked. The decouple worked fine. Perhaps the problem is that when I installed ReCouple, it has this problem only on vessels that were already docked.

Edited March 10, 2017 by Apollo13

> I was not born to walk your path, nor you to walk mine. But, if by chance we should meet, then it's beautiful.
>
> – author unknown

Quote

DiSeal — Posted March 9, 2017

Quite possibly related. I saw similar behavior in a ship last night. Launching with docking parts coupled worked fine, and I could decouple - but once to undock I couldn't undock again.

Quote

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