

Kerbal Space Program - Feature #291

RCS Translation controls are broken

03/06/2013 02:13 PM - purpletarget

Status:	Not a Bug	% Done:	0%
Severity:	Normal		
Assignee:			
Category:	Controls and UI		
Target version:			
Platform:	Windows	Mod Related:	No
Expansion:			
Description			
What happens: Using translation control for lateral movements (Up/down, Left/right) results in undesirable yaw or pitch of spacecraft.			
How to reproduce:			
<ul style="list-style-type: none">• Build orbital module with RCS blocks in back, and another set of blocks forward away from Centre of Mass, like on the end of a long girder.• Stabilize attitude with time warp or ASAS. Attempt to use translation controls.• Nose of craft will drift off the original heading/attitude due to uneven moment arm from COM.			
Notes:			
<ul style="list-style-type: none">• Translation controls had RCS thrust balanced to adjust for COM moment arm previous to 18.1.• Understand fix was needed for RCS exploit due to div0 issues for blocks placed too close to COM.• Expect original balance algorithm would still be workable with smaller displacement to COM divisor to adjust RCS thrust, and a max 100% limit placed on the actual output.• Players should not be required to place or adjust RCS thrust based on COM, especially since it shifts in flight, and KSP does not currently provide any tools to visualize the COM location as fuel is consumed, either in VAB or in flight.• Roll unaffected			

History

#1 - 03/09/2013 12:50 PM - C7

- Tracker changed from Bug to Feature

#2 - 10/25/2013 05:20 PM - sr

- Version set to 0.19

- Platform Windows added

Could you please verify that this is still an issue with 0.22?

If so, could you please also expand on your expected/desired behavior? The way I understand the mechanics, gaining angular momentum for thrust applied unsymmetrically regarding the center of mass is expected.

#3 - 09/05/2014 01:10 PM - Squelch

- Status changed from New to Not a Bug

- % Done changed from 0 to 100

Everything described here is expected behaviour.

Any thrust that is not symmetrical to the Centre of Mass will result in a rotation about the CoM. Fuel load is variable over the duration of the mission, and it will alter the CoM.

There are Mods which will aide in keeping the CoM neutral through fuel transfer or adjusting thrust to compensate.

This report is confirming vanilla behaviour.