

Kerbal Space Program - Feedback #13099

SAS Hold Extremely Difficult With Wheel Authority Set To 1%

10/24/2016 05:57 AM - DefiantZombie

Status: Confirmed	
Severity: Low	
Assignee:	
Category: Controls and UI	
Target version:	
Version: 1.2.1	Language: English (US)
Platform: Linux, Windows	Mod Related: No
Expansion:	
Description	
Version: 1.2.0-1586 Windows Steam x64	
Setting the wheel authority for SAS low causes SAS to have a very difficult time locking. During testing I had a small satellite take over 4 minutes to seek and lock to the selected orientation. SAS appears to not take into account the set limit when ramping up/down speed.	
Steps to reproduce:	
<ol style="list-style-type: none">1. Load the attached craft.2. Place craft in orbit.3. Turn on SAS and set hold to a direction.4. Set Wheel Authority on the probe core to 1%.5. Set SAS hold to a new direction.	
Note: If you click multiple hold directions and set the craft tumbling, the problem worsens.	
Related issues:	
Related to Kerbal Space Program - Bug #3950: SAS directional hold overshoots ...	Updated 01/08/2015

History

#1 - 10/24/2016 09:42 AM - sal_vager

- Status changed from New to Not a Bug

- % Done changed from 0 to 100

Well it's doing its best DefiantZombie, but you've given the poor sas next to zero control, so it's going to take time ;)

#2 - 11/08/2016 09:30 AM - dasvaldez

Hey Sal_vager-

Seems like this issue is closed prematurely, I found it on stream and we observed that the SAS doesn't take into account limits to SAS control authority. I asked Defiant to report it, and here we are.

He set it to 1% to make it very obvious... it really doesn't matter if it's 15, 5%, 25% or 50%... the new SAS algorithm simply isn't working correctly when reaction wheel limits are set, and thus hunts very badly and wobbles around the target.

It's very easy to replicate using his craft file and instructions... if you need help let me know.

Cheers-

Das

#3 - 11/08/2016 06:40 PM - sal_vager

- Tracker changed from Bug to Feedback

- Category changed from Physics to Controls and UI

- Status changed from Not a Bug to Confirmed

- % Done changed from 100 to 10
- Version changed from 1.2.0 to 1.2.1
- Platform Linux added

Hiya das valdez.

You're right, the SAS does not take the authority limiter into account, unlike a person the SAS is not intelligent and it just inputs control to pitch, yaw and roll, it does this to face the direction set by the player via the SAS controls or just tries to assist stability, it does not know about the control devices on the vessel, this includes the reaction wheels, RCS, engine gimbal and elevons, SAS does not know what or how many devices the vessel has or their authority limits.

So setting the reaction wheels to too low a value will cause the SAS to struggle, SAS needs enough authority to be effective and the SAS will also have trouble with a much larger vessel with a tiny probe core, or indeed any other vessel with insufficient authority from whatever control parts the player has fitted, but it will settle down eventually.

Rather than being a bug, as this capability is not there for it to be wrong, this is a valid feedback and a feature we would all benefit from being added to the SAS in KSP.

So I will making this issue known to the developers, and I thank you and DefiantZombie for your help making KSP a better game for everyone :)

#5 - 11/09/2016 11:04 AM - sal_vager

- Related to Bug #13202: SAS ROLL not damping properly added

#6 - 11/11/2016 07:06 PM - sal_vager

- Related to Bug #3950: SAS directional hold overshoots significantly added

#7 - 11/14/2016 12:20 PM - sal_vager

- Related to deleted (Bug #13202: SAS ROLL not damping properly)

Files

Kerbsat A.craft	9.38 KB	10/24/2016	DefiantZombie
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