Kerbal Space Program - Bug #762

Joystick input delay - Saitek X-65F

06/07/2013 05:00 PM - SwiftHands

Status:	Closed	**Start date:**	06/07/2013
Severity:	Low	**% Done:**	100%
Assignee:			
Category:	Controls and UI		
Target version:			
Version:	0.20.2	**Language:**	English (US)
Platform:	Win32	**Mod Related:**	No
Expansion:			

Description

Issue & result:

When either keys or axis are being mapped directly in the settings menu to Saitek X-65F joystick,
the input will register in game with a delay of about 0.5 - 1 second,

Expected result:

- Input should register instantly when applied in game when using a joystick (Saitek X-65F).

reproducing:

- map an axis \ button of a Saitek X-65F (and possibly X-52) in game settings
  NOTE: this may not apply to all operating systems or their architectures,
  as well as any other relevant hardware.

System basic info

Windows 7 64bit
8GB ram
(mobo)- ASUS P8Z68-V PRO
Intel Core i7-2600K
Gforce GTX 580

observations:

- both key based tasks as well as axis have a delay (ie brakes \ gear as well as pitch, roll, yaw axis).
- the delay is not affected by altering the dead-zone or sensitivity values in game settings
  (I read somewhere that it may work better by turning sensitivity all the way down to "0", ill test it and report my findings)
- keyboard inputs are registering instantly and are not affected by the delay.
- following some research it appears to be Saitek specific issue, same issue was reported on the forums for the older model X-52 as well.
- It may be possible that only a portion of Saitek joystick owners (X-65F \ X-52) are affected,
  I stumbeled on posts by others using the X-52 and not experiencing this issue,
  this is NOT yet verified fully when considering the current version 0.20.2, these reports were for older versions,
  also - the differences in OS, SW, HW was not verified to try and pinpoint a possible root cause.

Additional notes

- Steam version of KSP was used here.
- Tested on a modded game as well as clean install - same result.
- all drivers are up to date.
- Saitek X-65F is a two pieces controller (throttle | Stick)
- The stick is connected to the Throttle platform via serial cable, the entire set is connected via USB from the throttle platform to the PC.
  (so both units must be used together by default).

Possible useful references

Same problem as they were reported on Unity forums:
[[http://forum.unity3d.com/threads/17663-Serious-Problems-using-two-joysticks-at-the-same-time]]
[[http://forum.unity3d.com/threads/115807-Joystick-lag]]

Previous report of the same problem, yet unresolved, on the KSP official forums (For X-52 model):
[[http://forum.kerbalspaceprogram.com/showthread.php/29298-Open-Saitek-X52-Pro-Joystick-input-has-severe-lag]]

my original recent post on KSP forums:
[[http://forum.kerbalspaceprogram.com/showthread.php/34672-Saitek-X-65F-input-lag]]

Related issues:

Related to Kerbal Space Program - Bug #13043: Joystick input delay - X52, rel...	**Need More Info**	**10/19/2016**

History

#1 - 06/07/2013 06:13 PM - Shadark

Confirm this for the X52. The lag is extreme and renders the joystick completely unusable.

To see if this was a unity issue (as some have suggested), I tested via

http://thematrixgroups.com/demo/

and

http://dal-acm.ca/~dice/joytest/joystick%20test.html

and found them to work fine.

#2 - 07/18/2013 06:28 PM - carsonmyers

- Status changed from New to Confirmed

- % Done changed from 0 to 10

Also confirmed for the x52.

I tested the same programs as Shadark:

For http://thematrixgroups.com/demo/, it started with no lag and the lag built up to over 1 second over time for the axes. There was no lag for buttons.

For http://dal-acm.ca/~dice/joytest/joystick%20test.html there was no noticeable lag.

In KSP, there is extreme lag for both the axes and buttons. From what information I've found in other places this seems to be a Saitek/Unity bug, although hopefully there is a workaround.

#3 - 08/18/2013 07:39 PM - joelflake

Also confirmed in 0.21.x with the x52. I'm using a comparable system to the original reporter with the same symptoms. I encounter lag on all inputs on the x52 while encountering no input lag on another other controls. One further detail, though. When attempting to land any craft at any location, the lag spikes to well over a second.

#4 - 01/06/2014 04:15 AM - TruePikachu

Just wondering, but is the Saitek profiler installed and running when you get the lag? I'm not pulling out my X52 to bugtest, but I've never gotten input lag from it into anything.

#5 - 01/06/2014 09:38 AM - SwiftHands

TruePikachu wrote:

> Just wondering, but is the Saitek profiler installed and running when you get the lag? I'm not pulling out my X52 to bugtest, but I've never gotten input lag from it into anything.

Yes, if you read in my original report, i said it is being mapped to keys and axis in the game settings directly.
but i see what you are asking, since a profiler would turn these inputs to virtually "keyboard keystrokes" it may deal with the delay,
to be fair i didnt test for that, as i expect a joystick to work without delay using direct key binding.

but even in the event of it working using a profiler for **keys**
you are still left with the delay using axis inputs.

that being said, i did NOT get a chance to recheck if the issue is relevant in the future patches since this initial report.
it may have been fixed, and i simply rest on the fact that they would close the bug if it was (and was tested by them as well etc).

#6 - 01/06/2014 03:27 PM - TruePikachu

I'm mentioning because, IIRC, internally, when the profiler is running, it even maps physical presses to virtual presses.

#7 - 01/23/2014 09:21 PM - Attheveryend

I have a Saitek X-52 Pro.

I have discovered that removing the Saitek SD6 Software from the list of programs launched at startup significantly reduces input lag in Kerbal Space Program. It does not eliminate it entirely, but it is back to playable levels.

So one need not go deleting drivers as some have suggested, but shutting the profiling software off seems to help a lot.

EDIT: It seems that after a short time, the lag came right back. The profiler did not launch at any time. Stopping the Saitek DirectOutput service via task manager did not alleviate lag. It seems that I was ultimately mistaken...

#8 - 02/04/2014 11:40 AM - SwiftHands

TruePikachu wrote:

> I'm mentioning because, IIRC, internally, when the profiler is running, it even maps physical presses to virtual presses.

Tested again, profiler and any other 3rd party tools used by this device cause no imapct on the delay issue at all,
that is of course excluding the drivers themselves, but they are mandatory.

Since the delay is not present in any other game but KSP, i would assume the problem originates in Unity,
or even KSP, but i am not sure if they have their own logic to replace Unity's input logic.

that being said, i can confirm that other unity games i mapped the same joystick to, did NOT have any input delay at all...
Which further moves the root towards KSP specific code, but not being able to see the code ofc, i can never know...
that needs to be debugged.

IIRC i saw in an old thread that one of the devs actually owns X-52 (showcasing his work station area),
would be nice to get some more technical feedback on what is observed during runtime when using the joystick,
I could also help technically if any help \ tests are needed.

#9 - 02/04/2014 11:45 AM - SwiftHands

IMPORTANT:

Removing the DRIVERS themselves and using native input drivers in windows, present good results and no delay in input when mapping to axis in game.

can any other saitek owner attempt and confirm this please? i want to know if its a fluke or an issue with saitek drivers.

@Original issue, if it turns out to be a saitek driver issue,
i think it is still worth investigating why these drivers are having issues only with KSP (even other Unity games present no delay in input).

#10 - 05/25/2014 02:39 AM - Excrubulent

Just confirming SwiftHands' workaround. I had this issue with an X-52 Pro in Windows 7 64-bit, with KSP 0.23.5. Deleting the drivers fixed the problem.

However, the Saitek drivers will periodically reinstall themselves, making it look like the fix hasn't taken, when in fact it's just Windows and Saitek plotting to foil you. I've used this guide: http://support.microsoft.com/kb/2500967 to stop the automatic updates for now.

Also, I'm using Saitek drivers for my flight pedals, and they work just fine. So not all Saitek products have this issue.

#11 - 09/17/2014 12:56 PM - Samssonart

Disabling the default Saitek drivers, the lag problem disappeared, but I then cannot map buttons on my X55 through the usual Saitek software, or make use of the two thumb POV hats on the throttle. This seems to clearly imply there's some kind of clash between Saitek's drivers and the game, which needs to be resolved at some point.

I'm having more success, however, with a third party set of programs -- VJoy and Universal Joystick Remapper -- by using them to map the joystick's input to a virtual joystick, which is then used to control Kerbal Space Program, I seem to be able to reduce or eliminate the input lag without needing to uninstall any drivers. It is a bit technically tricky to get running, but in case you want to offer the workaround as an option to others with similar problems, you can find the software here: http://evilc.com/joomla/articles/9-code/autohotkey/1-ujr-universal-joystick-remapper

An example showing my problem, where the 'Roll' axis displays the correct behaviour, mapped through UJR, and 'Yaw' displays the lagged input, can be found here: https://www.youtube.com/watch?v=0VfkQq-ZDe8&feature=youtu.be

Credits to Mark Skonar

#12 - 02/20/2015 12:43 AM - Landon

Just a thought, but could something on the joystick be flooding the inputs queue? I notice when using the mouse on the throttle that it is immediately responsive, but gets less and less responsive as I move it around continuously until I take a break and wait for all inputs to be resolved. I'm not familiar enough with Unity though to point at either KSP or Unity as the origin of the issue, but I will play with making some sample applications that possibly exacerbate the issue.

#13 - 07/11/2015 01:51 PM - Waste

Are there any real updates to this? It seems multiple Saitek sticks have this issue with KSP. I'd be nice if it could be addressed since the issue has been around for years. The Advanced Fly-By-Wire mod helped some people but is not officially supported with KSP 1.0+. Thanks!

#14 - 07/27/2015 05:55 PM - Squelch

- Platform Win32 added

- Platform deleted (Windows)

#15 - 04/29/2016 06:15 AM - viperfan7

Issue persists, using X-52 Pro

I've gotten word that in some instances installing the unity web player fixes input lag, will report findings

#16 - 04/29/2016 09:57 AM - viperfan7

Unity web player is a no go, using vJoy + FreePIE I was able to remove the delay by routing the joystick though vJoy

#17 - 07/17/2016 09:46 AM - TriggerAu

- Status changed from Confirmed to Needs Clarification

- % Done changed from 10 to 0

#18 - 08/07/2016 11:40 AM - TriggerAu

- Status changed from Needs Clarification to Closed

- % Done changed from 0 to 100

Closing this report out for now. If you find it is still occuring in the latest version of KSP please open a new report (and this one can be linked to it.) For best results, the wiki contains really useful info for when creating a report http://bugs.kerbalspaceprogram.com/projects/ksp/wiki.

You can also ask questions about the bug cleanup in the forum here:
http://forum.kerbalspaceprogram.com/index.php?/topic/143980-time-to-clean-up-the-bug-tracker/ and tag @TriggerAu to get my attention

#19 - 10/19/2016 03:31 PM - Squelch

- Related to Bug #13043: Joystick input delay - X52, related to Issue #762 added

Files

settings.txt	20 KB	06/07/2013	SwiftHands
KSP.log	1.5 MB	06/07/2013	SwiftHands