A BEGINNER'S GUIDE



TO DRIVING WITH A GAMEPAD

Disclaimer: This guide is based on my personal experience and reflects my subjective preferences. It is not an official handbook and does not necessarily reflect the opinions or recommendations of the producers and/or developers of RaceRoom. For further information and help please visit the official forums at: http://forum.sector3studios.com

FUNDAMENTALS

The very key to driving successfully (i.e. consistently) with a gamepad is smooth and accurate analogue inputs. Using the D-pad or any other digital buttons for steering and/or throttle and brake control is not recommended and won't be covered in this guide. I also strongly suggest getting familiar with **manual shifting** as it allows for more control over the car than automatic transmission.

In order to achieve the most accurate inputs possible you should **avoid taking your thumb off the analogue stick** you're using for steering and instead keep it rested there all the time.

I know this might sound trivial but many people tend to take their thumb off the stick and only touch it whenever they are going to make a steering input. This technique has one major flaw; when you do make an input, most often you will end up pushing the stick all the way to either side (the infamous "clack" sound of the stick hitting its housing).



Don't take your thumb off that stick!

In combination with too sensitive controller settings this will translate to a full lock steering input which is exactly what you don't want because it will unsettle the car and raise your chances of losing control over it. So train yourself to rest your thumb on the steering stick at all times and how to give tiny inputs, like one quarter or one half of the possible travel of the stick.

Most users playing racing games with a gamepad prefer to use the analogue shoulder triggers for **throttle/brake control**. While this provides the advantage of being able to accelerate and brake at the same time (a technique sometimes used by real racing drivers to stabilise the car) I prefer using the right analogue stick for throttle (up) and brake (down) because it offers increased accuracy and is much less straining in longer races.

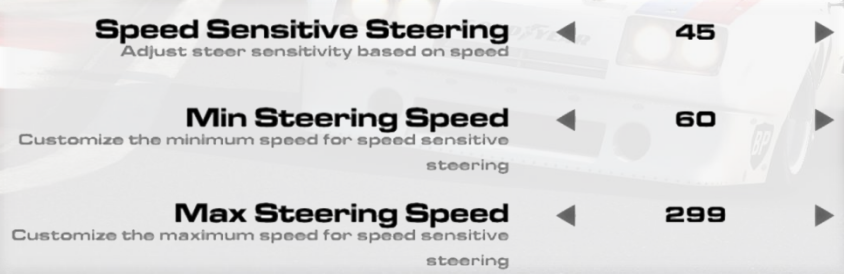
Whichever technique you prefer, remember that **accurate and smooth inputs** are fundamental to both steering and throttle/brake control in order to prevent unsettling the car by locking the wheels, under-steering or wheelspin.

CONTROLLER SETTINGS

In this section I will only cover settings that are of particular importance for gamepad users. You can find all my current setting on one page at the bottom of this document.

SPEED SENSITIVE STEERING

This setting helps to maintain control over your car at higher speeds because it increasingly dampens your inputs the faster you drive. It prevents your car from making too snappy movements while going fast and helps managing this state of increased instability. Higher values result in more damping, so try to find a value that suits you. Around 50 should be a good starting point.



MINIMUM & MAXIMUM STEERING SPEED

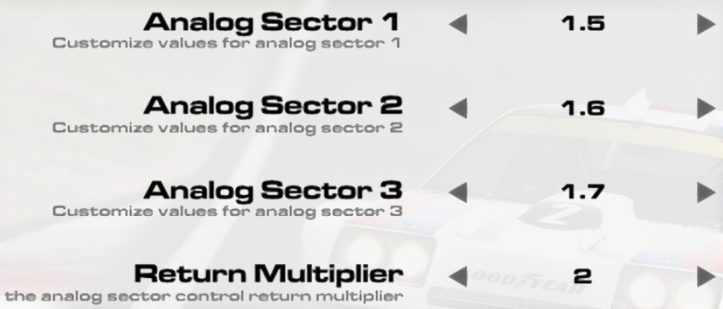
These are the vehicle speeds in km/h at which Speed Sensitive Steering is being activated (Min) and where it reaches full effect (Max). As damping isn't desirable at very low speeds (hairpins) you should set it to 60 km/h at least.

ANALOG SECTORS 1, 2 AND 3

Arguably the most important settings, because they determine the responsivity of your cars steering by damping the speed of your controller inputs. (So your stick movements don't result in too rapid steering movements.) Sector 1 is the inner third of your sticks path of travel, sector 2 the middle third and sector 3 the outer third. As we're looking for small and accurate inputs, sector 1 should be a bit lower than 2, 2 a bit lower than 3.



They are also highly individual settings; some people prefer them way higher than I do. But lower values allow for more precision, which I believe will make you faster and less prone to losing control of your car. Higher numbers equal faster response and less damping. If you try my settings the steering might feel clumsy, unresponsive and too slow at first (especially if you've been using the default or even higher values before), but try them for a solid number of laps before adjusting, they are highly accurate at low inputs. Change by .2 increments to find your sweet spot and don't go above 4. See my current settings below, but I've also used 1.7, 1.9 and 2.1 in the past.

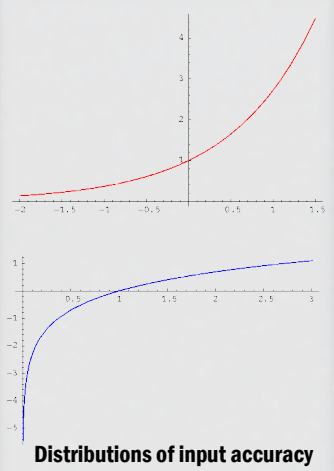


RETURN MULTIPLIER

The Return Multiplier does basically the same as the Analog Sector setting, but reversed. It determines how fast the steering wheel returns to its centre position when moving the stick to neutral. Again, higher numbers equal faster response and less damping but too high values result in snappy movements which can unsettle the car. 1.8 – 2.5 is a good range to look for your sweet spot and like before, I think anything above 4 is just too quick.

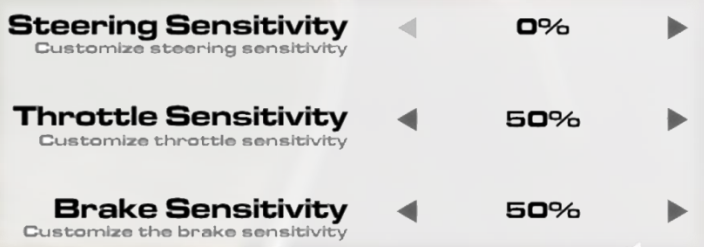
STEERING, THROTTLE AND BRAKE SENSITIVITY

This is the last set of crucial settings for gamepad users. They determine the way your inputs are translated and how the stick's sensitivity is distributed over its path of travel. Choosing 50% will result in a linear distribution, so the sensitivity will be equal at each point. If you set them to 0% the input will be exponential (see the red graph) and the accuracy of your inputs will be highest near the stick's neutral position (S1), decreasing the further you push the stick. Vice versa, setting these options to 100% will result in a logarithmic distribution (blue graph) and greater inputs will be more accurate than small ones.



Distributions of input accuracy over the stick's path.

From my point of view it makes most sense to aim for very accurate, small inputs because this is where you initiate your turn-in and fine tune the car's direction. You want these to be as precise as possible so I recommend 0%. For throttle and brake inputs a linear distribution is preferable, so the whole range of your analogue input (stick or shoulder triggers) behaves exactly alike.



DEAD ZONES

In order to prevent unintended inputs, make sure you adjust the dead zones of your controller's analogue axis' using the test zone at the top of the menu screen. In a neutral state there should be no white bar visible on either side of the central point (Steering) or at 0% (Throttle and Brake).

CLUTCH BITING POINT

The biting point of your car's clutch can have an influence on how it behaves during starts and while shifting because we have to depend on the automatic clutch and can't influence how quickly it is being released. A low biting point will make for more direct clutch engagement once you start accelerating and can cause problems when using a gamepad. Higher values on the other hand prolong the slip range and can help during standing starts. I've grown used to very high values but they can lead to difficulties starting certain cars, so I suggest trying to use the lowest and highest values to see how they change the cars behaviour and then find your preferred setting.

STEERING LOCK

The Steering Lock defines the maximum angle the front wheels can turn from the centre. The higher this number, the farther the wheels will turn at full steering wheel lock. This setting cannot be found in the controller options menu but is set per car in the pre-race garage menu. Usually this should be set to 13 by default on all cars and for most of them that's fine.

But I found that open wheelers (Formula cars) and LMP cars are a bit too responsive using that lock value with a gamepad so I tend to reduce this to 10 or 11 when driving the FR or LMP cars.



Listening to the sounds your car's tyres make while cornering can be helpful here too. If you hear a screeching noise while turning at a high or full steering wheel lock your tyres are probably turning too much, which makes them slide and causes your car to understeer. Lowering the steering lock can be helpful in such instances.

FINAL NOTES

In general, gamepad users have to depend on their eyes and ears more than wheel users, so be very observant to little movements of your car's bodywork and listen to what is happening around you, especially with your car's tyres. I also encourage you to check out mr_belowski's Crew Chief add-on which can be found here. It provides you with all kinds of useful data and adds a lot to the immersion.

Once again, I know other users will prefer significantly different settings, especially regarding Analog Sectors and Steering Sensitivity. I'm not saying that my settings are subjectively the best because with enough practice you can grow used to all sorts of settings and do just fine using them.

The merit of the settings presented here lies in their maximised precision in lower input ranges while remaining reasonably responsive. For me this is the key to achieving fast and consistent lap times. However, if you prefer a more responsive feeling, try raising the aforementioned values by small margins and see how the feeling changes until you find the ones you're most comfortable with.

Good luck and have fun.

THANKS GO TO

Sector3 Studios, RaceRoom, mr_belowski and forum user larcin who provided the background image.

SETTINGS SUMMARY

H Pattern Shift Hold button for Gear	Off
Speed Sensitive Steering Adjust steer sensitivity based on speed	45
Min Steering Speed Customize the minimum speed for speed sensitive steering	60
Max Steering Speed Customize the maximum speed for speed sensitive steering	299
Analog Sector 1 Customize values for analog sector 1	1.5
Analog Sector 2 Customize values for analog sector 2	1.6
Analog Sector 3 Customize values for analog sector 3	1.7
Return Multiplier Customize the analog sector control return multiplier	2
Steering Sensitivity Customize steering sensitivity	0%
Throttle Sensitivity Customize throttle sensitivity	50%
Brake Sensitivity Customize the brake sensitivity	50%
Clutch Sensitivity Customize Clutch Sensitivity	20%
Steering Dead Zone Defines how much input is required to start steering	5%
Throttle Dead Zone Defines how much input is required to start applying throttle	1%
Brake Lower Dead Zone Defines how much input is required to start braking	1%
Clutch Lower Dead Zone Defines how much input is required to start applying clutch	0%
Double Shift Prevention Set the duration in which a second input is ignored	0.05s
Throttle Upper Dead Zone Adjust to add upper dead zone to throttle	100%
Brake Upper Dead Zone Adjust to add upper dead zone. Useful for "Load Cell" pedals	100%
Clutch Upper Dead Zone Adjust to add upper dead zone to clutch	0%
Clutch Biting Point Adjust the biting point of your clutch pedal	5