

Tuning Center

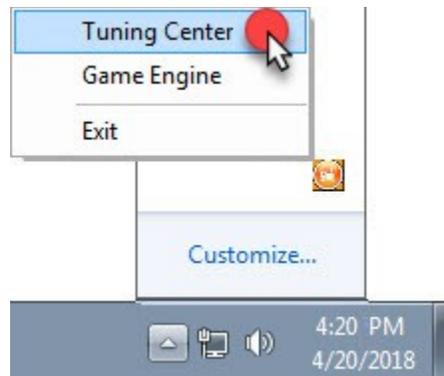
Tuning the Max/Min values of a game ensures that the motion you output to your simulator is the best it can be! You only need to do this once per game and it can greatly improve the overall ride of the simulator.

You can get to the Tuning Center for Game Engine in two of ways:

- 1) Click the **Tools** button on the **Game Engine GUI** and then click the **Tuning Center** button show in the picture below.



- 2) **Right click** on the **Game Engine Icon** in the **system tray** and then select **Tuning Center** from the pop-up menu.



The tuning window allows you to set the Max and Min values that will be used by Game Engine to calculate how much of the axis is used. It does this by comparing the incoming value with either the Max or the Min value and then calculating the correct percentage needed for output.

Each game plugin allows for up to nine DOF's (Degree Of Force) to be sent and used for output to your simulator. Roll, Pitch, Heave, Yaw, Sway, Surge, Extra1, Extra2 and Extra3. Each of these nine DOF's that are used for a game plugin should have a corresponding Max/Min value.

Increasing the Max/Min values to higher numbers will result in less movement. The game values will seldom reach their max or min values resulting in less overall movement, but they will in turn have more range overall for output.

Decreasing the Max/Min values to lower numbers will result in more movement. The game values will end up reaching those Max/Min settings a lot quicker resulting in faster and snapper movements, but they will have less overall range for output.

The primary goal of tuning the Max/Min values for a game is to have numbers that allow for enough range on the simulator to match what happens on the screen under normal circumstances, but not so much range that you lose all of the finer details from the game.

To Automatically Capture Max/Min values with the Tuning Center:
(Example shown is for the car game Live For Speed)

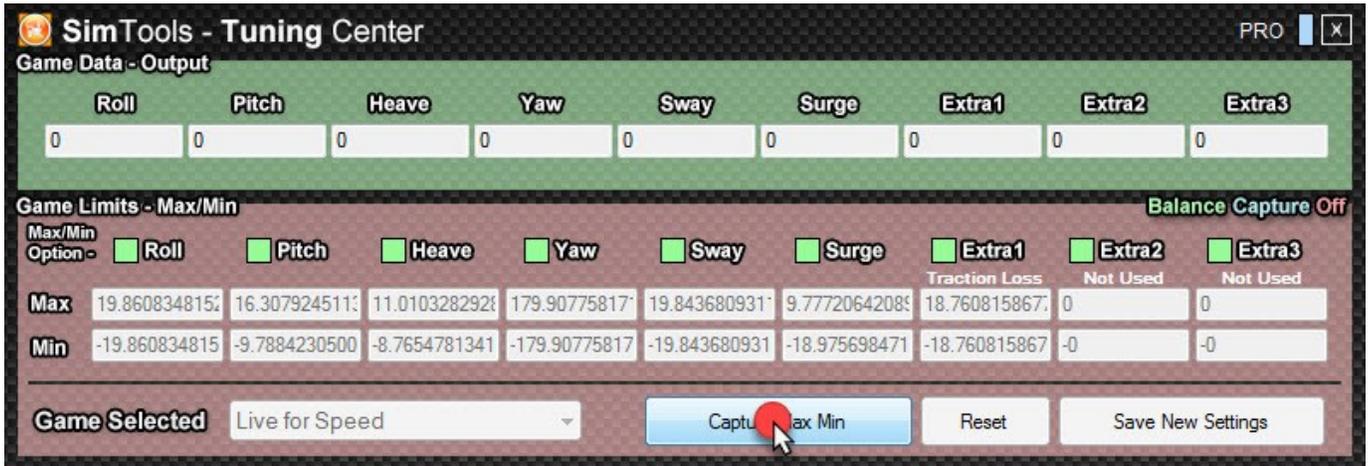
- 1) Start Game Engine and Game Manager. **Game Manager** needs to be **On** and **Connected** and the game needs to be **Patched** before you can retrieve data. Game Manager should be all **Green** as seen in the image below.



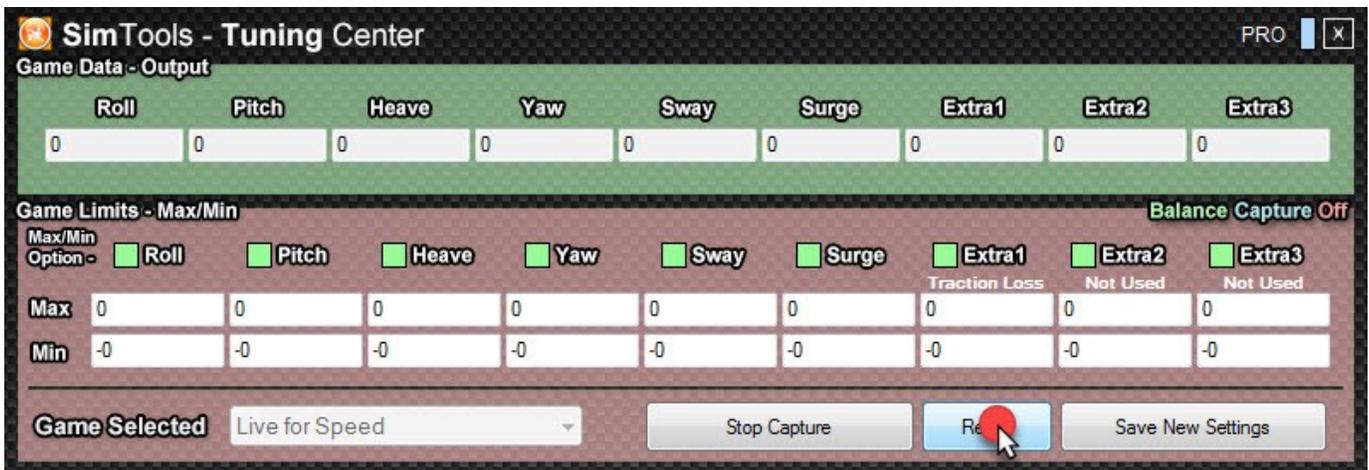
- 2) Start the game you want to capture new Max/Min limits for. I would suggest using a medium car on a somewhat curvy and hilly track if you can.



3) Press the **Capture Max Min** button.



4) Press the **Reset** button.



5) Drive around the track carefully not to bump walls or hit anything that will skew the results. You should see the new Max/Min values being captured in the Tuning Center window.

Here are a few examples ways to capture valid Max/Min values from a car game. Hit the gas from a dead stop and continue full speed until you shift into third gear and then hit the breaks and you will capture Surge and Pitch. Do the same thing on the steepest hill or slope in the game and you can capture a more accurate Pitch. Driving around corners helps capture Roll and Sway. You can capture good Heave data by slightly running your wheels over the curb, but make sure not to drive into the grass or dirt as it will skew your data.

We suggest setting your DOF to **Balance** for Sway, Roll, Pitch and Yaw. We suggest using **Capture** for Surge. Heave can be used either way depending on the game. Selecting Capture captures the Max/Min values coming from the game. This makes sense for Surge as your engine could be more powerful than your breaks. Balance makes your Max value equal to the opposite Min value. Select **Off** if you do not want to change the DOF while capturing live data.

The screenshot displays the SimTools - Tuning Center interface. The top portion shows a first-person view from a car in the game 'Live for Speed', with a speedometer and a track ahead. The bottom portion is the 'Game Data - Output' and 'Game Limits - Max/Min' panel.

Game Data - Output

Roll	Pitch	Heave	Yaw	Sway	Surge	Extra1	Extra2	Extra3
-1.1105137112	2.29468659250	0.55405233701	-12.453737758	5.83467636370	1.49919969658	-0.9338856459	0	0

Game Limits - Max/Min

Max/Min Option - Roll Pitch Heave Yaw Sway Surge Extra1 Extra2 Extra3

Balance Capture Off

	Roll	Pitch	Heave	Yaw	Sway	Surge	Traction Loss	Extra2	Extra3
Max	1.1105137112	4.4272798524	8.36222865234	12.453737758	5.8346763637	7.6691201791	0.9338856459	0	0
Min	-1.1105137112	-4.4272798524	-8.3622286523	-12.453737758	-5.8346763637	-7.6691201791	-0.9338856459	-0	-0

Game Selected: Live for Speed

Buttons: Stop Capture, Reset, Save New Settings

6) Once you feel you have received all the Max/Min values the game has to provide and you are happy with your new settings, click the **Save New Settings** button. The new Max/Min will be applied live while the game is running.

7) Press **Stop Capture** when you are finished altering the Max/Min limits.

If you want to start over, you can re-install the original plugin and start again.

Fine tuning the Max/Min values for the game can provide a much more accurate ride on your simulator.

That is it! Have fun!