

# YAW VR Motion Simulator Manual

## Initial Software Setup

This is the initial software setup guide. In this guide, we will assume you've finished the [hardware setup](#) where you've assembled your Yaw VR Motion Simulator.

Already done the initial software setup? Then all you need are the following steps to get started:

### Easy 3-steps start

After you've done the initial software setup, you don't need to do all the steps again. Just make sure to do these steps, every time you want to play a game:

1. Turn on the simulator (see [step 1](#) if you haven't yet).
2. Use the Yaw VR Config App to calibrate the simulator (see [step 3](#) for calibration)
3. Once done, start the game & device. **Important:** Always sit in the simulator before starting the device in the Yaw VR Config App.

Once you're done playing, make sure that before you step out of the simulator, **always stop the simulator** in the app or turn off the tracker (see [step 7](#) for more info).

## How To Configure & Calibrate

### What you need

- Assembled Yaw VR Motion Simulator



*This is what it should look like*

- Yaw VR Configuration app
  - [Apple Store](#)
  - [Google Play](#)
  - [Windows](#)

All software downloads can be found [here](#).

Step 1. Turn on the Yaw simulator



- 1.1. Plug in the power cable (4)
- 1.2. Turn on the simulator (5)
- 1.3. Turn on the motors with your included keys, you can do this at a later time too (6)



1.4. Turn on the positional tracker, wait until the tracker's light turns green (7)



## Step 2. Download & Install the YawVR Config App

2.1. Download & install the config app on your phone or on your PC using one of these links:

- [Apple Store](#)
- [Google Play](#)
- [Windows](#)

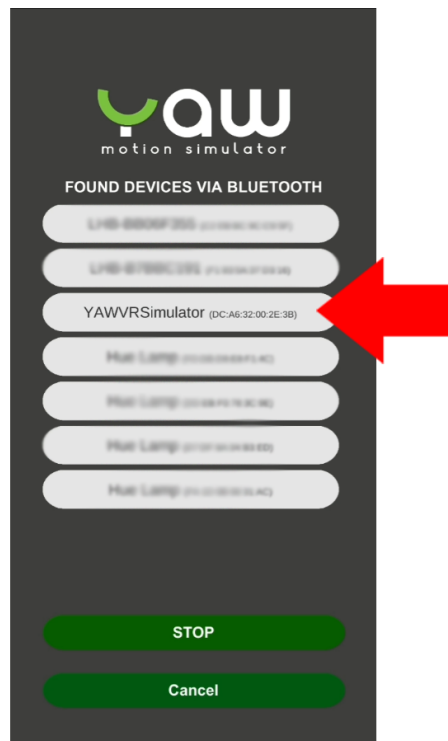
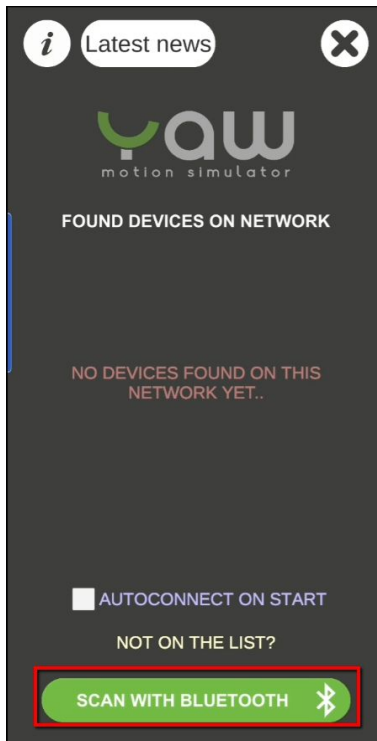
2.2. Before you start the app, make sure your device has turned on Bluetooth.

2.3. Start the app now.



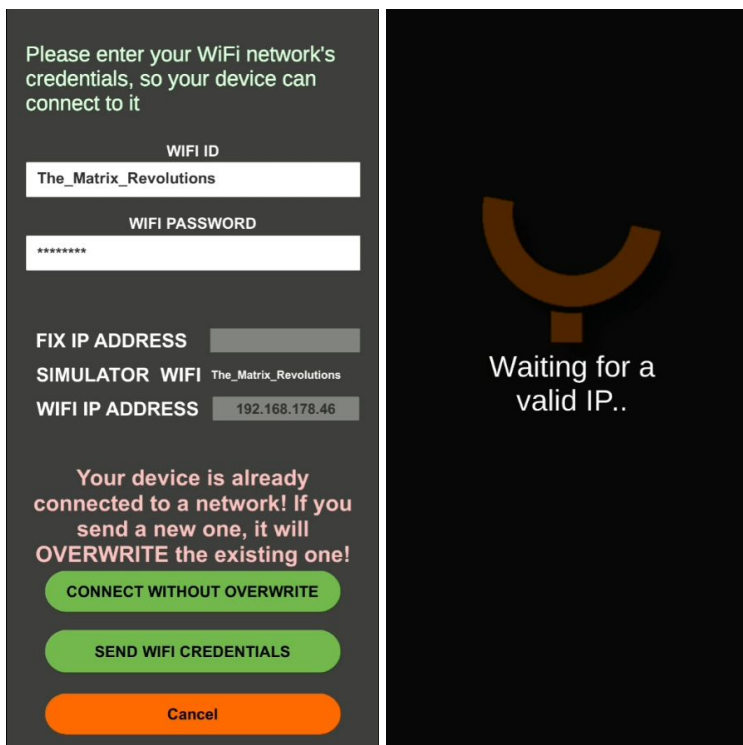
*The screens you are seeing right now is from an Android device but the iOS and Windows app should look about the same.*

2.4. The first time you start the app, the simulator will not be found on your app and network as it doesn't have your WiFi credentials. So we need to connect it via Bluetooth first. Use the button "Scan with Bluetooth".



2.5. Once the Yaw VR Simulator (or a similar name) appears in the list, you can click on it to connect. Wait until the connection is established.

2.6. In this next screen, you can send your WiFi credentials to your Yaw simulator. In the field WiFi ID, type your WiFi name (SSID) into the field if it doesn't show up already. Then type your WiFi password in the field below that.



2.7. Once done, you can set the WiFi settings by tapping on the “Send Wifi Credentials” button.

2.8. Make sure that your phone (or other device) where you run the YawVR Config App on is using the WiFi network that you want your Yaw VR Motion Simulator to use. Both the device and simulator need to be connected to the same WiFi network.

2.9. If you filled in the correct info, this screen will show up indicating a successful connection to your simulator.

You can now move the simulator with your hand and you should be able to see the animation on your app move with you. If the animation doesn't move with your Yaw simulator, then restart the app and make sure everything is turned on correctly.

**Important note:** Don't start the simulator using the “start” button in the app without someone sitting in it.



**This animation should move with your device**

2.9. **Recommended step for beginners to help you avoid any damages to the simulator.** In the “Limits” tab, make sure to start at a lower power and limitation in degrees on each axes. We suggest to start at 12° limitation on each axes and 50% of power. You can gradually increase the degree carefully.



### Step 3. Calibration & Starting The Simulator

Before you start playing, please calibrate the position of the simulator. It is recommended to do the calibration before **every** use.

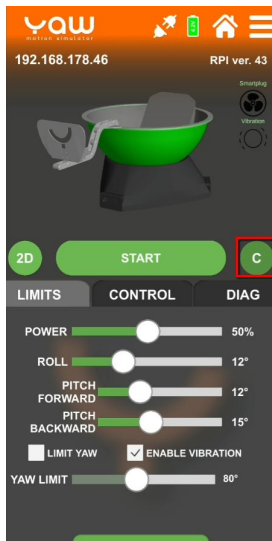
3.1. To do this, move the simulator into the starting position (the upper shell should be horizontal and the foot holder arm should be directed along with the Yaw logo like these photos.



3.2. Now hold the “C” (stands for calibrate) button for 0.5 seconds. This button can be found next to the “Start” button.

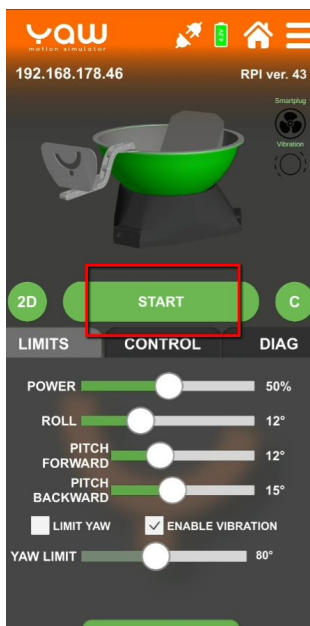
Holding "C" will calibrate ALL axes, Tapping "C" will only calibrate Yaw axis.

You should see the Yaw animation in the app recenter itself.



3.3. Make sure you are sitting in the simulator before starting. You can now start the simulator by pressing the start button. If you have a game connected, it will work with the Yaw simulator.

If you don't know how to connect a game yet, continue to the [“How To Connect Games”](#) section.



## How To Connect Games

There are currently two ways of playing VR games with this motion simulator for consumers. If you are a game developer, then you could develop something for your own game using their SDK (see below for a link).

**Consumers/Gamers:**



You can pick which option you want to use:

- Yaw VR's GameEngine (free-to-use) > Go to [step 4](#).

The first option is using Yaw VR Game Engine, a tool that allows one-click gaming with Yaw VR. Usually, connecting existing VR games to motion simulators is complicated. There are just a few games that support certain simulators directly. Usually, people use middleware software like SimTools to make the connection between games and simulators. But to use SimTools is sometimes complicated and not free of charge. With Yaw VR Game Engine you can get the same result but with almost zero setup and for free.

Works with third-party games like Assetto Corsa, Dirt Rally 2, DCS, NoLimits2, etc. See a list of all supported games [here](#) (you can also vote what the next game should be).

- SimTools (needs license) > Go to [step 6](#).

The 2<sup>nd</sup> option is using SimTools, which is a popular, generic motion simulator software which has a big community building for it.

Note: Games with native Yaw VR support is in development and will be released soon.

- Space fighter (<https://www.youtube.com/watch?v=62u-dCGgOcY>)
- Roller coaster (<https://www.youtube.com/watch?v=H2Gyh69moxg>)
- Car racing (<https://www.youtube.com/watch?v=BCPTw8qzkXc>)
- Flight simulator
- Tower defender

### Developers:

If you are a developer, you can download our SDK from the [Downloads](#) menu and include our communication plugin into your own game.

## Yaw VR's GameEngine

What you need

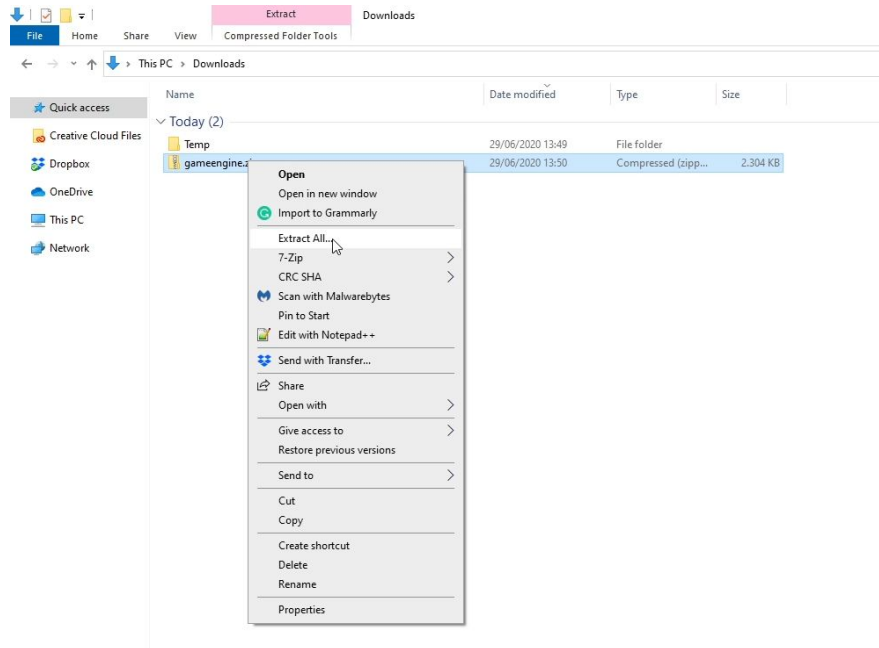
- Yaw VR GameEngine software - Download from [here](#).
- Yaw VR simulator turned on and calibrated

### Step 4. Using Yaw VR Gam

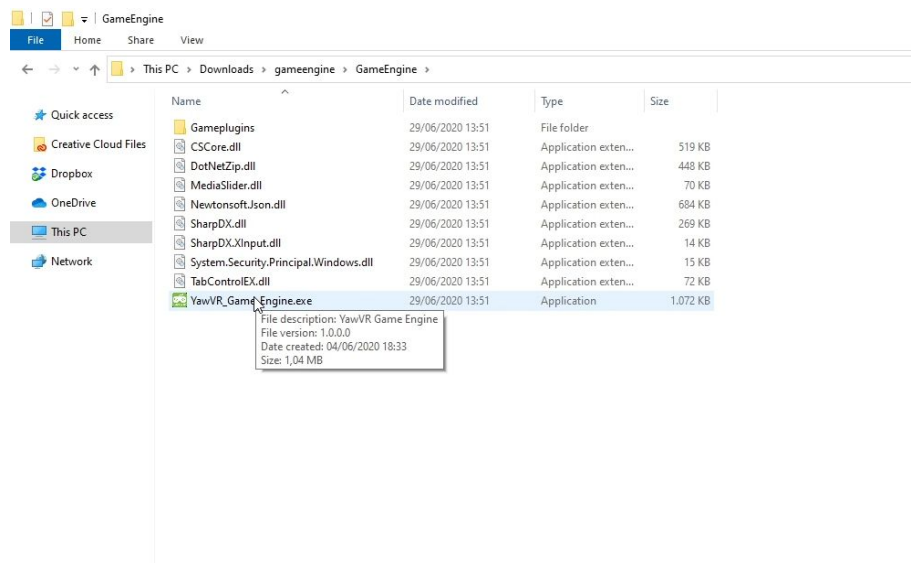
4.1. Download the latest version from Yaw VR website – [click here](#).

4.2. You should get a .zip file, which you need to extract to a folder.

You can extract it by right-clicking the zip file > Extract All > Choose the folder you want it to be extracted on (can be anywhere on your PC) > Extract.



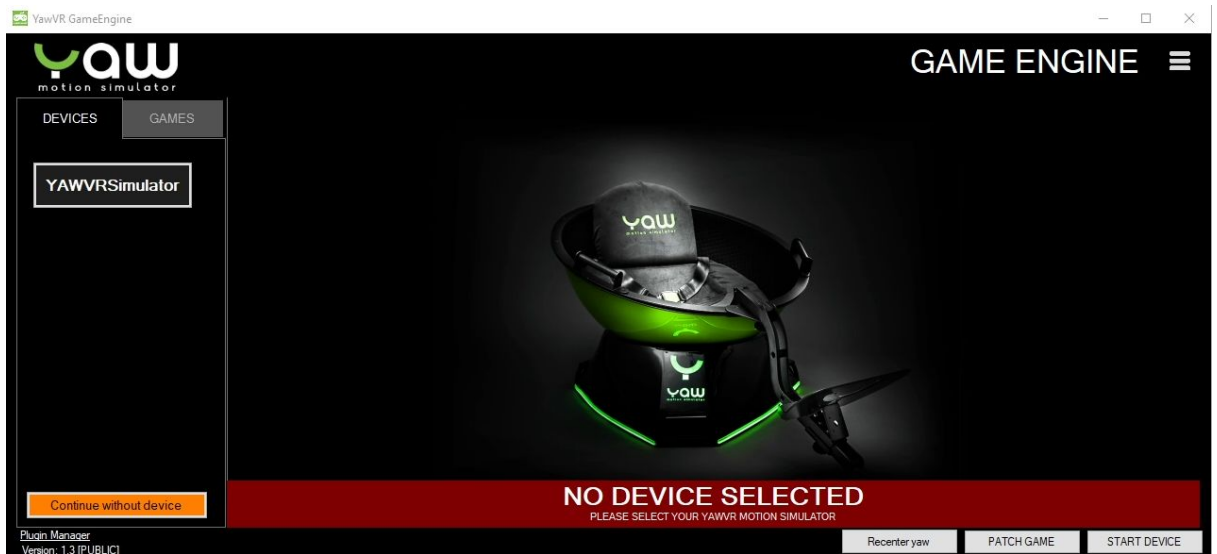
4.3. Find the location of the extracted folder and open it. This is the contents of the folder. Double-click the “YawVR\_Game\_Engine.exe” file to start the app. There is no need to install this app as it is standalone.



*Note: If Windows Defender gives you a pop-up, give it permission by clicking ...*

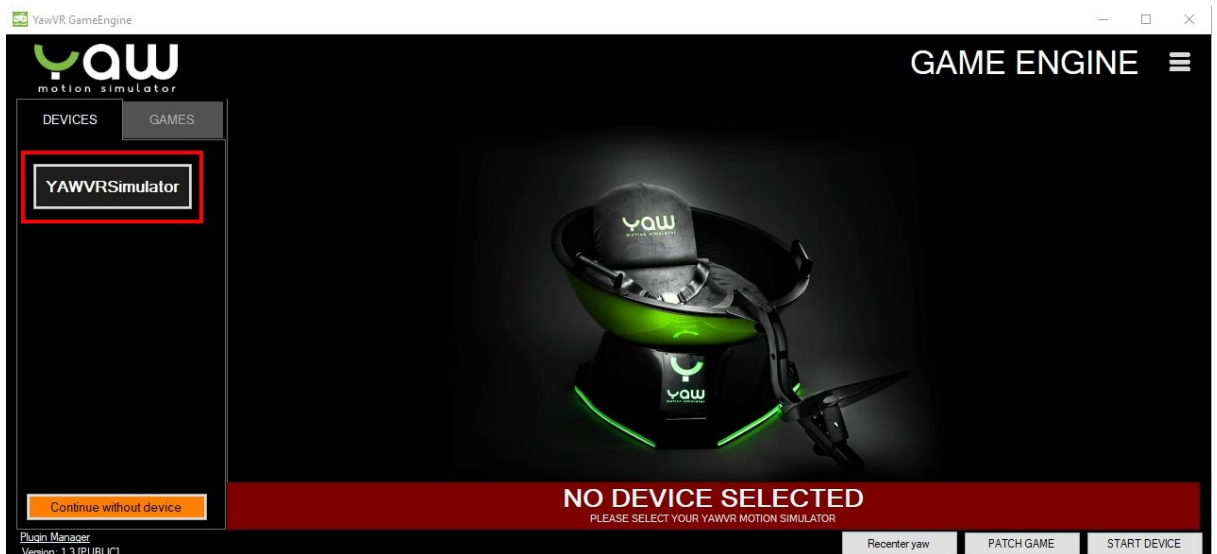
*If Windows Firewall asks for permission, click allow access.*

4.4. You should now get this screen. If you haven't yet, turn on your Yaw Simulator using the steps in [Step 1](#).



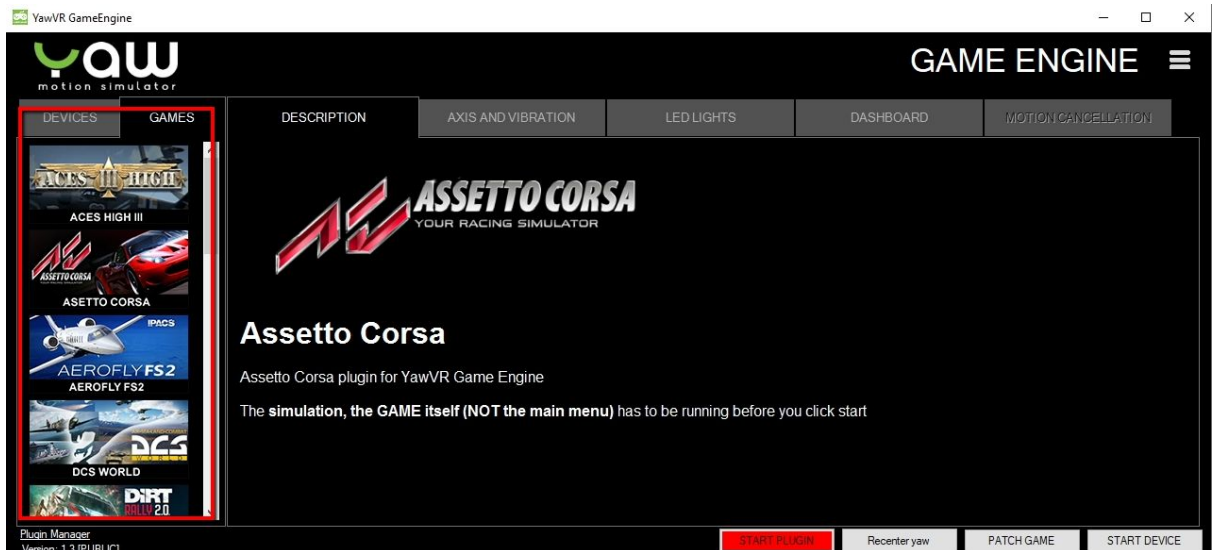
Calibrate your simulator if you haven't yet, see the steps in [step 3](#). You can do this using the Yaw Simulator app that you've configured in [step 2](#).

4.5. Once you've turned on your simulator, it should show up in the Game Engine. Click on it to establish a connection. You should see this screen with a message that the device is selected.



4.6. You can now select a game you want to connect to from the list at the left.

It is important to note here that every game needs its own configuration for the connection to work. If you select a game, you can read in the description tab what you need to do.



Two examples:

- Assetto Corsa needs you to start the game, skip the intro, and go further in the menu until you're about to start a race before you can start the plugin. I will show you this in step 5 as an example.
- NoLimits2 needs you to add launch options to the game and you also need to start the game before you can start the plugin.

Just make sure to read the description per game and start the plugin accordingly. I will show you an example in Assetto Corsa now.

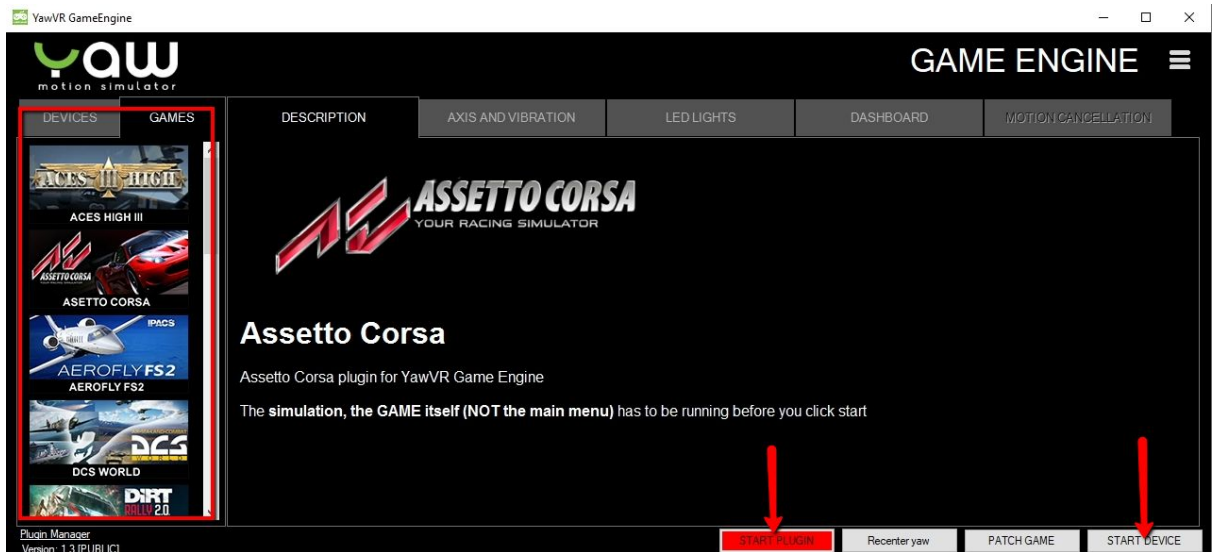
### Step 5. Example: Assetto Corsa With Yaw VR GameEngine

5.1. Start Assetto Corsa from wherever you installed it. I have it on Steam, so I'm starting it from there. For Assetto Corsa, you will have to figure out a way to control the game whilst on your chair. You can use wheels for that or a controller. I'm using a Xbox Controller right now with a VR headset. So make sure that's on as well when you start the game.

5.2. Now go through the video intro and menu until you're about to start a race.

5.3. This step is the same for every game after you've done the needed steps of that particular game.

You can start the plugin by clicking "Start Plugin", red button in the YawVR GameEngine. Then click on "Start Device". **Again, before starting the device, make sure you or someone else is sitting on the Yaw Simulator.**



5.4. You're ready to start playing! Just start the race/plane/rollercoaster or whatever else you're sitting in and get ready to feel the g-forces... Have fun!

5.5 When you are ready to exit the game, please make sure to do this gracefully by turning off the tracker or stopping the Yaw simulator before stepping out. See [step 7](#).

## Step 6. Using SimTools

Quote from the website: "SimTools provides the missing link between the game and the motion simulator. It extracts the game values like the force of speed, the direction of movement, shifting gear, RPM of the engine, force of acceleration and a whole lot more. Then, all of these values are mixed into a standardized data set which can be used to control the motors of your motion simulator." - More info on their official site [here](#).

Please note that SimTools is not free software. However, it has a big motion simulator community building plugins for it, so there is more support for games. See a full list of supported games [here](#).

For example, NoLimits2 works great with the Yaw Motion Simulator if you download the custom made map by Yaw called YawCoast. Other rollercoasters might not work well with the Yaw GameEngine. SimTools could also make the other rollercoasters work. But for this to work, you will need two things:

- SimTools license for about US\$49.99 (lifetime license) - See all licensing options [here](#).
- SimTools has multiple licensing options. This guide is written for consumers, so a license for private use is enough. This is the DIY License for US\$49.99.

SimTools is delivered with built-in support for the race game Live for Speed (LFS) only. For other games to work, you will need extra plugins. You can download these from the Xsimulator website, see below.

- XSimulator plugins license for about US\$32.53 (for one year) – See all licensing options [here](#).

In this guide, we will take NoLimits2 as an example.

6.1. Get the SimTools license from [here](#), if you haven't yet. You will get an email with a username and password to login. Click on the link provided in the email and log in with your new account. You can find your download link for SimTools in your account. Use it to install SimTools on your PC.

6.2. Get the XSimulator license from [here](#), if you haven't yet.

6.3. Now go back to the [XSimulator website](#), make sure you are logged in with an account that has an activated license. Find the NoLimits2 game plugin from [here](#). Plugins for other games can be found [here](#).

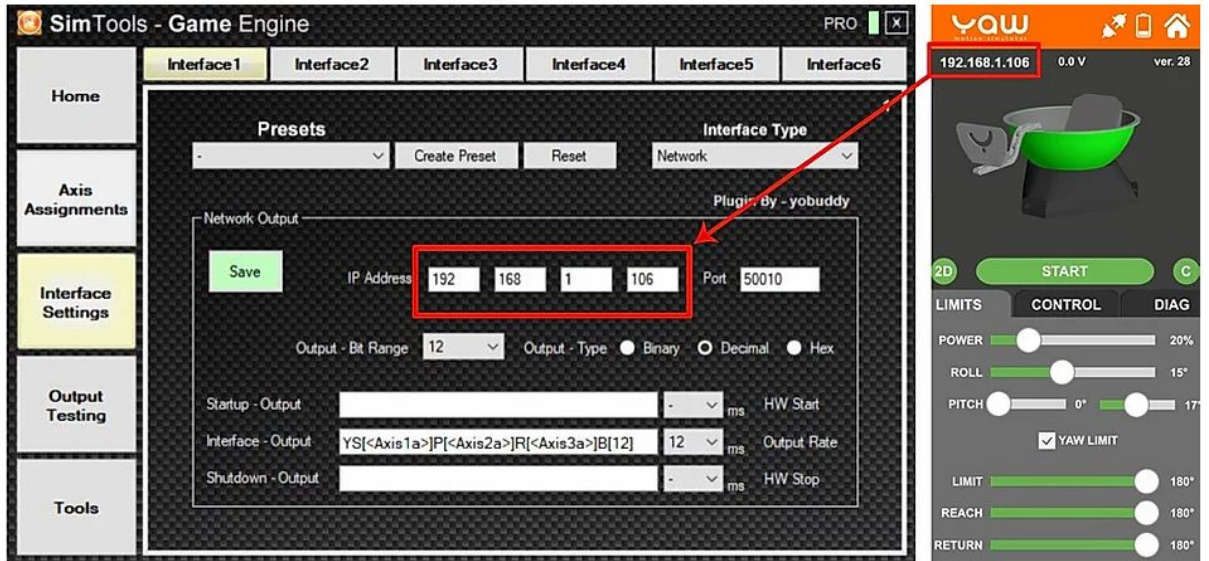
6.4. The NoLimits2 game plugin is in a zip folder, no need to extract it. You can install it in SimTools by opening the SimTools PluginUpdater, which was installed automatically when you installed SimTools.

Drag the plugin zip file on to the SimTools PluginUpdater and it will install.

Close the SimTools PluginUpdater.

6.5. Before we can use SimTools with the Yaw Simulator, we need to configure SimTools first.

So, start SimTools GameEngine > go to Interface Settings > Fill the "Interface1" Tab with this information:



Note: It's possible that SimTools GameEngine starts minimized into your taskbar, double click the icon to launch it

Interface output (copy and paste this):

```
YS[<Axis1a>]P[<Axis2a>]R[<Axis3a>]B[12]
```

IP Address: Should be the local IP address of your Yaw Simulator. This can be found in the Yaw Config App.

Click "Save" to save your settings.

6.6. In SimTools GameEngine, go to "Axis Assignments". Choose "NoLimits 2" from the Game List dropdown menu and change to these settings:



Click "Save" to save your settings.

6.7. You're ready to start playing now! Start SimTools Game Manager, choose the game you want to play in the "Game Selection" dropdown menu.

Make sure the SimTools - Game Manager is on by clicking the button on the top left corner.



6.8. Turn on ([step 1](#)) & calibrate ([step 3](#)) your Yaw Simulator if you haven't yet. Launch the Yaw VR Config App and start the simulator. Don't forget to sit in it before starting.

6.9. Start the game of your choice with SimTools Game Manager on in the background and the game should work with your Yaw VR motion simulator.

When you are done playing, please do not forget to step out of your Yaw VR simulator gracefully as explained in step 7.



## How To Step Out Of Your Yaw VR Simulator Gracefully

### Step 7. Stopping Gameplay

7.1. If you are done playing, make sure to stop the simulator before stepping out of the device. This is to prevent any damages to the simulator as it needs your weight to keep balance. You can stop the simulator by clicking the “Stop” button in the Yaw Config app. If you can’t do this, you can also turn off the positional tracker instead before stepping out.

7.2. Then don’t forget to turn off the motors, the chair itself and the positional tracker. Charge the positional tracker if needed with a regular micro-usb charger. **Do not use a supercharger!**