

SIMAGIC

User Manual

PD-19-01



M10 Base

Welcome to the Direct Drive Revoluti



- * For more convenient and quick use of M10 base, please read this Before installation and use, please read the instruction manual carefully, which contains important product and safety information; please make sure to keep this manual for future reference.
- * The product contains many advanced technologies, including custom overspeed motors, integrated electronics, wireless modules, etc. and is PC compatible.
- * Pd-19-01 is a trial version, simagic reserves the right to modify it without prior notice, based on factors such as product and user feedback.
- * This instruction manual is a general instruction manual for a single product (including different configurations and categories under a single product).

Getting information

1. Users can visit SIMAGIC global website www.simagic.com to browse product information or obtain product support ;
2. Simagic official website information publishing site Uniform name : [Simagic official](#)
YouTube
Facebook
Twitter
3. China's information channel



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About **SIMAGIC**

This section introduces
Simagic brand and Simagic Tech.

Simagic Brand

Simagic brand direct drive simulator is the first three-phase hybrid direct drive motor simulator designed independently in China. The steering wheel is directly connected with the motor shaft, eliminating the traditional belt and gear sensors, bringing a more pure and immersive direct driving experience.

Simagic takes users as the center, develops the direct drive revolution with all its strength and strives to build the world's top direct drive simulator, and promotes the development of *racing E-sports from keyboard Entertainment (1.0) to simulator Entertainment (2.0)*.

The first direct drive simulator host achieves real-time, accurate and extremely accurate reproduction of driving road conditions, physical feedback of the action effect in the racing game, and a new human-computer interaction experience.



Simagic Tech

Shenzhen Simagic Tech Co., Ltd is the first company based on the field of simulation driving equipment in China, adhering to the company concept of "committed to the development of new culture of simulation driving", to create the best racing equipment and best competitive experience for racing game enthusiasts, and create a new application mode of simulation driving for the driving industry.

As a new generation team of China's racing E-sports culture, with the initiative of simagic brand direct drive equipment, we are at the forefront of simulation racing equipment technology, insisting on the product concept of continuously innovating technology and optimizing product design, "leading the trend of simulation driving with innovative technology", and filling the gap in the field of China's racing E-sports with the advanced technology level of international racing simulation driving equipment.

Fast simagic technology adheres to the enterprise spirit of "technology leading, extremely intelligent first", actively practices the concept of product development through scientific and technological exploration, integrates unlimited possibilities into every experience detail, and develops the new simulation driving culture of China's intelligent manufacturing.

Product Profile

This section describes the specific functions of hub so that you can quickly understand and use it

- * The main body of M10 mainframe is made of high-quality alloy aluminum through CNC processing. The surface of the main body is put through multiple processes such as sandblasting and oxidation to make a simple and elegant color effect and comfortable surface feel.
- * The carbon fiber trim is embedded in the front and rear of the main unit, which greatly enhances the product texture and makes the body richer in racing elements.
- * Bright and beautiful SIMAGIC lacquered silk-screen LOGO.



M10 base is made of integrated design, and the body is clean and less port.

USB port:
Spare interface, SIMAGIC test interface
Used for product inspection, after-sales inspection, etc.



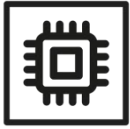
USB-B port:
Use the factory equipped USB-B data cable to connect to the PC.

Host vent:
Used for heat dissipation during base operation, Do not block.

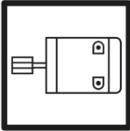
USB Can Bus port. Can be used to connect Simagic peripheral converter box or future Simagic accessories

Reset hole:
The M10 has a memory protection function. If the user encounters problems with the simulator system such as failure and no angle limit state in use, he can use a pin or similar object to reset the wheelbase.





The **three CPUs** respectively implement motor control, game effect presentation, and USB real-time communication. Give the entire system real-time, fast and complete reproduction of every force feedback detail



Newly designed three-phase hybrid stepping motor, smoother and more accurate; Maximum continuous torque reaches **10nm**.



Equipped with self-developed control software, Race Manager has feature rich yet simple and user friendly functions that adjust data according to different personal needs.



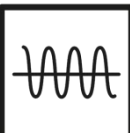
In the drift game, the unique drift mode adjustment: the force feedback size and return speed can be set separately, perfectly balancing the strength and return speed, which can bring a new real car drift experience.



Supports a variety of peripherals, making the simulation process more realistic.



The position resolution of 16384 per circle is more accurate and smooth.
The optical sensor module can quickly and accurately map the shifting parameters every moment



1000hz real-time game data interaction.



40,000 force feedback control frequencies per second; no detail is missed.

Safety Suggestion

This page introduces the safety suggestions for the steering wheel of the direct drive simulator in use, which is very important

Proper Use



- * Equipment and power supply shall not be exposed to rain or other liquids or humid environment to avoid short circuit and leakage, which may cause damage and failure of equipment and fire.
- * The suitable operating temperature is 15 °C - 35 °C.
- * It is suggested that the game time of power feedback is 1 hour, and overuse may lead to health risks; we suggest to take 5 minutes off every 20 minutes, and the maximum driving time per person per day is 2 hours.
- * Although the product can adjust the force feedback data, the children under 13 years old must be supervised by their parents to adjust the force feedback parameters of children's model and use the device under their supervision.
- * When users use it for the first time, please adjust the force feedback from small to appropriate strength.
- * In the game, if the feedback force adjustment is too large to control, please stop the game immediately and adjust the feedback force parameters in time.
- * This product contains small parts, and the magnetic light sensitive shift paddle adopts strong magnetic magnet, which is not suitable for children under 13 years old to operate alone.
- * The hub contains circuits and other parts that cannot be repaired by the user. It is forbidden for the user to open the equipment shell to avoid greater damage to the equipment.
- * It is forbidden for the user to open the hub without authorization or professional guidance, which may cause irreparable injury to the equipment and the user will not receive simagic's warranty policy service.

Electricity Safety



- * The steering wheel must be installed on the simagic main engine to ensure proper matching power supply.
- * The factory fitted USB cable must be used when upgrading the steering wheel.
- * In order to ensure relevant safety, parts replacement can only be sent out or repaired by an officially authorized maintenance center.
- * If it is not used for a long time, please pull out the steering wheel and disconnect it from the main engine.
- * In case of any abnormality, please stop using immediately and ask simagic official or relevant authorized Center for help.
- * Please follow simagic website and public platform for the latest product information.

*** This product is only limited to simulation driving related activities.
Please distinguish simulation games from reality and drive safely !**

Packaging Brief

This section introduces the packaging content of M10. M10 is designed and manufactured with integrated design and convenient operation

Package Contents



Power supply



Mounting screw pack



Fixed bracket



USB data cable



Quick release



Warranty Card

Screw bag



Custom slider nut:

To be used in slots on the side of the base along with supplied bracket.
The unique design of this allows easy adjustment of the wheel base to be closer or farther away from driver.



Square nut

Interlock with M6 × 16mm flat head screws



M6 × 16mm flat head screws

To be used with bracket stand bottom hole connection. 16mm Allen wrench.



M6 × 16mm flat head screws

To be used for securing wheelbase bottom directly to fixed support.



M6 × 10mm flat head screws

To be used with bracket stand side hole connection. 4mm Allen wrench. 4 mm screw.



Allen wrench

Product assembly

This section introduces the installation instructions of the M10 base. The M10 direct drive base is relatively simple to install and the accessories are already provided.

Unpacking Instruction

This product is a valuable item. Due to the product's special appearance and product weight, it contains parts that cannot be repaired by the user. The factory packaging is protected by high density foam to avoid damage to the product caused by transportation and other factors .

Do not unplug the power cord to take out the host, Unplugging the power cord will cause the power cord and the carbon fiber cover on the back of the host to fall off and will be damaged.



The correct way to unpack is:

Place the foam cover on a flat surface and carefully flip the base on it to protect it from damage.

Base installation



① Attach the bracket stand



② Install the wheelbase (use slide nut)



③ Adjust the direction of the wheelbase accordingly



The second way to install the bracket stand

Operation Explanation

Simagic custom quick release adopts the design of high precision upper six balls and lower four balls, and the access base needs to align the steel ball hole position. It can be removed without any tools.



The quick release logo shell is the first lock. Hold the red part of the shell when removing it. Pull out the quick release to remove it.

To fit it back in, just push the QR back on the shaft and rotate the shaft till it clicks and locks in, ensuring that the ball bearings are fully seated in the shaft ring of the base.

Safety lock



This is the factory standard setting.
Only use simple and fast single lock



Use a wrench to loosen the screw
Manual lock can be opened



After opening the quick release second lock,
To remove the quick release, press the
button to remove it

Adapter steering wheel

This section introduces M10 compatible steering wheel, two simagic GT1, one gt4 steering wheel

SIMAGIC steering wheel

GT1



Round wheel



D wheel

GT4



* This section is not limited to simagic single host. More simagic products can be found on simagic official website or public platform and other official information release channels.

Race Manager

This section introduces the control software of simagic direct drive simulator. Race manager is the control center

Race Manager

- * Race manager is a host control program independently designed by simagic according to the mechanical effect of the direct drive simulator host and the source of game feedback. The interface is simple and easy to operate, which simplifies cumbersome parameter settings and complicated parameter relationships, and brings more direct product experience to users.
- * SIMAGIC supports six types of game force, and game may not use all types. At the beginning of the game, the type that is chosen will turn red. Users can adjust the type of game force. The default value of game force is 100, which is the original output of the game. Users can get a good handle by adjusting the mechanical setting coefficient.
- * Race manager supports parameter saving. Users can save parameters after adjusting to the best experience parameters for different games and scenes.
- *Modify parameter method: the parameters in the parameter setting part can be modified directly by pulling the slider and by keyboard input (press enter to take effect).

Download and install

Users obtain simagic control software "race manager" as follows :

- (1) Official website of simagic Technology: www.simagic.com users can go to the homepage of the official website to navigate the "service and support" section and download the simagic professional driver software installation package "race manager" according to the guidance.
- (2) Through Simagic's designated sales outlets and channels. Please contact Simagic's official after-sales customer service or distributor in various regions to obtain desired "service and support" such as documents, official information release platform, etc

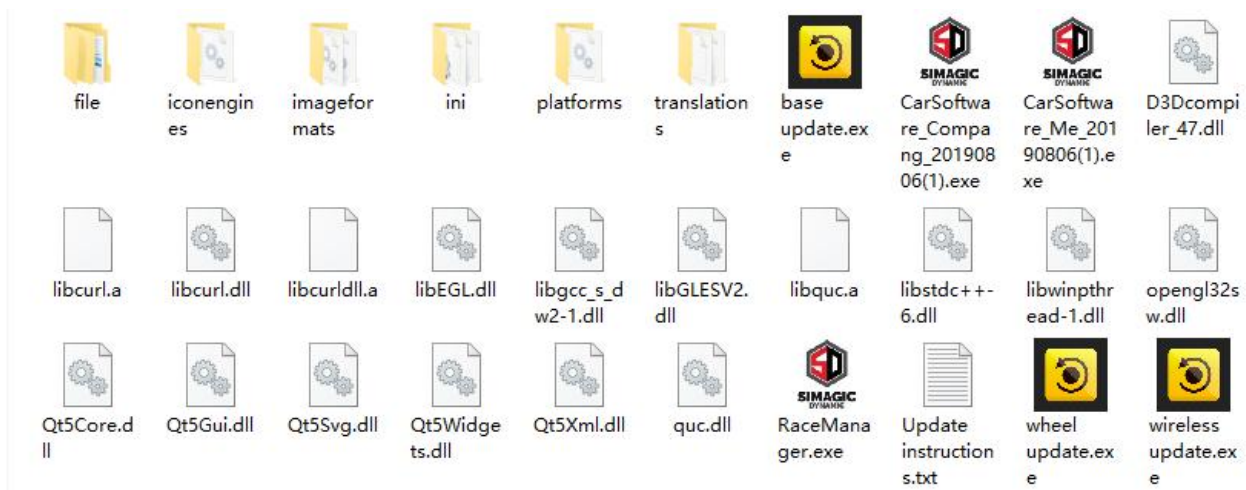


Installation steps

- ① Extract the "race manager" driver package to the custom path: (Note: it is recommended that all software paths do not contain Chinese characters)



- ② Get the racemanager folder:

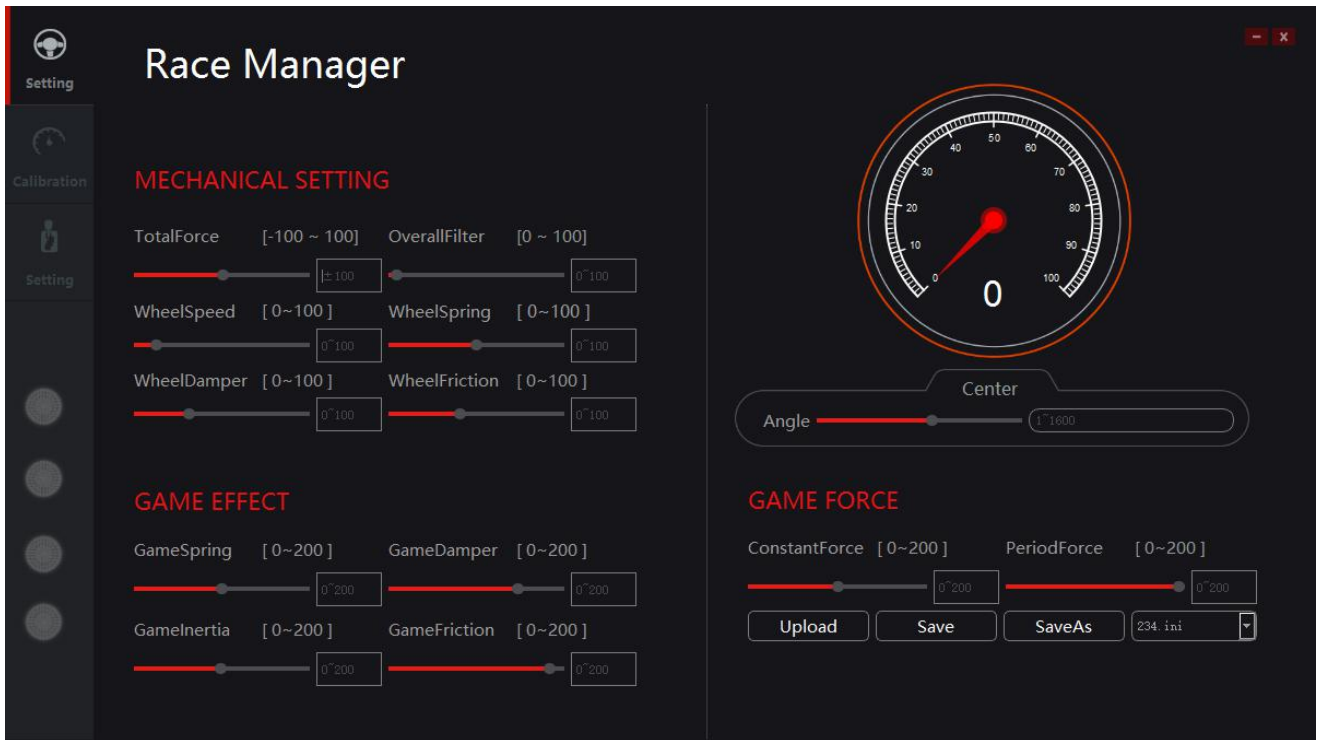


- ③ After opening racemanager software, set parameters:



Mechanical setting interface, specific parameter adjustment page, where users can set and save parameters of different scenes

Mechanical force: To enrich the handle of the game, which works while whether the game is played or not.



TotalForce

To adjust the output range of the Force engine. The positive or negative signs represent the direction of the Force.

OverallFilter

To adjust the smoothness of the output of force engine. The higher the value, the smoother the output, the lower the resonance frequency, and the less the details.

WheelSpeed

To adjust the highest speed of the wheel. The value on screen represents the highest speed. SIMAGIC algorithm does not intervene if the speed is below this value; Other wise the algorithm will limit the speed to set value.

WheelSpring

To adjust the central spring of the wheel. The larger the offset from the center, the greater the spring.

WheelDamper

To adjust the mechanical damper of the wheel. The damper force hinders the wheel rotation. Damper force= wheel speed * mechanical damper coefficient.

WheeFriction

To adjust the mechanical friction of the wheel. The direction of friction is opposite to that of wheel rotation. The value of friction can be adjusted by friction coefficient.

ConstantForce

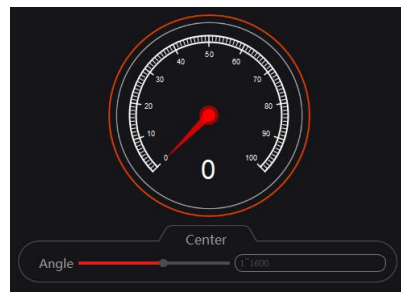
Represents steering power in most games.

PeriodForce

In most games, it represents the intensity of game road, collision and other details.

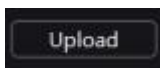
WHEEL CENTER CALIBRATION

Rotate the wheel to center manually,
and then press the button CENTER



Two ways of changing the parameter in the setting:

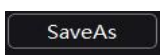
1. Pull the slider to change the parameter
2. Input the parameter through keyboards, and then press “enter” to fuction



Upload parameter s from base to RaceManager.normally RaceManager will upload parameters autoly when it is opened or base is connected.



To save parameters to base interal memorizer and remember these parameters even poweroff.



To save parameters to a “ini” file,user can save different setting for different game.and these setting can be loaded by pull-down menu next to “save as”.

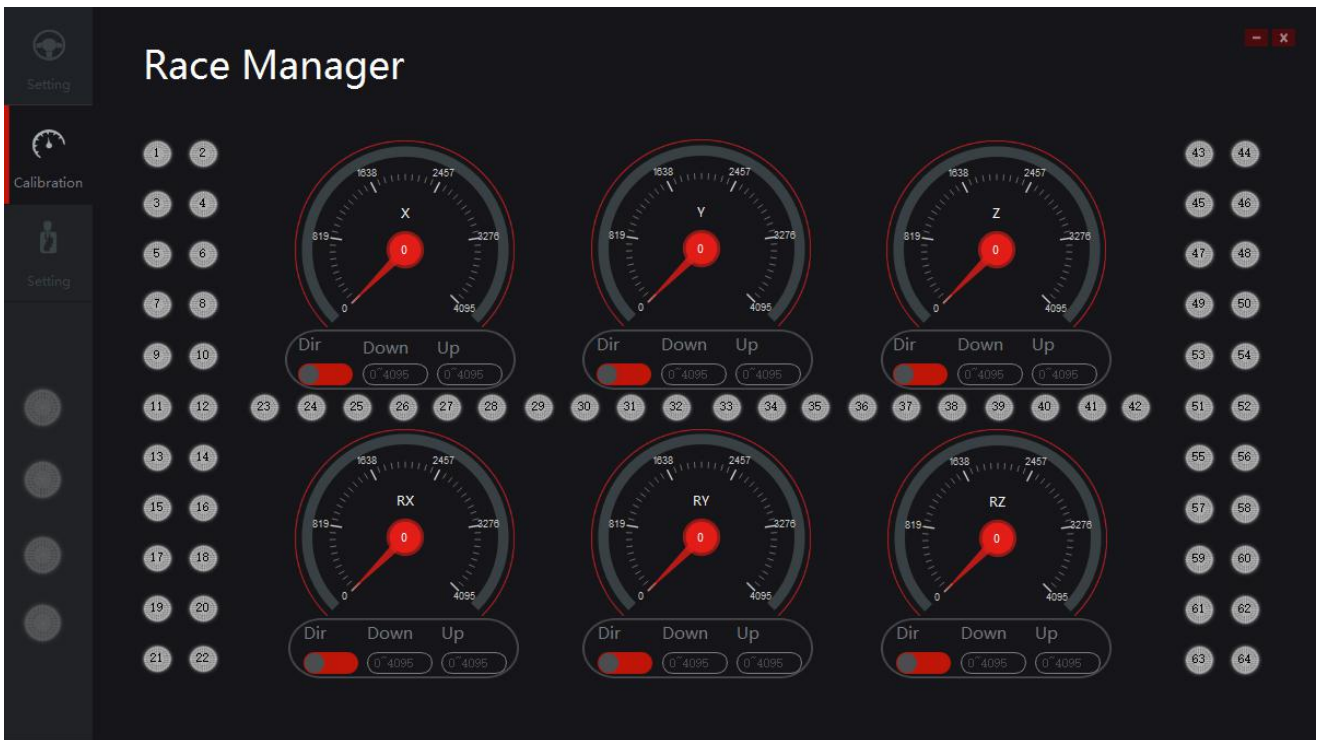
Note:

*The drawings are cut from the base and other equipment not connected. The user must install the equipment before setting

*All parameters in the diagram are used as display instead of official recommended parameters. The hand feeling of parameter setting varies according to people and equipment. After the initial setting is familiar, it can be debugged by itself

The second page of RaceManager is **Calibration**.

all peripherals from simagic will be linked to base by can bus.here show all 6 axes and 64 buttons.that will be enough for most of all games.



Motor setting interface, which can view the basic information and system status of race manager.

Motor Speed:

SIMAGIC have 5 scales of motor speed to set different feeling of motor.you can see it represent suspension hardness of car.

Game Model:

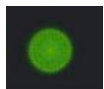
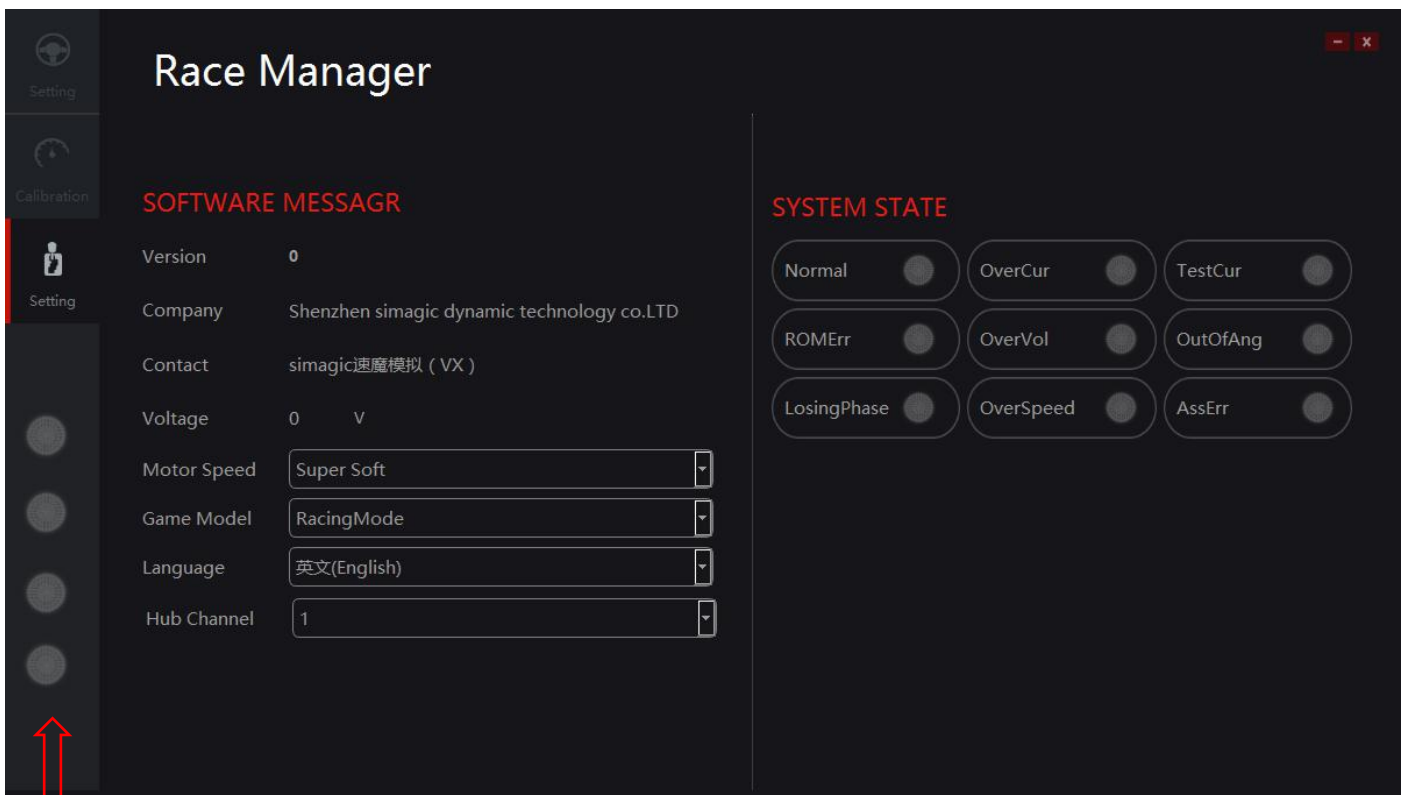
Reserved

Language:

To set language of Race Manager.

SYSTEM STATE:

To show the state of base. Errors will be show here. Normally errors can be clear by restart base.



BASE OK - This led indicated connection with base

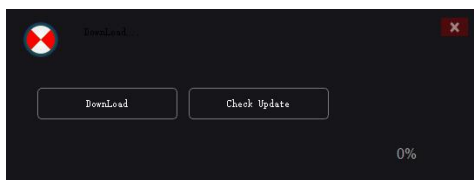
* If there are three states of system over-current, system over-voltage and angle over limit during system loading, please refer to reset hole operation.

*There are four different motor status flags at the bottom left. You can check the connection status of the motor here to adjust the motor.

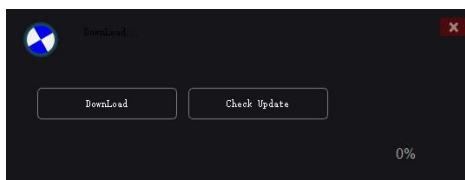
Firmware Update

This section describes the upgrade steps of hub. You can upgrade after Simagic releases the new version, but the product will always be the latest version when it reaches you,

Wheelbase upgrade. Please keep the computer connected.

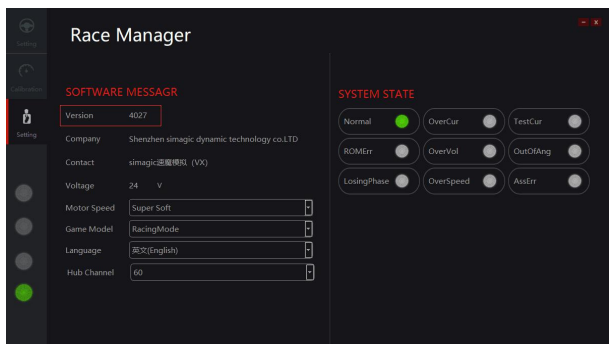


Not connected properly



Connection is normal

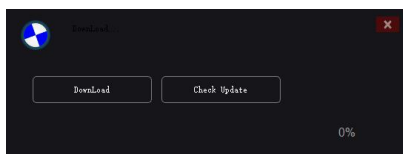
- Enter Race Manager to check the version status. Simagic products will always be the latest version when you get them. If new versions are released, please follow the official channels.



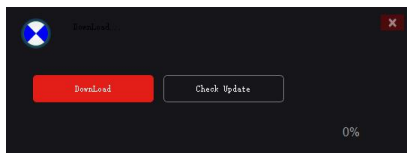
- Go to the Race Manager folder, Open the base upgrade program and prepare to upgrade



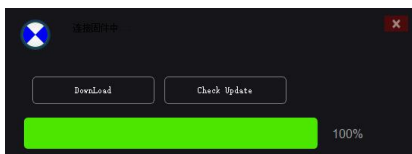
- Follow the prompts
 - 1.Click the“Check Update”



- 2.After checking, the version can be upgraded Click the“DownLoad”



- 3.When the progress bar shows 100% Upgrading



- * An error message appears: reconnect the USB cable,Operate according to the steps after checking.
- * Do nothing during the upgrade
- * After successful upgrade " Restart wheelbase " Complete the version upgrade and you can use it normally

After-sales Information

In order to protect the legitimate rights and interests of consumers and the operation of simagic Brand, simagic formulates franchise terms and consumer product warranty terms, so as to restrict the official partners such as franchise agents to provide simagic warranty terms integrated with consumer standards to protect the legitimate rights and interests of consumers.

Simagic adheres to the user spirit of being responsible for users and reassuring users, invests in the production and operation of the manufacturing industry with the attitude of service industry, and actively creates the user's ultimate experience ecology.

In order to enjoy simagic's warranty support, do not damage the machine artificially, and do not operate the machine or system abnormally without the guidance of the official or authorized personnel.

For detailed pre-sale and warranty terms, please log in to simagic public platform or official website and simagic official information release channel for inquiry.

Additional Information

- * Before trial use, please install the equipment on the rigid platform safely, and fix the main wheel base on a suitable platform bracket or racing equipment with the adapter screw. It is forbidden to use other types of fixings.
- * Before each use, it is necessary to check the installation of the base and the strength after starting the machine.
- * This product has a large feedback force and contains small parts. Children are not allowed to use this device alone.
- * When terminating use, please turn off the button and power equipment to prevent accidents.
- * People who use or experience your device for the first time must be instructed by the device owner.
- * Loose clothing such as hair, cables, hemlines or other tangles should be kept away from the simulator.
- * Simagic DDW can be used out of the box completely. We always update the latest firmware at the factory. For program upgrade and other issues, please pay attention to the official website of speedmagic technology and the official public platform "simagic speedmagic simulation".
- * Users can use this product to simulate racing game activities, and should drive the car at least 1 hour after the end of the game.
- * This instruction manual is only used as a general instruction manual for a single product (including different styles under a single product), and the products demonstrated in this manual are only used as product instructions instead of sales instructions. The specific style of products shall be subject to the purchase of users.
- * **Note: relevant documents are game adaptation documents developed by simagic based on simagic supporting equipment, In order to protect the legitimate rights and interests of users, users are requested to download all files in the channel designated by simagic.**

Thank you for reading and have a good time.

This manual is updated without notice.

The latest manual and any simagic related information can be found on the official website www.simagic.com

If have any questions and suggestions about this instruction manual and simagic products, please contact us through information channel.

Common name of Chinese platform: [simagic 速魔模拟](#)

Common name of international platform: [simagic official](#)