



**Air Suspension Electronic Control Unit**  
Product Instructions

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## Foreword

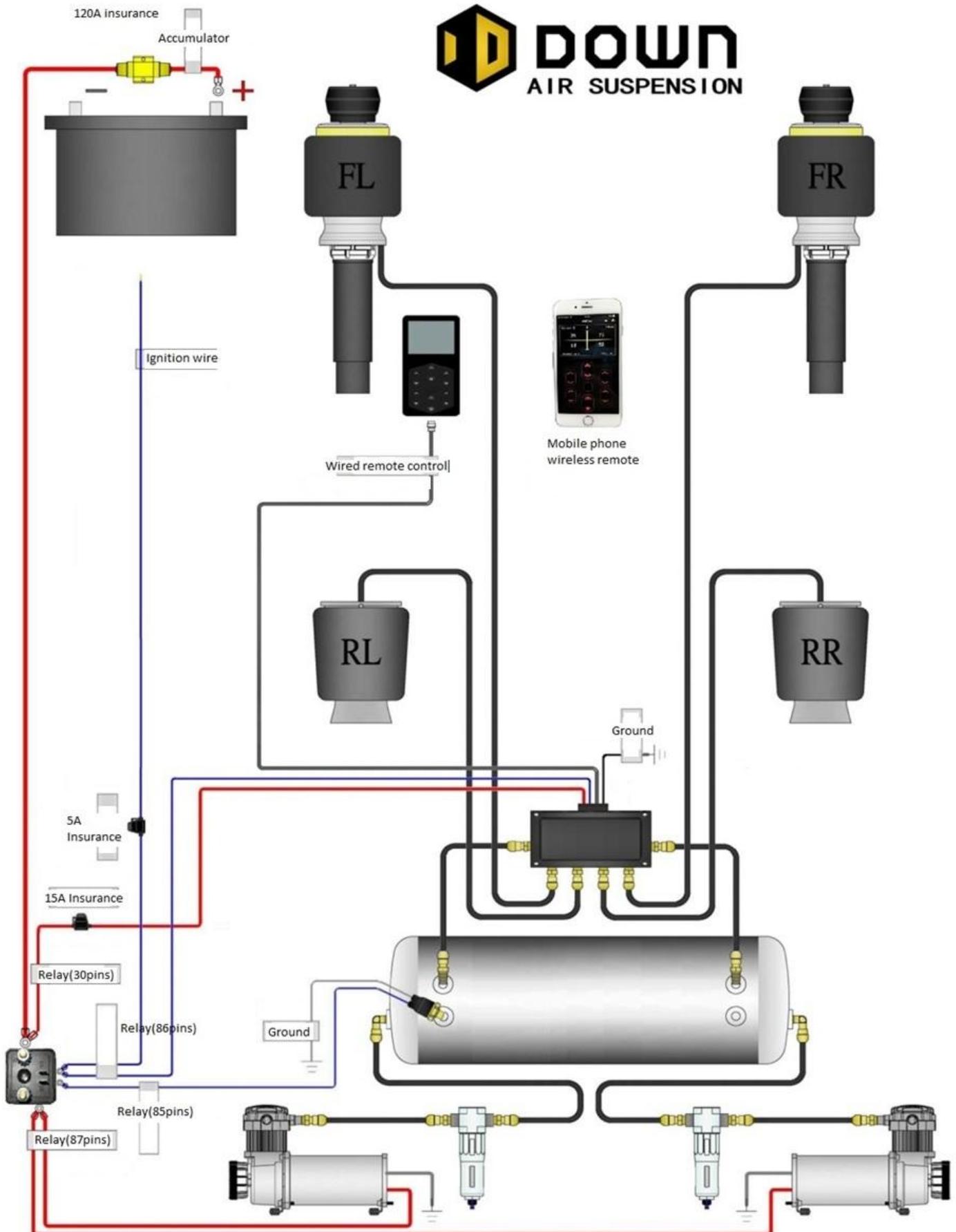
Thank you very much for your support of the "DOWN" air suspension electronic control unit.

This product adopts the principle of single-chip microcomputer control, receives input commands from the remote control, and controls the solenoid valve group to perform corresponding actions, thereby completing the corresponding suspension action. The product control logic is clear and the production is excellent, which guarantees the reliability of the product.

We are committed to developing advanced suspension control technology to provide you with stable and reliable products and high-quality services. For a great driving experience, please visit our website ([www.dpdown.com](http://www.dpdown.com)) and tell us your driving experience.

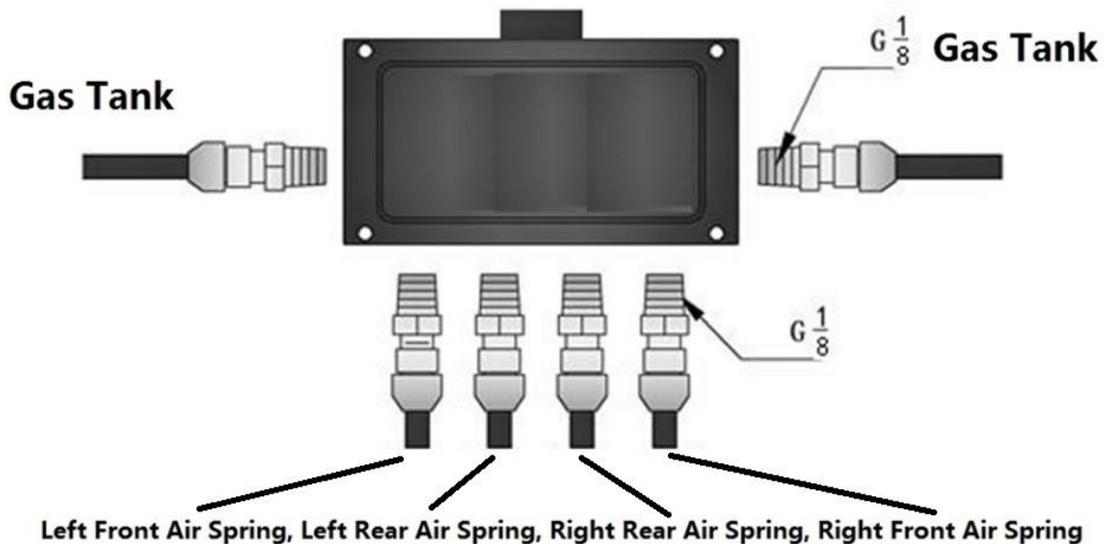
**Note: This product is part of an electronically controlled air suspension system and needs to be used in conjunction with other system components.**

[1] System Composition Layout Diagram



## [2] Air Line

### 1. Connecting Solenoid Valve



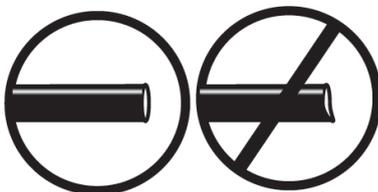
### 2. Connecting Air Spring / Electric Air Pump / Air Tank

According to the "system composition layout diagram", the electric air spring, the gas storage tank and the solenoid valve group are connected by the air pipe.

It is recommended to install an air filter. In cold climate, the air filter must be installed to ensure stable operation of the pneumatic system.

Note:

1. Use standard pipe cutters or blades to ensure that the ends are as round and flat as possible.
2. The air line is away from sharp edges and heat sources, if necessary, using insulated casing.



### Joint assembly guide

1. Check the interface screw holes and joint studs to ensure that there are no contamination and excessive adhesions and cracks.
2. Apply sealant on the joint thread. Do not apply the initial two threads.
3. Screw the connector thread into the interface screw hole and tighten.

**Caveat:**

Do not withdraw the tightened threads for alignment. Unscrewing will damage the seal and cause air leaks.

## [3]System Test

When most of the components of the system are installed and connected the system can be tested.

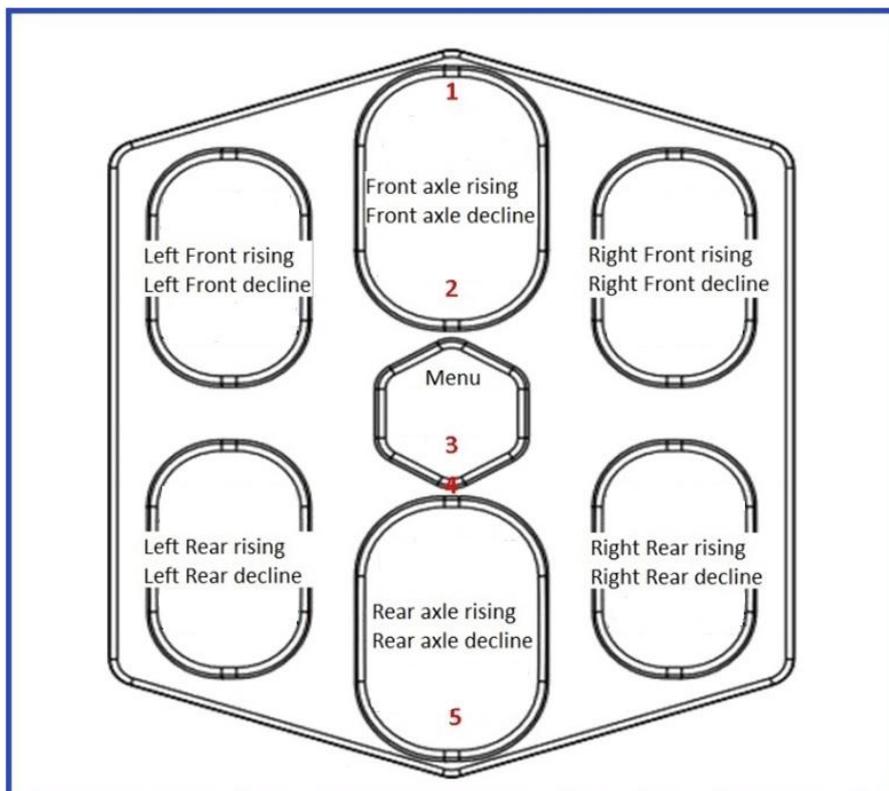
**Note:** The test procedure is carried out on a lift as described bellow.



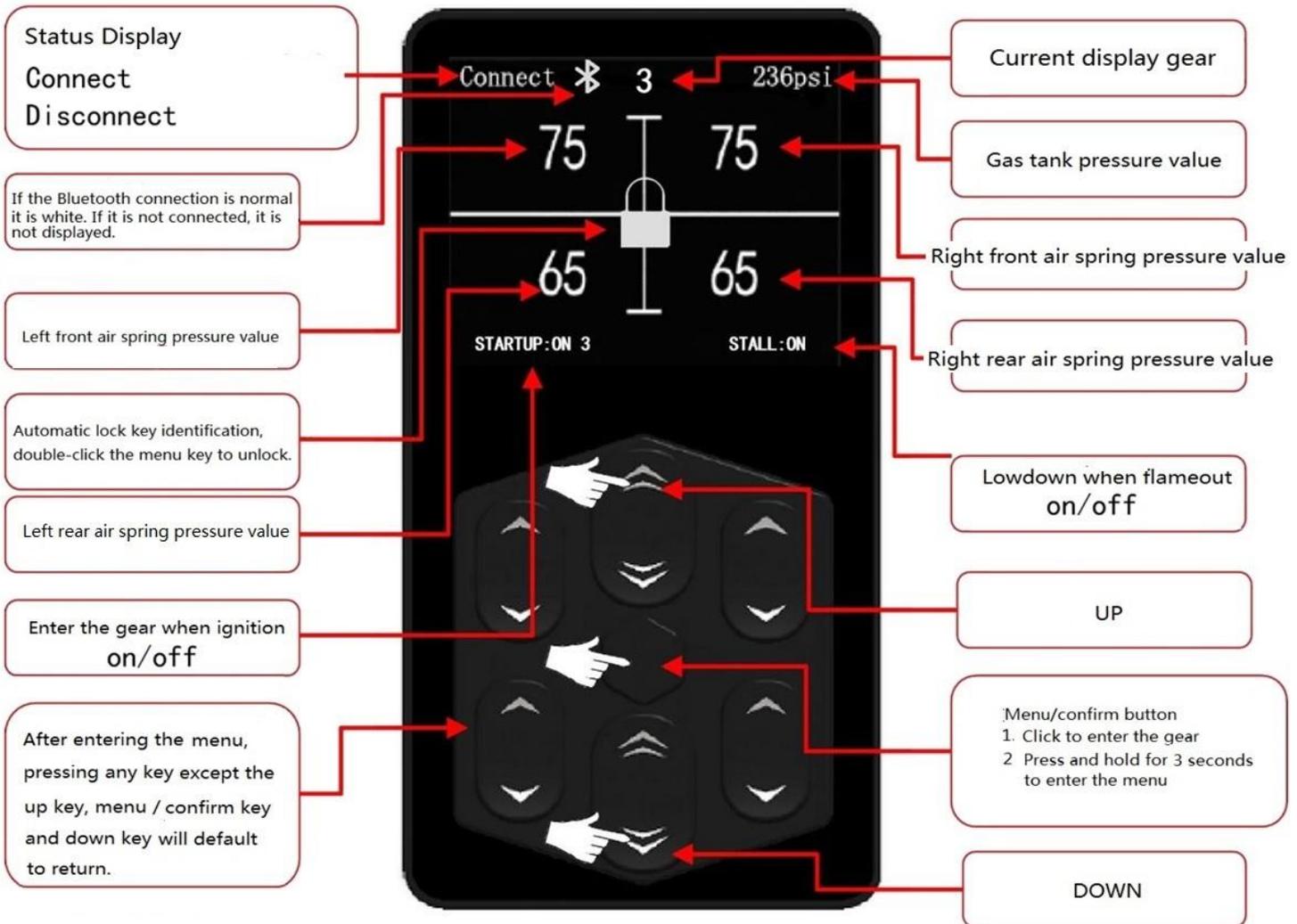
### ● System Test

1. Start the car, the electric air pump will start and start to inflate the air tank. When the electric air pump is inflated to the set maximum pressure, the electric air pump is automatically turned off. When the tank volume is 20L and the double pump is working, this process takes about 2-3 minutes.
2. As shown on the left, adjust the wired remote control button group to see if the corresponding wheel position will rise and fall. When the body is raised, air will be consumed, and the electric air pump will start automatically when necessary.
3. When the vehicle is erected on the jack, the inspection of the mechanical system can be done properly: check the clearance between the entire range of the air spring and the surrounding components.
4. Check all threaded fittings for leaks with soapy water. When repairing the leak, first lower the lift, then turn off the ignition and let go of the gas in the tank.

The button description of the button area is as follows:



## [4]Wired remote control the display interface



## [5]Use of wired remote control Menu

### 1、 Gear calibration

- After the car is installed on the ground, a suitable driving height is calibrated according to the model and tested.
- This product has 5 gears, and you can set 5 gears with different body heights to experience according to customer preferences. Each of the 5 positions can be turned on / off independently. The gears will be distinguished by color on / off, "Gray" is off. In addition, the value saved in your last calibration will be displayed in each gear.
- The factory default 5 gears are all open and closed, and the calibration values of the 5 gears are all within 50psi, which is within the safe air pressure range. In order to prevent the customer from misoperation, it is recommended that the customer set a few gears that they can use. (Prohibited to operate while driving)

**Tips:** When you don't need 5 gears, we suggest you choose to close to avoid misoperation.



### 3. Ignition settings

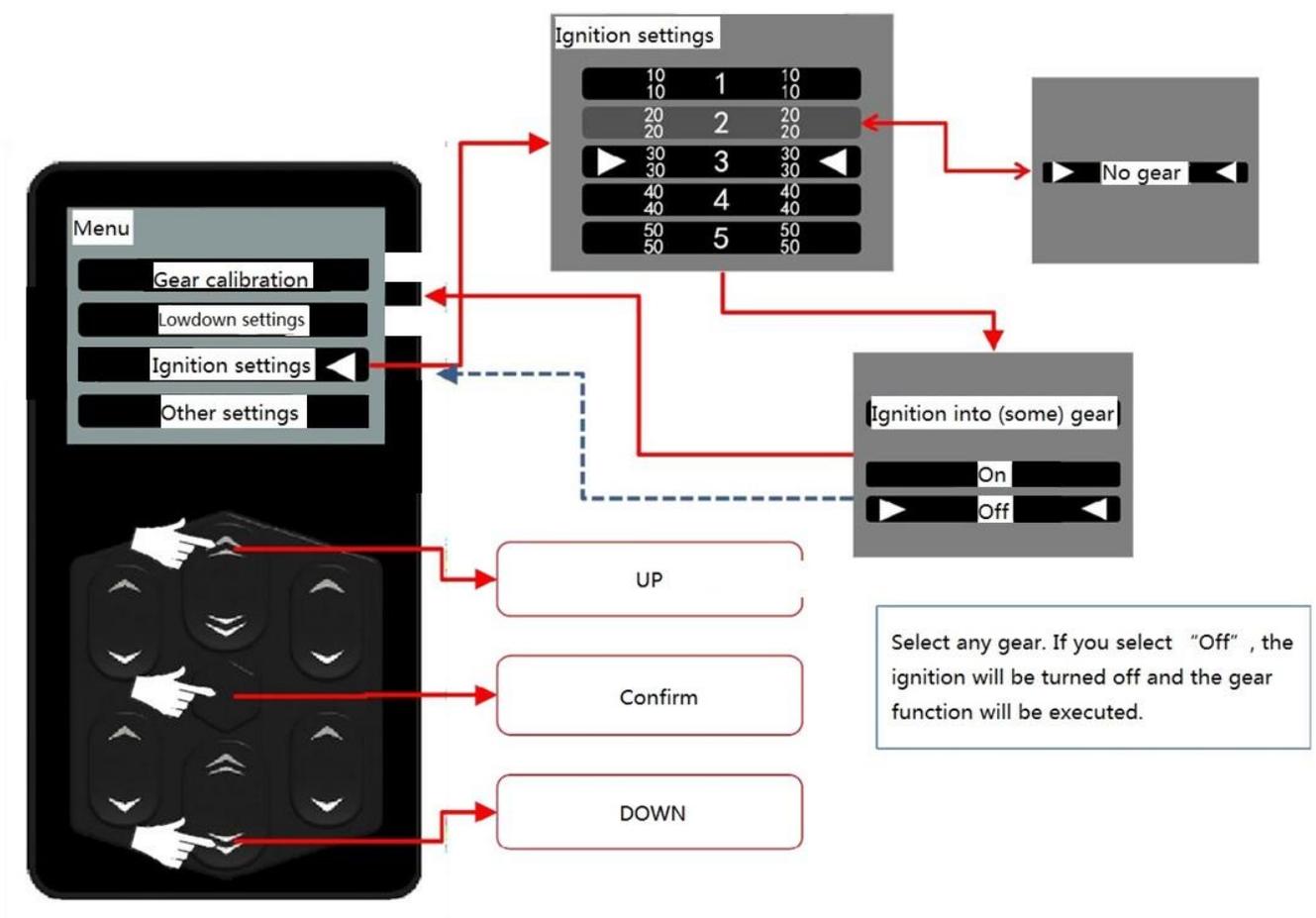
a. After entering the ignition setting, you can select any one of the five gears as the "ignition entry gear". The closed state of the gear cannot be used, and a "no gear" interface will appear.

b. "Ignition into gear" can be "on / off", just click "confirmation key" in the currently set gear, and the interface of "ignition into (some) gear on / off" will pop up.

#### Tips:

a. When "Ignition into gear on" is selected, starting the engine to execute the gear for 10 seconds is not interruptible. In addition, from the start of the engine calculation, within 50 seconds, turn off the engine and pull out the ignition key, the flameout is on, and the vehicle will not lie down.

b. After the flame is low, the vehicle will ignite again within 15 seconds. When the gear is in the "open" mode, the vehicle will not enter the gear at this time.

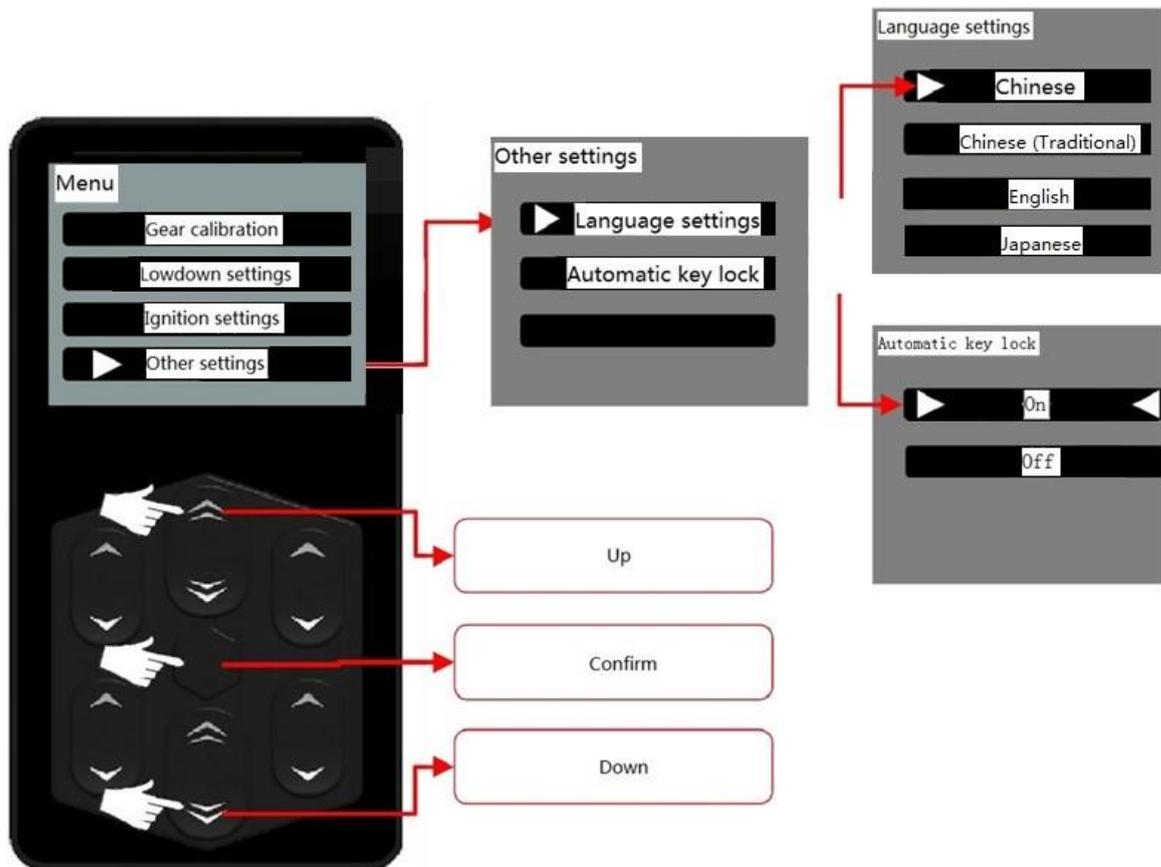


### 4. Other settings:

a. This product is available in four languages: Chinese, Chinese (Traditional), English,

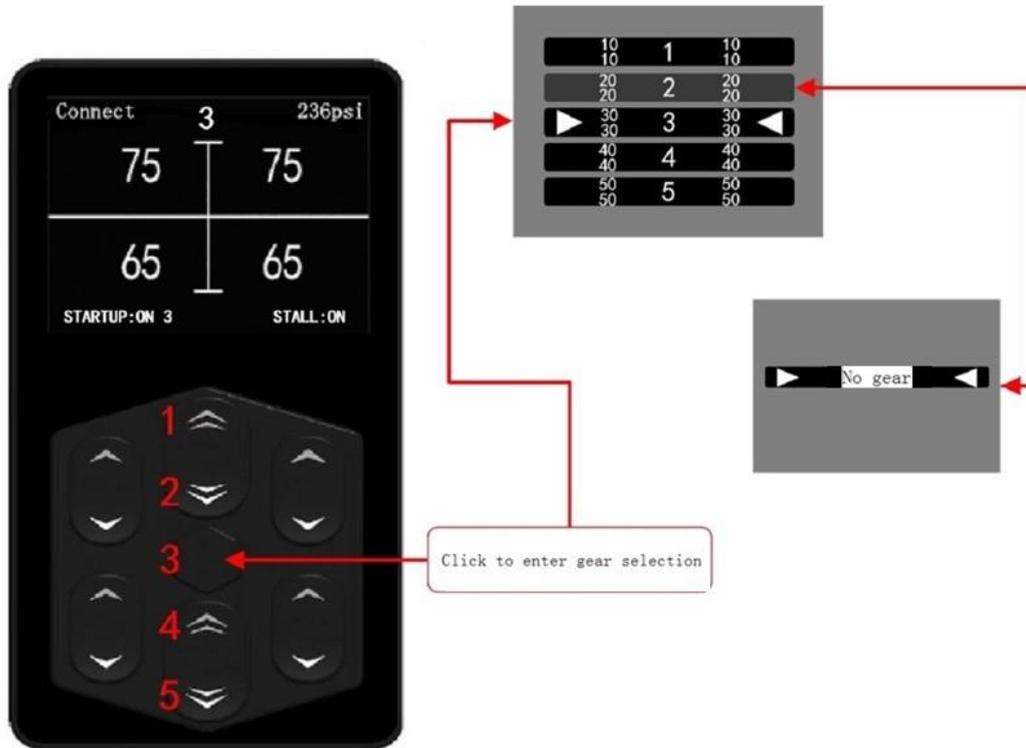
Japanese.

- b. Press and hold the "Menu / Confirm" key for 3-5 seconds to enter the menu, then enter "Language Settings", select your own language, and click "Confirm".
- c. Automatic key lock function: When the remote control is not operated, the keyboard is automatically locked after 10 seconds. Double-click the "Menu / Confirm" key to unlock; this function can be turned on and off according to customer needs.



**5. Gear shortcuts to enter:**

- a. When displayed on the homepage, click "OK" to enter the gear shortcut selection interface.
- b. After entering the gear shortcut interface, click "Front Axle Up" to 1st level, "Front Axle Down" to 2nd level, "Menu / Confirm Key" to 3rd level, "Rear Axle Up" to 4th level, and "Rear Axle Down" to 5th level, Other keys return by default, please pay attention to selection.
- c. The gear position is displayed in gray, which indicates that the gear position is closed. After selecting, the "No gear" interface will pop up.

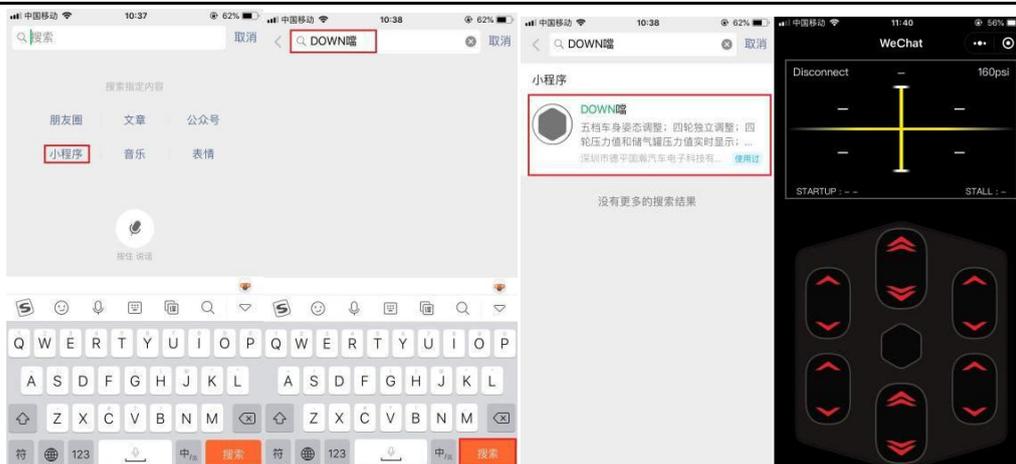


## [6] Instructions for using the Wechat Mini Programs

### 1. Product features:

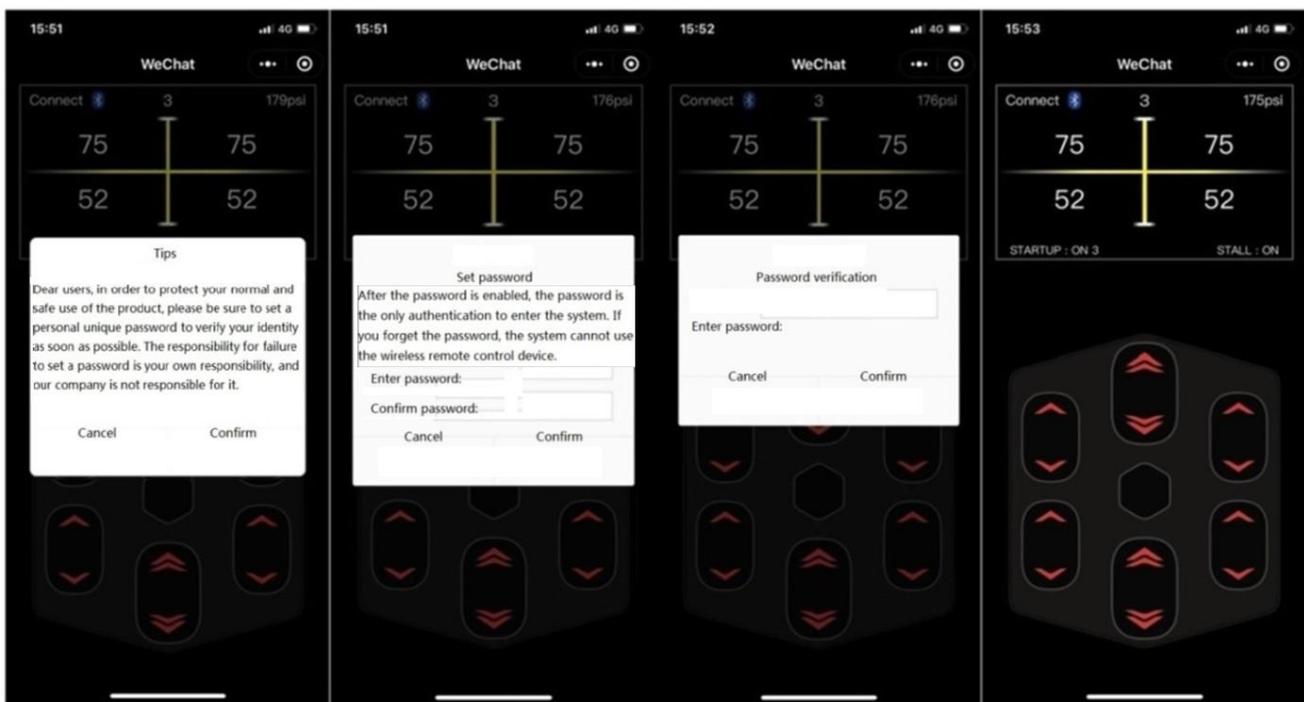
- a. This program can be used only after WeChat is installed.
- b. Bluetooth effective distance: 0 ~ 30 meters in open environment (depending on the antenna placement) .
- c. Android 4.3+                    iOS7.0+; Support Android 4.3+, iOS7.0+.
- d. DOWN; Bluetooth broadcast name: DOWN.

2. Click "Mini Programs" in the WeChat search bar, enter "DOWN 嚙", and search. Click "DOWN 嚙" to enter the program. Bluetooth will automatically identify the connection within the product area (requires Bluetooth on the phone). After the connection is successful, "Connect" will be displayed in the upper left corner of the screen, and the Bluetooth logo will be displayed.

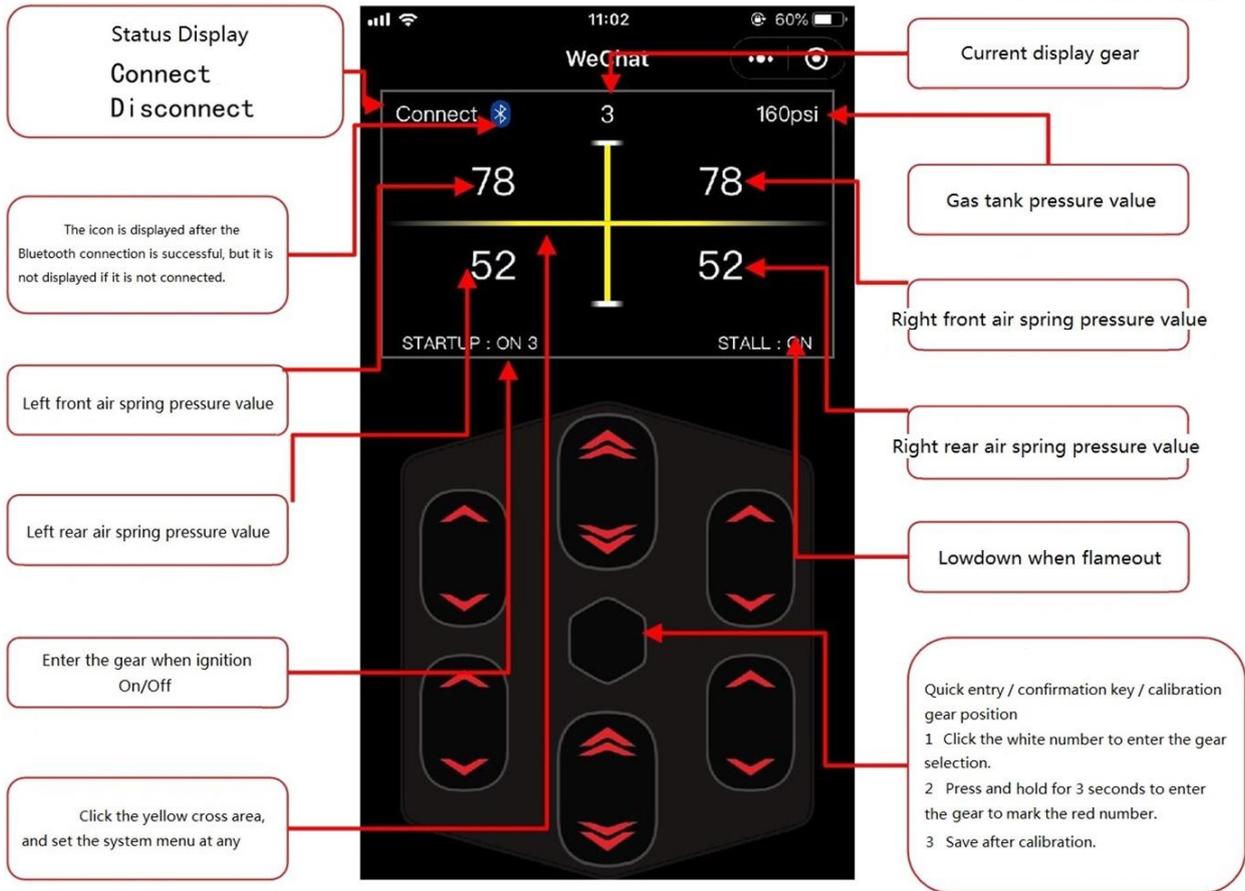


3. When the applet is connected to the system, Bluetooth automatically recognizes it. After the connection is successful, the normal information is communicated normally, and the "warm reminder" interface will pop up in the initial state. After reading the prompts carefully, if you are debugging the system status, press the "Cancel" button, the system enters the conventional main interface and can be arbitrarily controlled. After normal use by the terminal customer, it is recommended to set the personal unique password access authority to avoid other security risks. The company will not be responsible for the consequences caused by not setting the password.

**Password setting process:** When the "Warm Tips" interface pops up, click the "Confirm" button to pop up another "Set Password" interface. No need to set a password, you can press the "Cancel" button, the system will automatically go to the conventional main interface. Enter the same 4-digit password after "Enter Password" and "Confirm Password". After clicking the "Confirm" button, the password is set successfully. After the password is set successfully, this password is the only authentication to enter the program. Please remember the password you set, if you forget the password, please contact the supplier. If you need to change the password, you can modify the password in the "Other Settings"-"Change Password" column of the menu bar. Press the pop-up window to set the 4-digit password to be modified. To restore the password to the factory settings, **change the password to "0000" factory state.**

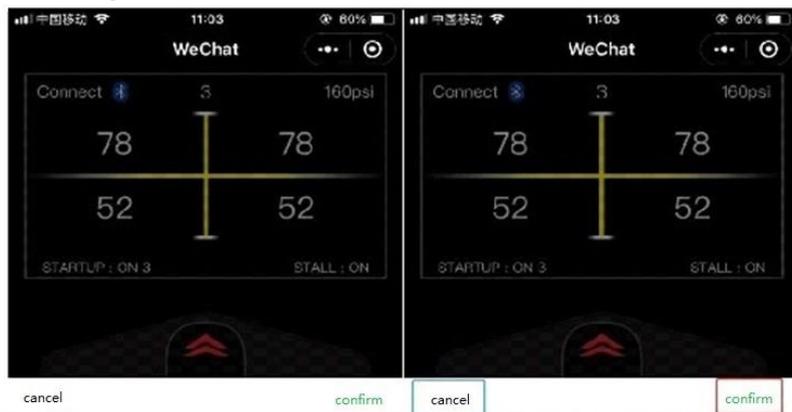


4. After the connection is successful, the connection with the ECU is started. The ECU data is refreshed in real time, and all data is fully synchronized with the physical remote control. The following figure is the functional diagram of WeChat Mini Program display interface:

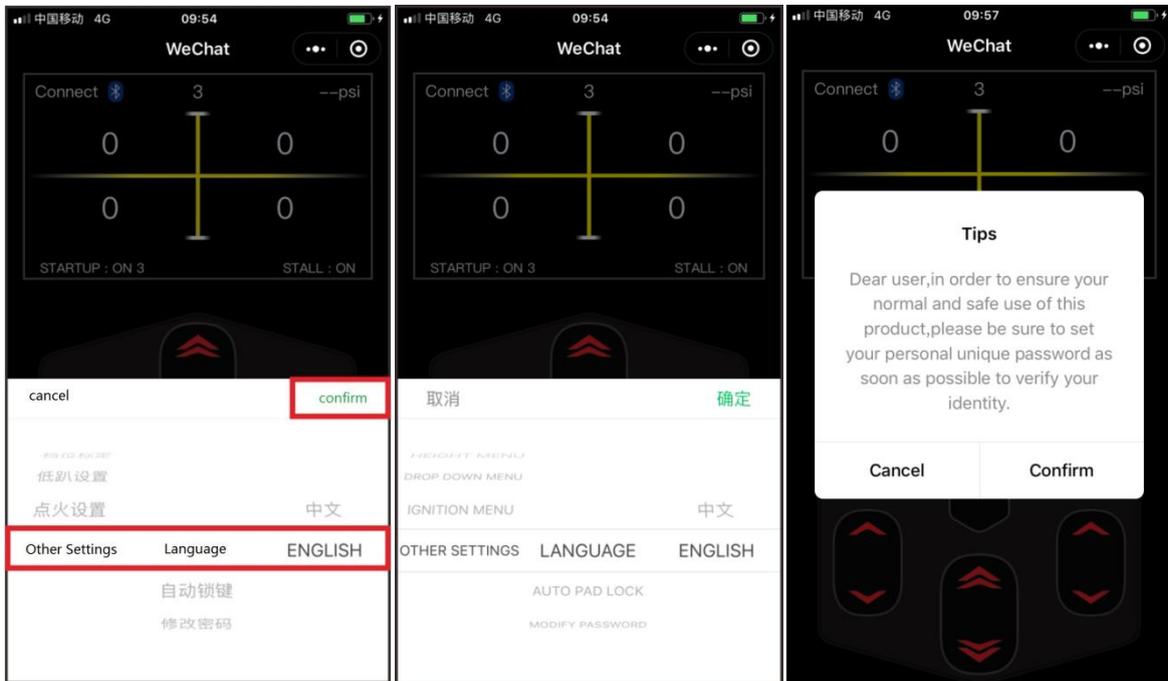


5. Enter the menu settings, click any area of "十", and pop up the wheel setting menu in the simulated keyboard area. Left, center, and right of the menu can be swiped up and down to select the currently required settings. When the desired setting is on a parallel line, click "Confirm", and the function is enabled.

Note: This scale calibration is only used to view the current calibration data value, the order is (left front left rear) gear (right rear right front). Please refer to the description on page 13 for the value of calibration gear.

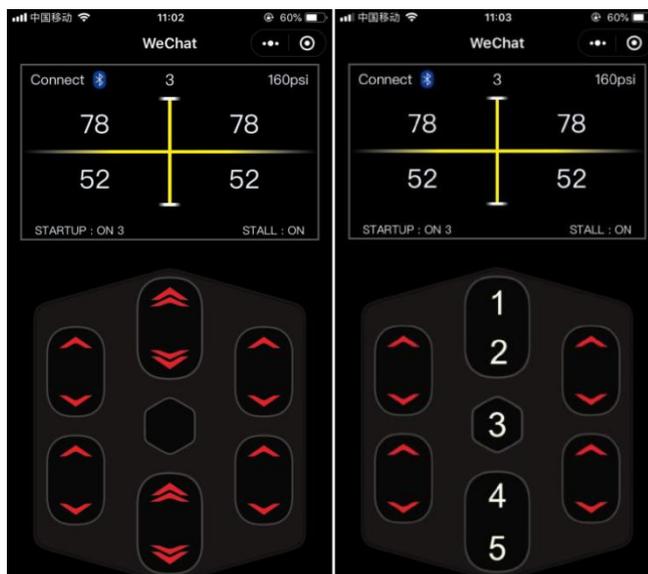


Example: Switch between Chinese and English: After opening the "DOWN when" applet, connect the Bluetooth system of the DOWN product, click on any area of "⊕", a wheel setting menu pops up in the simulated keyboard area. Slide up the left menu bar, slide to "Other Settings", then slide to "Language Settings" in the middle menu bar, then slide the right menu bar to "ENGLISH", and then click "Confirm". At this time, the system English language setting is successful.

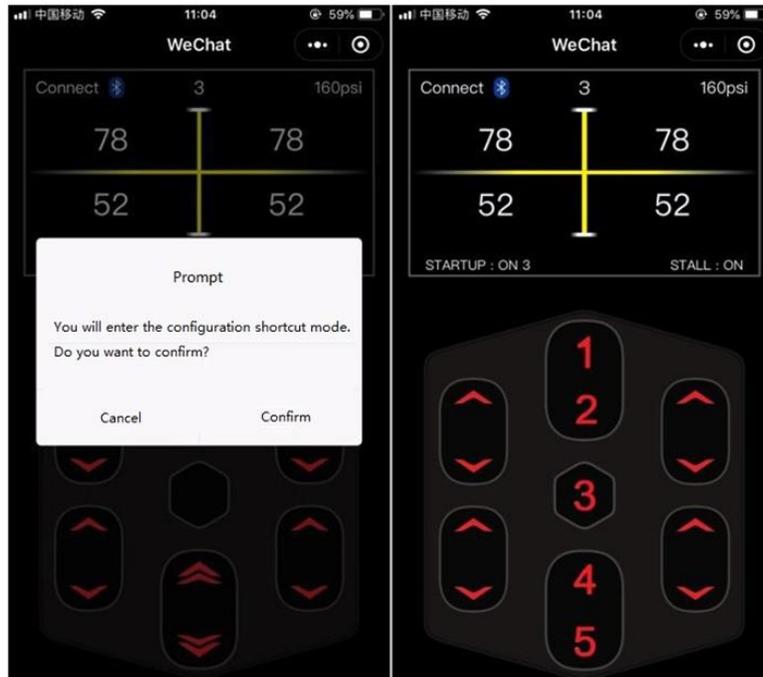


## 6. Quick file selection and gear calibration:

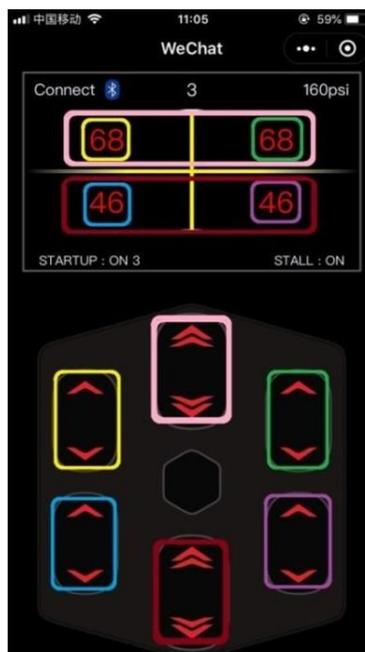
a. To enter the quick file, click the menu button, and the screen will pop up with white font 1 2 3 4 5 gear selection. If you need to choose your own preset gear, click the corresponding number.



b. Enter the calibration position: long press the menu button for 3 seconds to automatically pop up the prompt "Whether to enter the calibration". Exit and click "Cancel", you need to continue calibration and click "Confirm". Enter the calibration red digital gear selection interface, then select the gear position that needs to be calibrated by yourself, select the corresponding number, and the calibrated gear value is stored in the gear. You need to enter this gear during use, follow step "a" to enter quickly.



c. The color of the key box corresponds to the color of the value box. The left and right keys correspond to the numbers above. Values increase upwards and values decrease downwards. The middle button corresponds to the front axle and the rear stage. Click the button to increase the value by one, and long press to accumulate.



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