About Us

ACES Fuel Injection specializes in developing and manufacturing state-of-the-art performance-engine management systems and ignition components geared toward do-it-yourself automotive enthusiasts. Our company was founded on an electromechanical engineering background, and our talented staff always keeps a grip on the newest technology available. We use our expertise to guarantee top-notch quality components and constant innovation of new products and services for car and truck enthusiasts around the world.

Our greatest advantage is the overall simplicity of our products. From a painless installation to real-time tuning in just hours, our fuel injection systems offer a great advantage over the competition. Our ROYAL FLUSH™ Throttle Body EFI system with integrated CDI ignition capabilities features a built-in interface that allows users to have full control of the engine without the need of a PC. This allows you to install the system at home without the need of special tools or software. We also offer several other components to help seamlessly integrate our advanced technology into your vehicle.

Our craftsmanship and technology are built upon a foundation of extreme performance. With a history of producing winning results in a wide variety of applications, our pedigree offers proof of our commitment to attain the best results, wherever we compete. With more than 10 years of experience developing and designing high-performance products, ACES Fuel Injection has a product to fit your needs.

Mission

Research, innovate, and develop real, efficient, quality solutions, making engine management technology the key factor of success, and bring pride and satisfaction to customers by integrating them into the ACES Fuel Injection Team.

Vision

Become the world's leading company in engine management technology.

Values

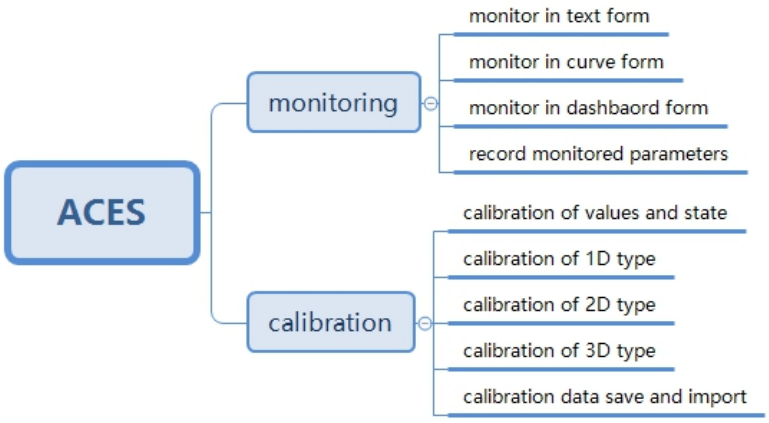
Ethics, commitment, professionalism, teamwork, quality, pioneering spirit, creativity, continuous innovation, pursuit of results and customer satisfaction.

Content

1. Overview

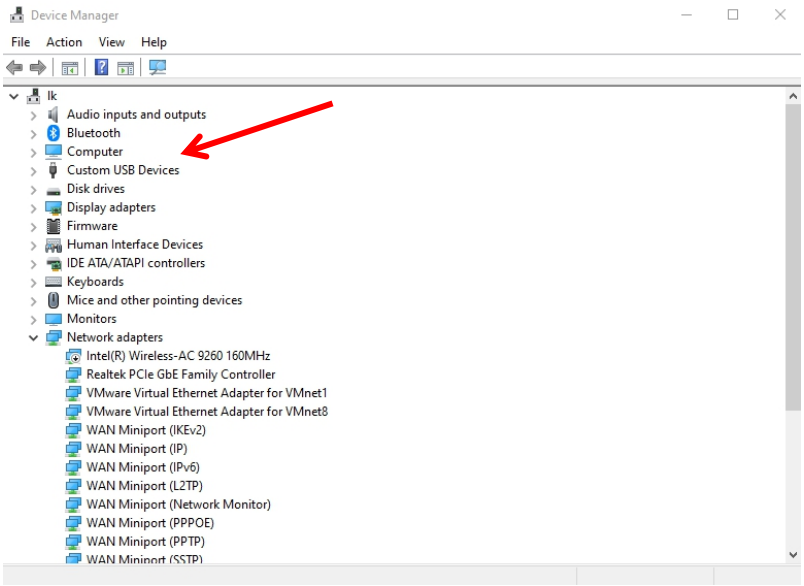
This software is designed to enable customers to quickly and conveniently monitor and calibrate various parameters of the product in real time.

2. Functional Architecture



3. USBCAN driver installation

The communication of the product is through USBCAN. Please install the USBCAN driver before using this software. Please refer to the "USBCAN Driver Installation Instructions" for the installation method. After the installation is successful, the device manager will display "WinUSB Device" after plug USBCAN into the computer.



4. Software use

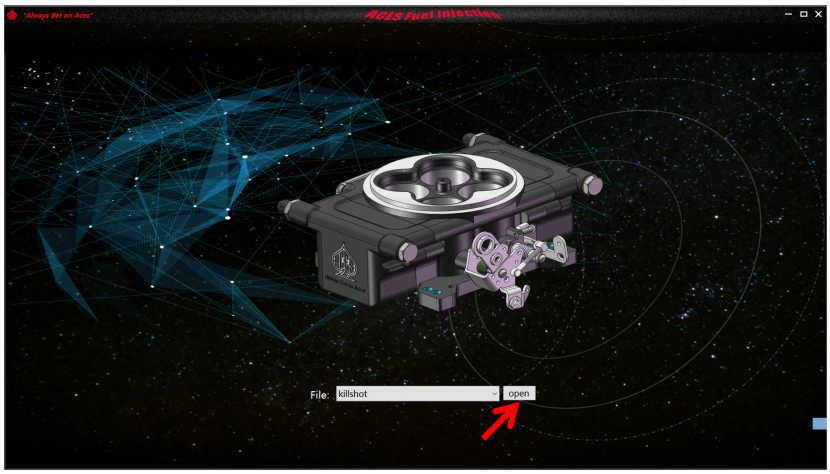
4.1 Monitoring

Real-time monitoring of a certain parameter of the product.

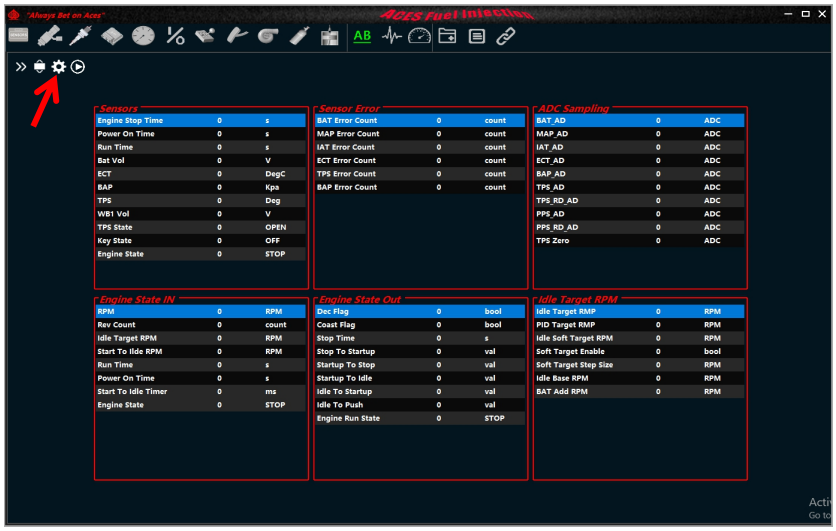
4.1.1 showing monitored parameters in text

4.1.1.1 Real-time monitoring of a certain set of parameters

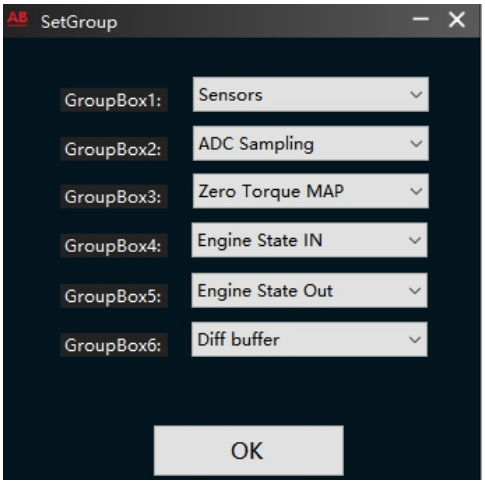
1）Open the software, select the corresponding product and click "open".



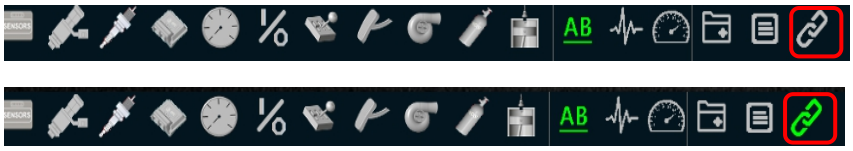
2）The software enters the text form monitoring interface by default, click "⚙" to enter the setting interface.



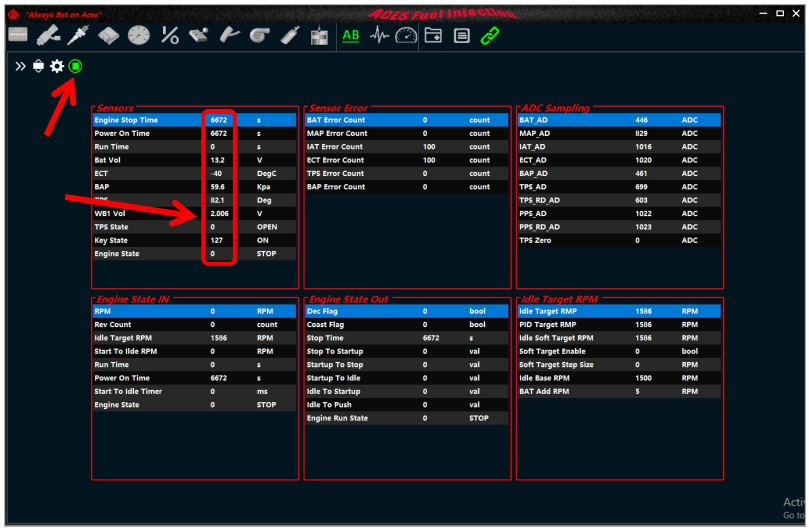
3）After entering the setting interface, you can choose to monitor different groups, up to six different groups at the same time. click "OK" to complete the setting.



4）Connect one end of the USBCAN box to the product's wiring harness and the other end to USB port of computer. Turn the key to "ON", and click the "" in the toolbar, wait for it to turn green "" which means the connection is successful. If the pop-up window prompts that it fails, please check the USBCAN connection and installation of USBCAN driver (If it is connected, ignore this step).

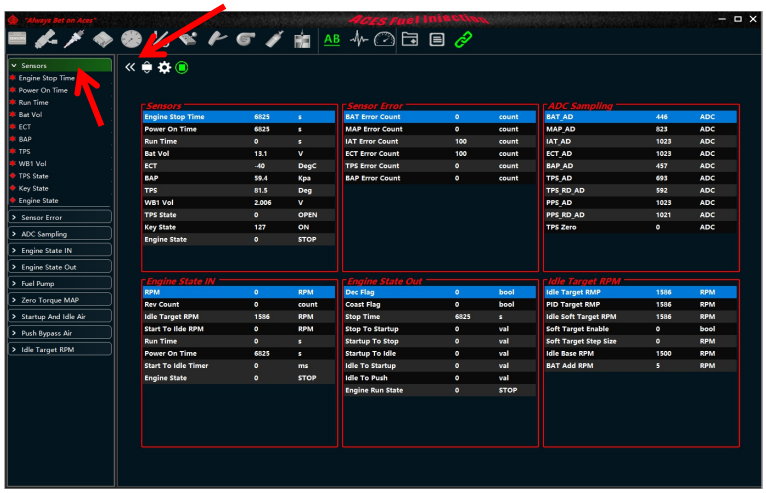


5）After successful connection, click "", and wait it to turn to "", then real-time monitoring data will be displayed in the text box on the interface.



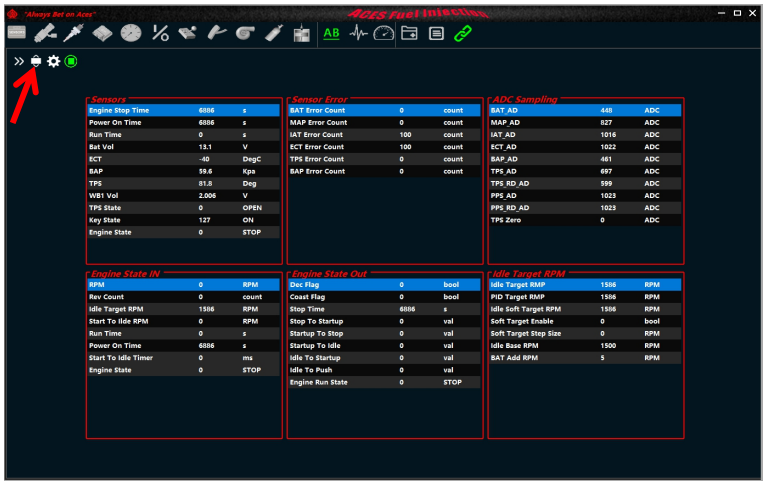
4.1.1.2 show/hide monitored items list

Click “ ”to view all the groups that can be monitored, click on the group to expand to view the specific monitoring parameters of the monitoring group.



4.1.1.3 Independent floating window

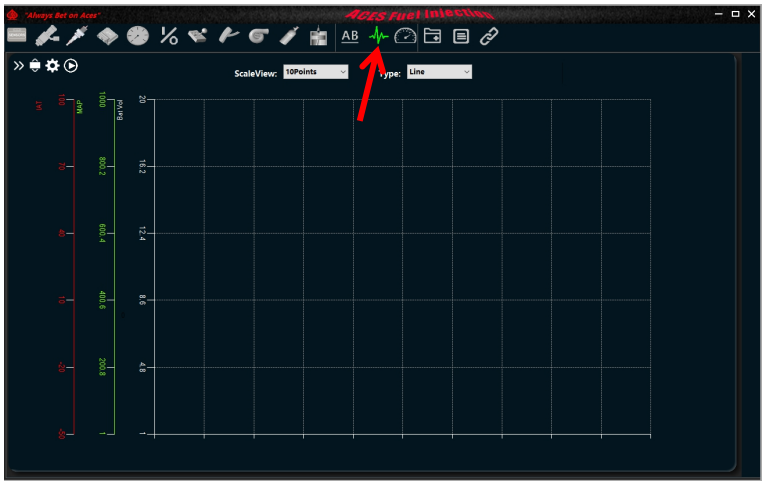
Click " " to float the current monitoring interface in front.



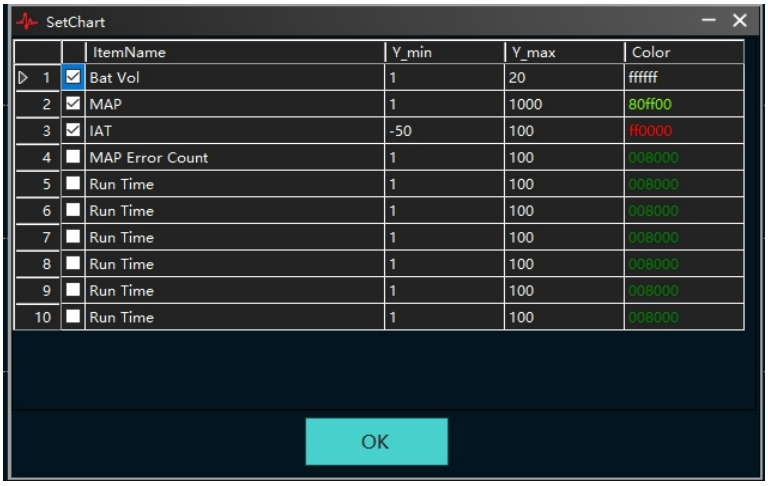
4.1.2 showing monitored values in curve

4.1.2.1.Real-time monitoring of a certain parameter

1） After entering the monitoring interface, click "" in the toolbar, the interface will jump to the curve monitoring interface.

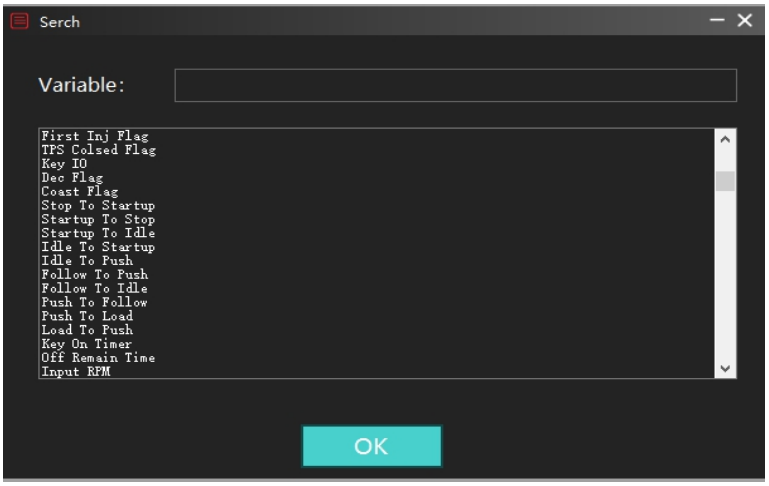


2） Click "" to enter the setting interface, which can support up to 10 parameters to be displayed in curve form at the same time.



3） Check one of the monitoring parameters in the second column of the setting table (check it if wants to monitor the item, uncheck it if do not want to monitor the item).

4） Double-click the third column of the setting table to enter the monitoring parameter selection interface. You can directly select a parameter in the list box with the mouse or enter the name of the parameter you need to monitor in the input box to search for it.



5） Select an option in the fourth column and modify the minimum value of the Y-axis coordinate.

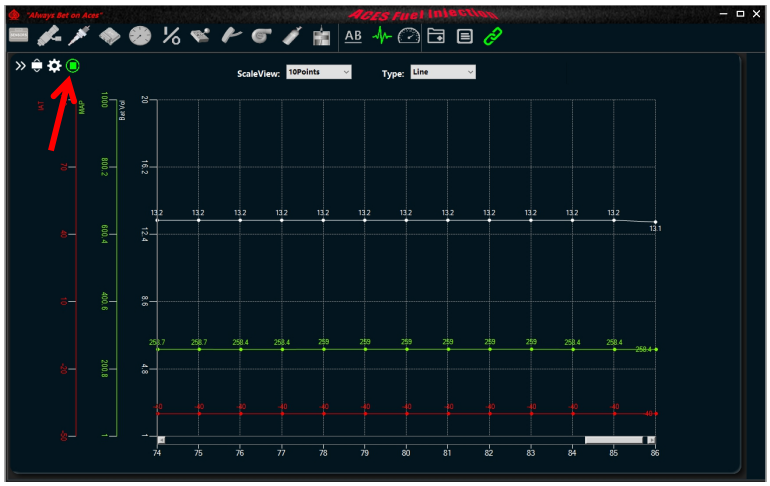
6） Select an option in the fifth column and directly enter the keyboard to modify the maximum value of the Y-axis coordinate.

7） Double-click an option in the sixth column of the settings table to select the curve color.

8） Click "OK" to confirm the modification of the setting.

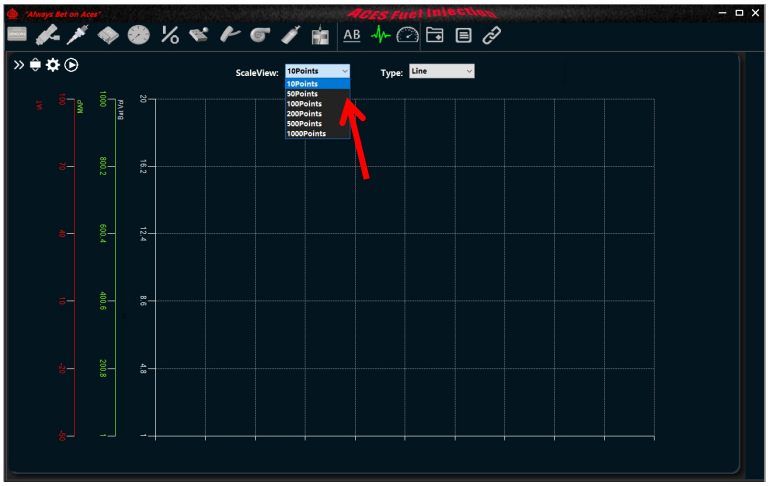
9） Connect one end of the USBCAN box to the product's wiring harness and the other end to USB port of computer. Turn the key to "ON", and click the "" in the toolbar, wait for it to turn green "" which means the connection is successful. if the pop-up window prompts that it fails, please check the USBCAN connection and installation of USBCAN driver (If it is connected, ignore this step).

10）After successful connection, click "",and when it changes to "", a real-time monitoring curve displays in the curve interface.



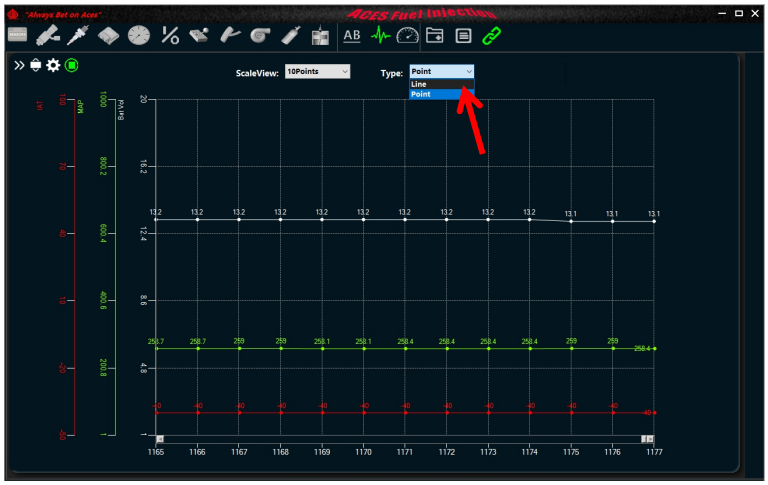
4.1.2.2 set up scale view of the curve.

Click the drop-down box to select the corresponding visual range.



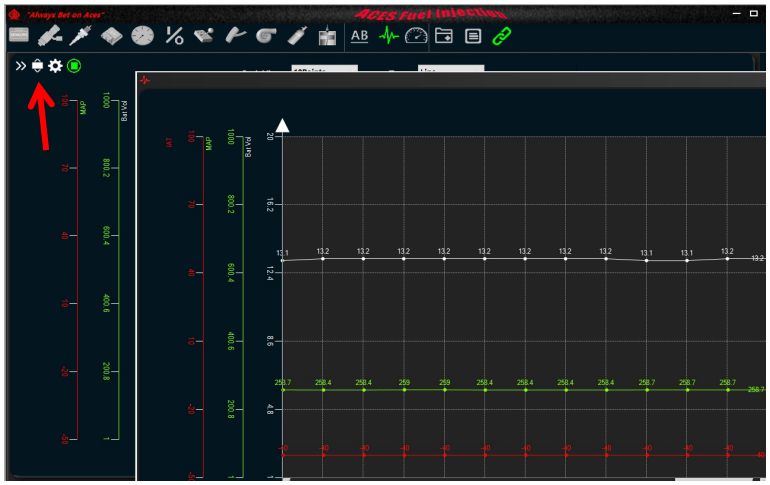
4.1.2.3 set up the type of curve

Click the drop-down box to set the curve to be displayed in the form of lines or points.



4.1.2.4 Independent suspension monitoring

The current monitoring interface can be suspended in front by click“ ”.

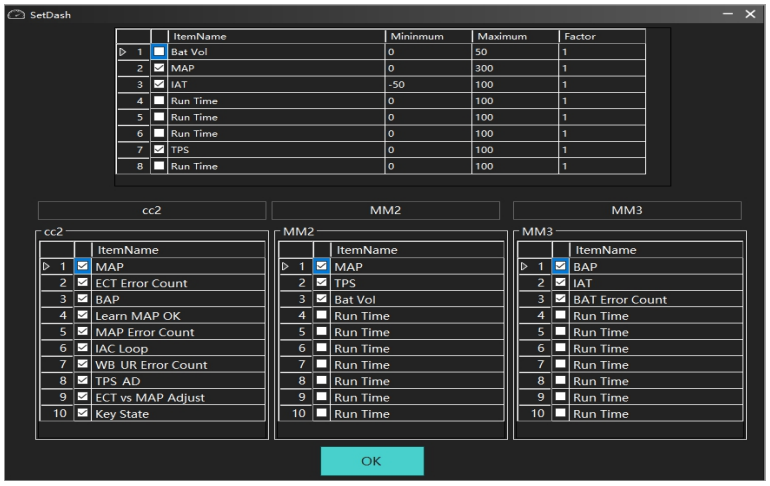


4.1.3 Dashboard form monitoring

4.1.3.1.Real-time monitoring of a certain parameter

1） After entering the monitoring interface, click " " in the toolbar to jump to the dashboard monitoring interface.

2） Click " " to enter the setting interface. Up to 8 parameters can be displayed in dashboard form at the same time. It supports up to three groups of free combination of parameters displayed in text form under the dashboard and each group has up to 10 parameters.

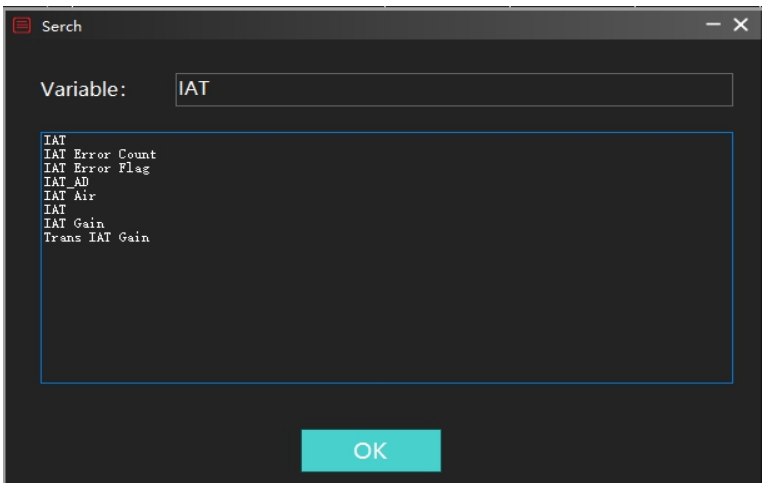


3） Dashboard and combo box settings

3-1.Dashboard settings

3-1-1.Check a monitoring parameter in the second column of the above setting table (check it to monitor the item, uncheck it if doesn't want to monitor the item)

3-1-2.Double-click the third column of the setting table to enter the monitoring parameter selection interface. Select a parameter in the list box with the mouse or enter the name of the parameter you need to monitor in the input box to search.



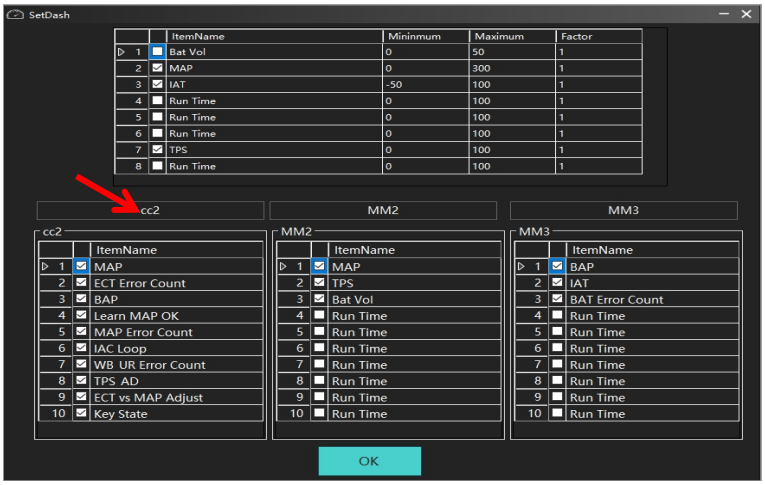
3-1-3. Select an option in the fourth column and modify the minimum value displayed on the dashboard (integer multiples of 10 are recommended)

3-1-4. Select an option in the fifth column and modify the maximum value displayed on the dashboard (integer multiples of 10 are recommended)

3-1-5. Select an option in the sixth column and modify the scale of the instrument panel scale.

3-2.Combo box settings

3-2-1.Select the title input box in the middle to set the title of the combo box.



3-2-2.Check one of the monitoring parameters in the second column of the setting table below (check it to monitor the item, uncheck it to not monitor the item)

3-2-3.Double-click the third column of the setting table to enter the monitoring parameter selection interface. Select a parameter in the list box with the mouse, or enter the name of the parameter you need to monitor in the input box to search.

4） Click "OK" to save and exit the setting interface.

5） Connect one end of the USBCAN box to the product's wiring harness and the other end to USB port of computer. Turn the key to "ON", and click "" in the toolbar, wait for it to turn green "" which means the connection is successful. If the pop-up window prompts that it fails, please check the USBCAN connection and installation of USBCAN driver (If it is connected, ignore this step).

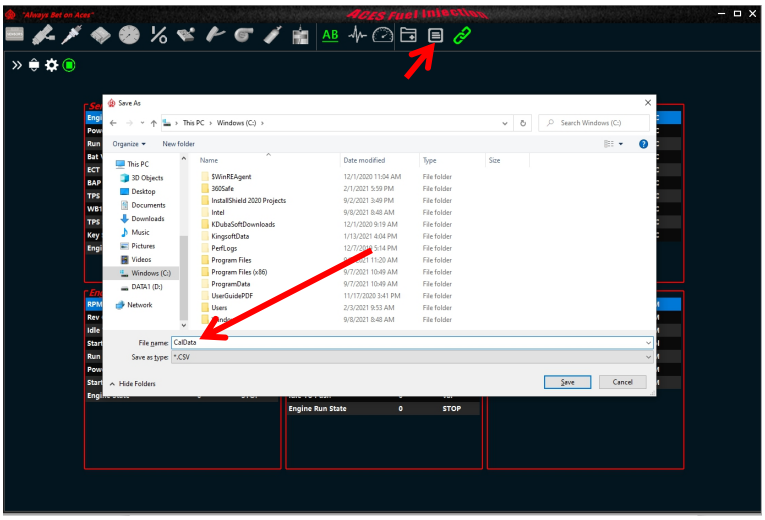
6） After successful connection, click "", when it turns to "", real-time monitoring data displays in the dashboard and combo box in the dashboard interface.

4.1.3.2Independent suspension monitoring

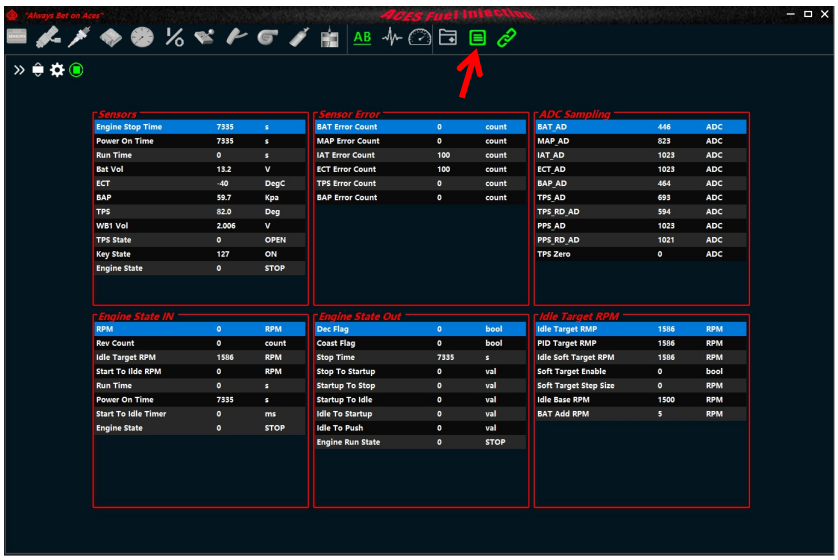
The current monitoring interface can be suspended in front by click“ ”.

4.1.4.monitoring data record

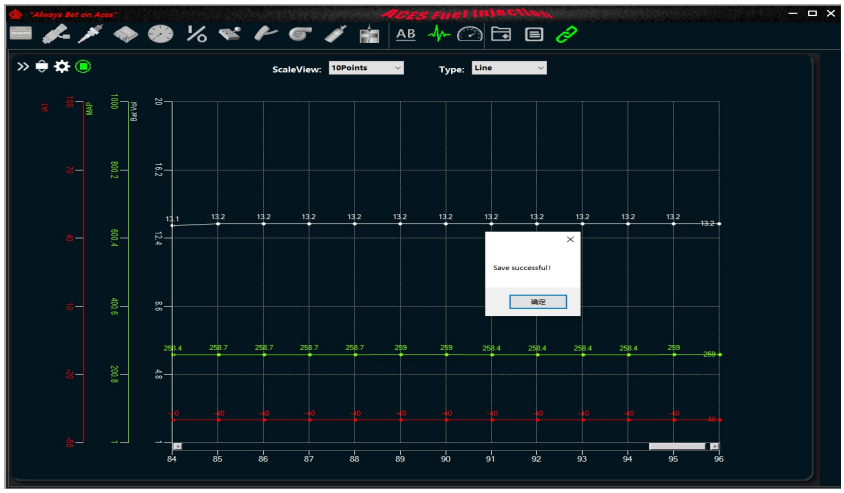
1） Click the "" icon on the toolbar, enter the file save path selection, and enter the saved file name



2） Click Save to exit the path setting interface. At this time, "" is in green. In this state, the data will continue to be recorded. And in this state, it is forbidden to enter the setting interface.



3） Click "" again to end the data recording and save the current record, and a prompt message will pop up.



4.2.Calibration

Real-time calibration of a certain parameter of the product.

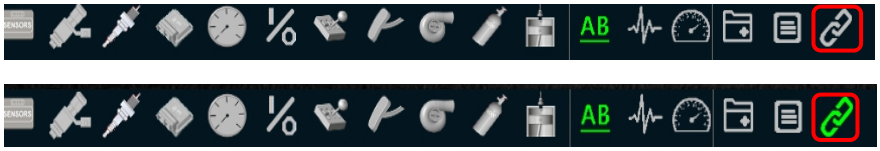
4.2.1 To write calibration data.

4.2.1.1 To write value and status type calibration data.

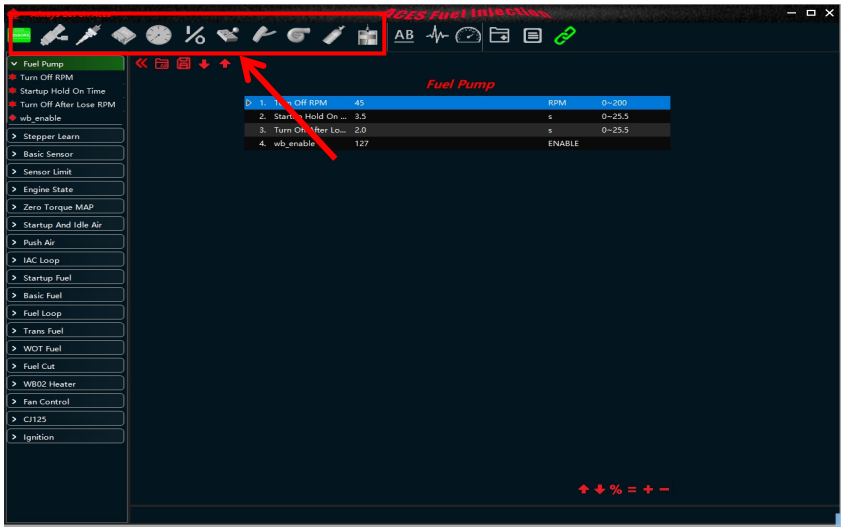
All values and state type parameters of each calibration group are calibrated in one calibration interface.

1） Connect one end of the USBCAN box to the product's wiring harness and the other end to USB port of

computer. Turn the key to "ON", and click the "" in the toolbar, wait for it to turn green "" which means the connection is successful. If the pop-up window prompts that it fails, please check the USBCAN connection and installation of USBCAN driver (If it is connected, ignore this step).



2） By clicking the calibration shortcut button in the tool bar, can jump to the corresponding calibration group conveniently and quickly. When you are in the calibration interface, you can also use the calibration list on the left, click the group name to expand, and click the specific calibration parameter to quickly jump to the location.



3） Definitions in the calibration table:

1st column: serial number

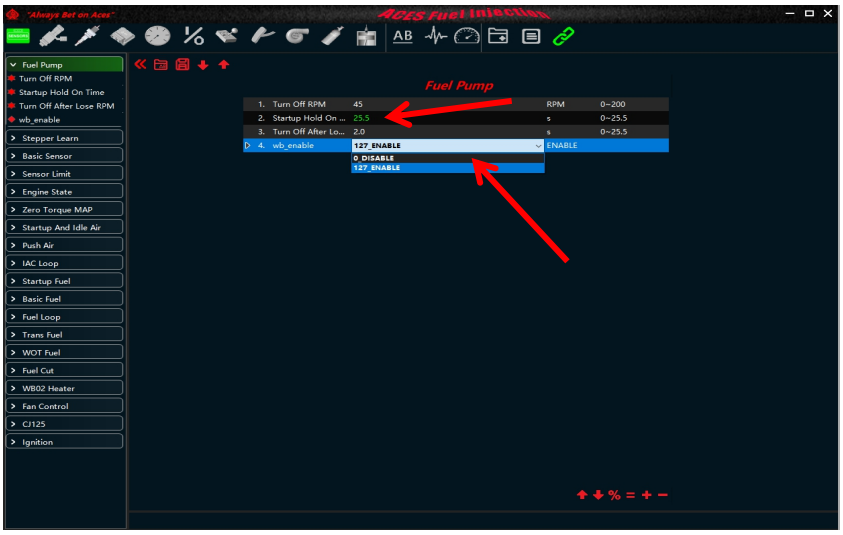
2nd column: the name of the parameter in the group

3rd column: parameter value

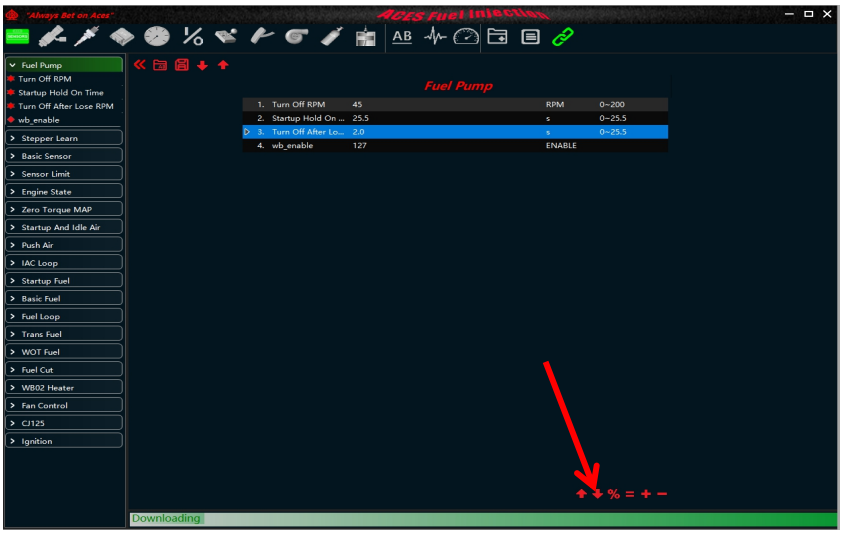
4th column: unit (status value)

5th column: reference range

4 ） Select a parameter that needs to be calibrated, enter the value with the keyboard or select the corresponding state with the mouse, and the value will turn green after the modification is completed.



5） Click "", and the writing is completed after the bottom progress bar is reset. Note: Each writing is to write the calibration data of all the parameters in the interface instead of a single parameter.

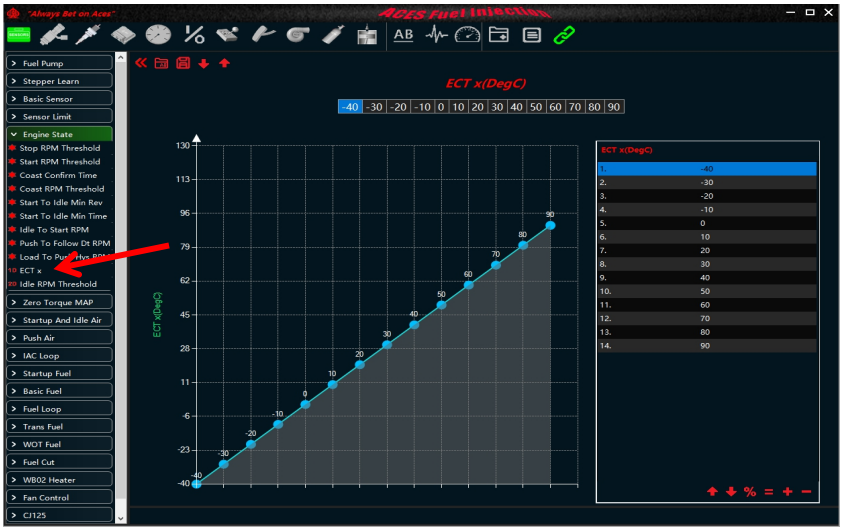


4.2.1.2 Write 1D type calibration data

The current interface only calibrates one 1D type parameter each time.

1） When the computer is not connected with the product, refer to step 4 in 4.2.1.1 (Ignore this step if connected) .

2） Click the group name to expand,then click the 1D type parameter that needs to be calibrated, and it will jump to the calibration interface of the parameter.



3）Parameters can be modified in three ways. After completing modification, the value turns green.

Approach 1: Move the mouse to a certain point of the curve that needs to be modified, hold down the left button and move the mouse up and down to change the value of the parameter.

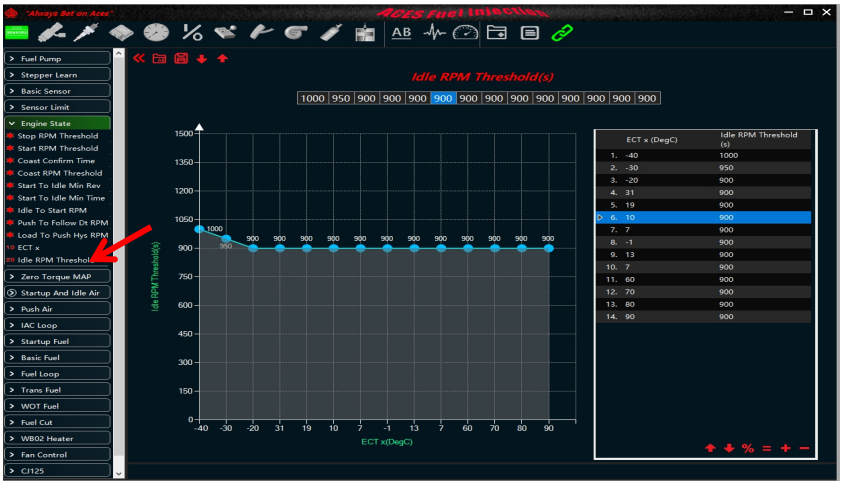
Approach 2: Select a cell in the table above and directly enter the value with the keyboard.

Approach 3: Select a row in the numeric value list on the right to directly enter the numeric value with the keyboard.

4）Click "  " in the numerical list on the right to write the parameter calibration data, and the writing will be completed after the progress bar is reset.

4.2.1.3 Write 2D type calibration data.

The current interface only calibrates one 2D type parameter at a time. The calibration interface and calibration method of the 2D type is same as 1D type and you can refer to the 1D type calibration method for calibration.



4.2.1.4 Write 3D type calibration data

The current interface only calibrates one 3D type parameter at a time.

1) When the computer is not connected with the product, refer to step 4 in 4.2.1.1 (Ignore this step if it is connected).

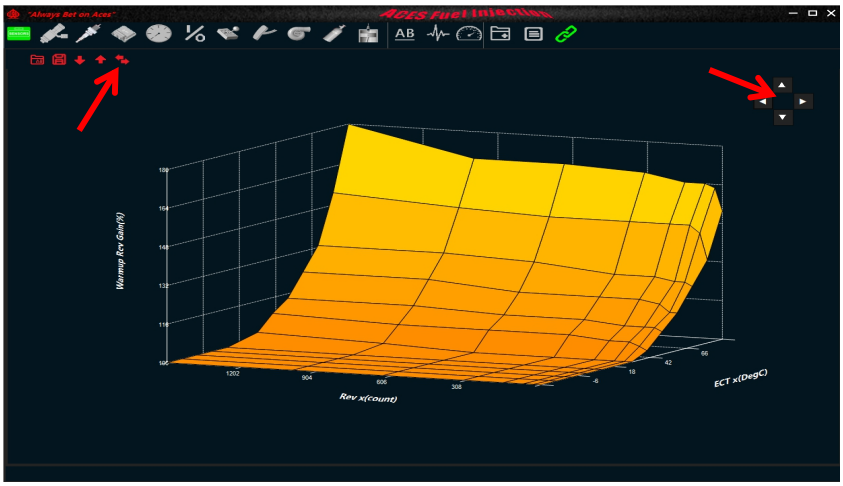
2) 2） Click group name to expand, then click the 3D type parameter that needs to be calibrated, and the calibration interface will jump to the calibration interface of the parameter.

3)Select the cell in the 3D table that needs to be modified, then enter the value with the keyboard, and the color of the modified value will be green.

4)Click "" to view the smoothness of the three-dimensional graph of the table for better calibration of the parameters.

5) In the 3D graph interface, you can hold down the left mouse button and drag the 3D graph to rotate, or you can adjust the viewing angle through the function buttons on the upper right side.

Click "" above to exit the 3D interface.



6） Click "" in the numerical list on the right to write the parameter group, and the writing will be completed after the progress bar is reset.

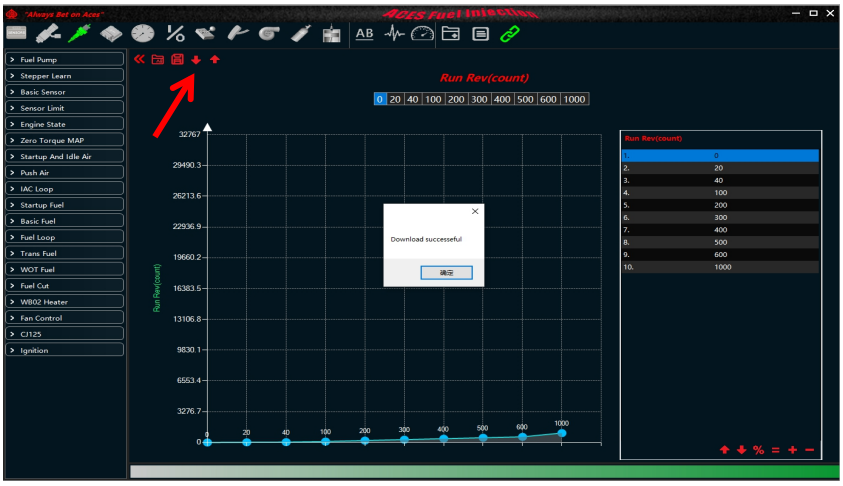
4.2.1.5 Write all current parameter data

Write the calibration data of all the current parameters into the product at one time, and it is mostly used to import a new calibration data in order to write the new calibration data into the product.

Enter any calibration interface

1） When the computer is not connected with the product, refer to step 4 in 4.2.1.1 (Ignore this step if it is connected).

2） Click "" at the top of the interface, and wait for the progress bar to complete and pop up the prompt message.



4.2.2 read calibration data

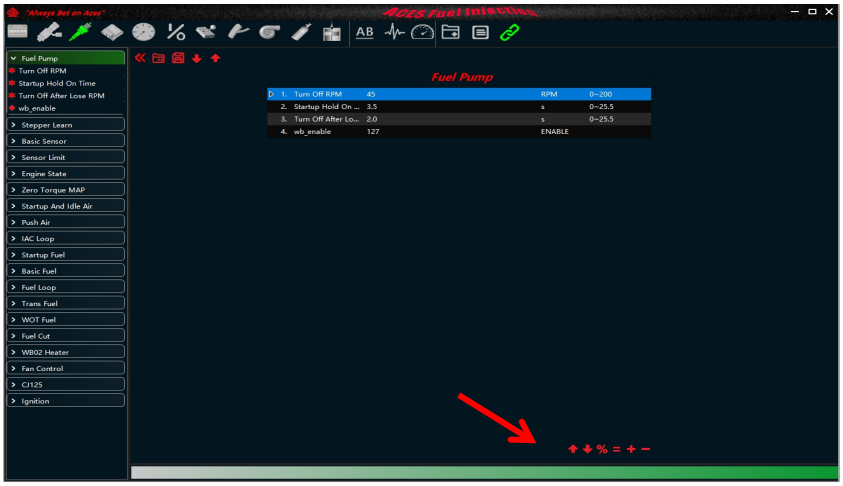
When the software and the product are successfully connected, the calibration data in the product can be read to the software interface.

4.2.2.1 Read calibration data of all value types and status types of a certain group.

1） Click the calibration list group name to expand, and click any parameter option to enter the calibration interface.

2） When the computer is not connected with the product, refer to step 4 in 4.2.1.1 (Ignore this step if it is connected).

3） Click "⬆" at the bottom of the calibration interface, and the upload is successful after the progress bar is reset. The interface will display the parameter value and status of the current group in the product.

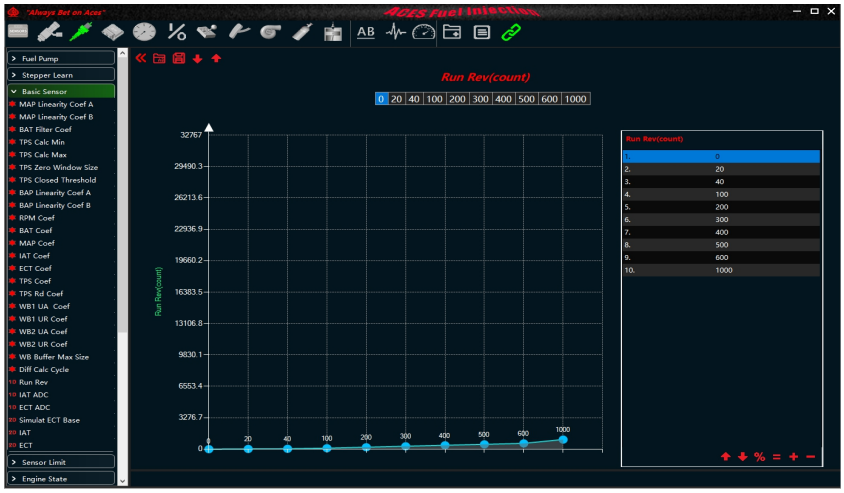


4.2.2.2Read the calibration data of a certain 1D type.

1） Click the group name of the calibration list to expand, and click the name of the parameter to be read to enter the 1D type calibration interface.

2） When the computer is not connected with the product, refer to step 4 in 4.2.1.1 (Ignore this step if it is connected).

3） Click "⬆" at the bottom right of the calibration interface, and the upload is successful after the progress bar is reset. The interface will display the currently read 1D type of calibration data in the product.



4.2.2.3 Read the calibration data of a certain 2D type

The reading method is same as that of reading a certain 1D type of calibration data, and please refer to 4.2.2.2 to read data.

4.2.2.4 Read calibration data of a certain 3D type

The reading method is the same as that of reading a certain 1D type of calibration data, please refer to 4.2.2.2 to read data.

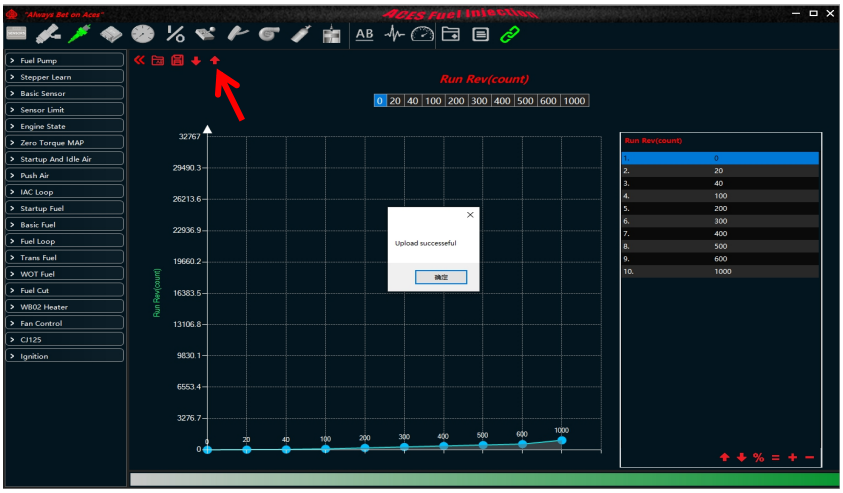
4.2.2.5.Read all calibration data in the product

Read all data of all groups at one time which is mostly used when connect to a new product, read all the calibration data in the product at one time to provide reference for subsequent calibration.

1） Enter any calibration interface.

2） When the computer is not connected with the product, refer to step 4 in 4.2.1.1 (Ignore this step if it is connected).

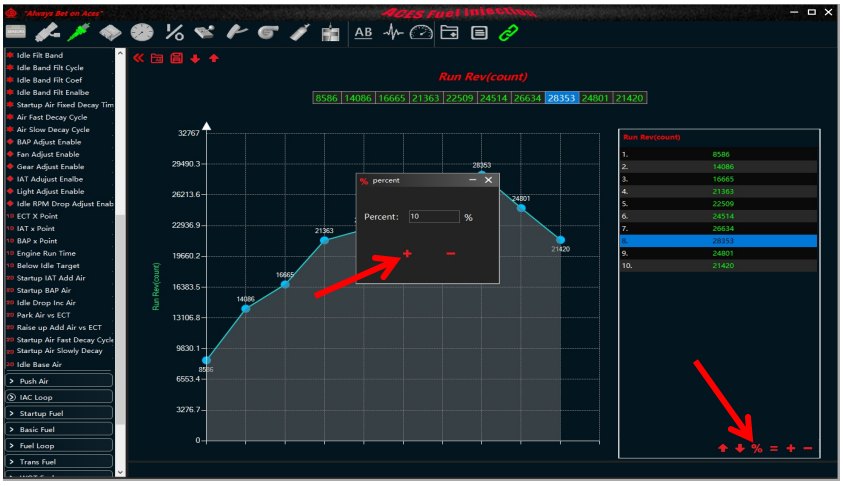
3） Click "⬆" at the top of the interface, and wait for the progress bar to complete the prompt message.



4.2.3 Calibration interface value modification method, applicable to all calibration interfaces.

4.2.3.1 The value increases or decreases by a certain percentage.

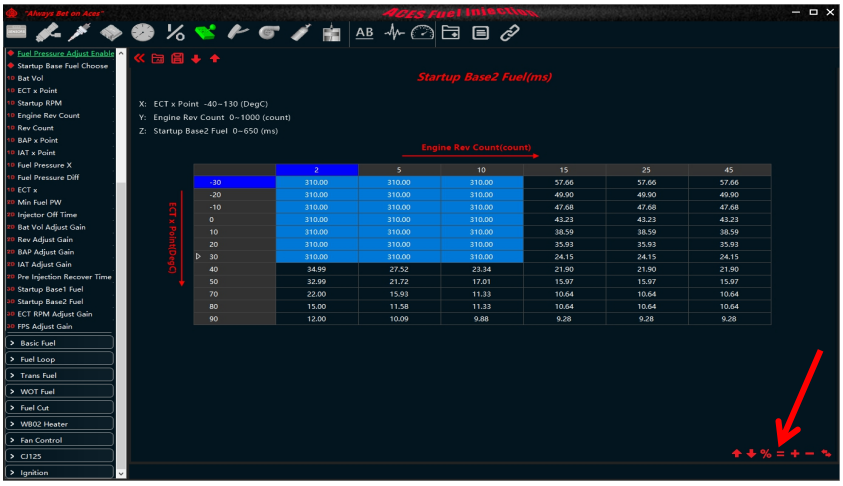
1）Select the parameter item that needs to be modified, click "%" in the interface, and will pop up a input box.



2） Enter the required percentage in the input box, click "+" to increase by percentage, and click "-" to decrease by percentage.

4.2.3.2 Quickly set multiple data equal

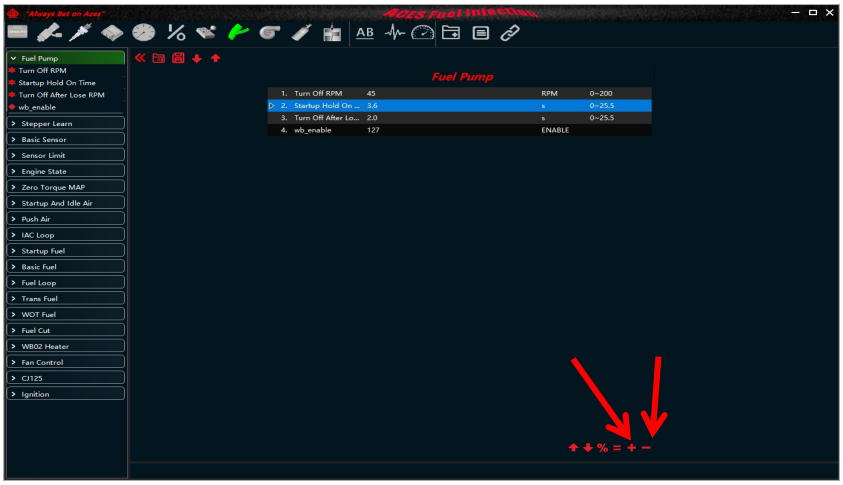
Long press the left mouse button to select multiple cells, click "=", all cells will be modified to the value of the first cell.



4.2.3.3 The value is incremented or decremented by 1 precision value.

1） Click "" on the calibration interface, and the selected parameter value will be incremented by 1 precision value.

2） Click "" on the calibration interface, and the selected parameter value will decrease by 1 precision value.



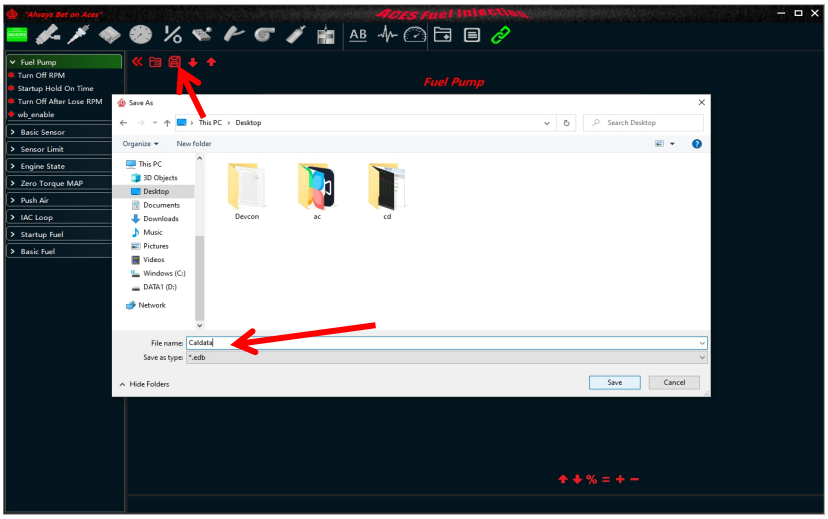
4.2.4 Hide and show the calibration list

Click "" on the calibration interface to expand and hide the calibration list.

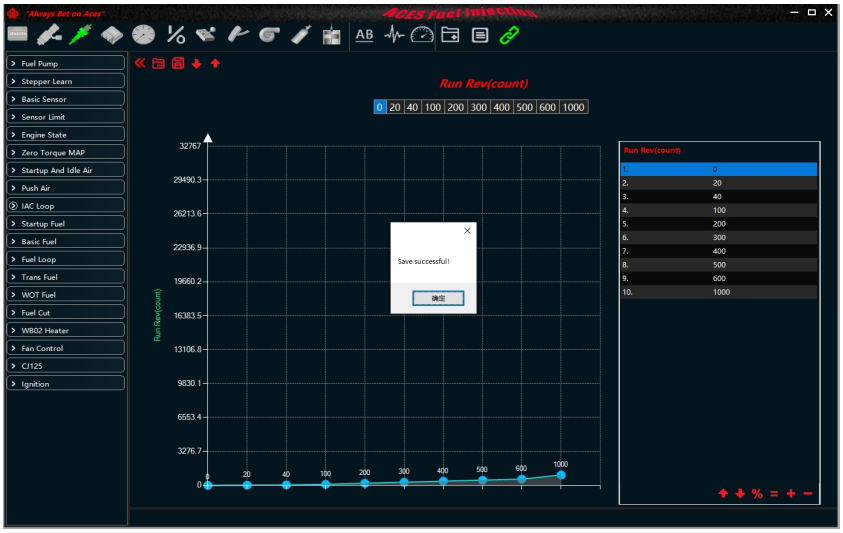
4.2.5 to save calibration data

Save the current calibrated data locally.

1）Click "" at the top of the calibration interface, select the file path to save, enter the file name, and click "Save".



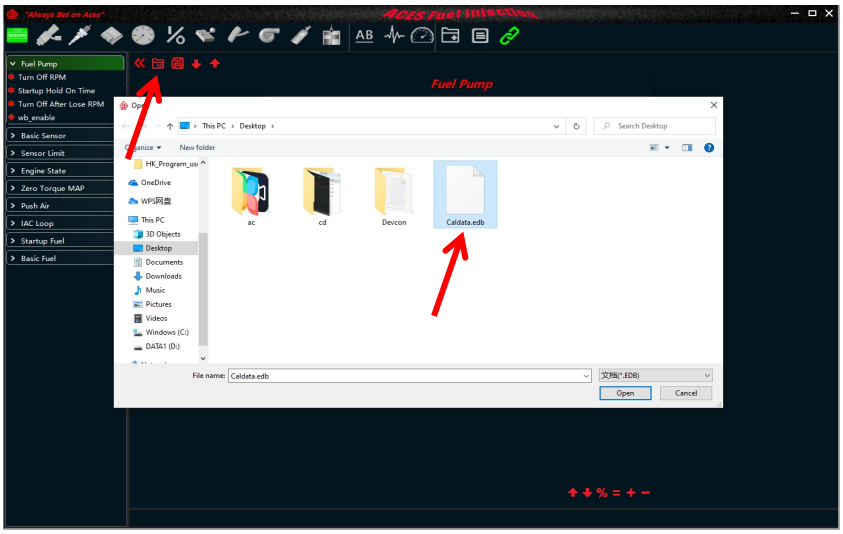
2）The interface pops up a prompt message box to complete the save.



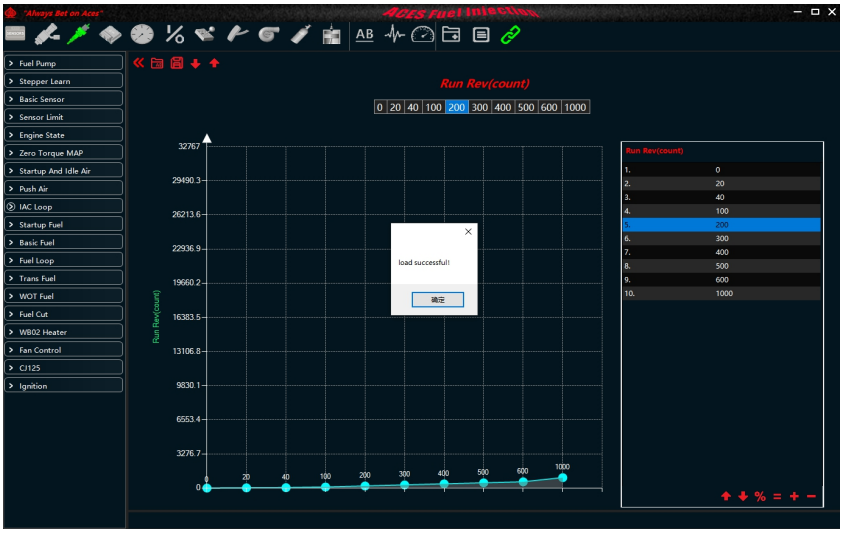
4.2.6 Import the calibration data.

Can import locally saved historical calibration data as needed.

1）Click "" at the top of the calibration interface, select the file path, and click "Open".



2）The interface pops up a prompt message box to complete the import. At this time, all the calibration data displayed on the calibration interface are the imported data.



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