Safety Precautions

To avoid personal injury, instrument damage and/or damage to your vehicle; do not use the U585 before reading this manual.

This manual describes common test procedures used by experienced service technicians. Many test procedures require precautions to avoid accidents that can result in personal injury, and/or damage to your vehicle or test equipment. Always read your vehicle's service manual and follow its safety precautions before and during any test or service procedure. **ALWAYS** observe the following general safety precautions:

- When an engine is running, it produces carbon monoxide, a toxic and poisonous gas. To prevent serious injury or death from carbon monoxide poisoning, operate the vehicle ONLY in a well-ventilated area.
- To protect your eyes from propelled objects as well as hot or caustic liquids, always wear approved safety eye protection.
- When an engine is running, many parts (such as the coolant fan, pulleys, fan belt etc.) turn at high speed. To avoid serious injury, always be aware of moving parts. Keep a safe distance from these parts as well as other potentially moving objects.
- Engine parts become very hot when the engine is running. To prevent severe burns, avoid contact with hot engine parts.
- Before starting an engine for testing or trouble-shooting, make sure the parking brake is engaged. Put the transmission in park (for automatic transmission) or neutral (for manual transmission). Block the drive wheels with suitable blocks.
- Connecting or disconnecting test equipment when the ignition is ON can damage test equipment and the vehicle's electronic components. Turn the ignition OFF before connecting the U585 to or disconnecting the U585 from the vehicle’s Data Link Connector (DLC).
- To prevent damage to the on-board computer when taking vehicle electrical measurements, always use a digital multimeter with at least 10meg Ohms of impedance.
- Fuel and battery vapors are highly flammable. To prevent an explosion, keep all sparks, heated items and open flames away from the battery

and fuel / fuel vapors. DO NOT SMOKE NEAR THE VEHICLE DURING TESTING.

- Don't wear loose clothing or jewelry when working on an engine. Loose clothing can become caught in the fan, pulleys, belts, etc. Jewelry is highly conductive, and can cause a severe burn if it makes contact between a power source and ground.

Product Information

1. Tool Description

① LCD Display 128*64 pixel display with contrast adjustment, Backlit

② enter key selects displayed

③ exit key go back to the previous screens

④ up/down arrows moves the selection pointer and scrolls up or down.

⑤ LEFT/RIGHT arrows Select responses and moves cursor.

⑥ Power button

⑦ OBDII connector cable, connect car and the scan tool

⑧ Battery compartment

2. Product Specifications

- **Display** Backlit LCD,128*64 pixel display.
- **Operating Temperature** 0 to 50℃ (－32 to 122℉)
- **Internal Power** 9v Cell
- **External Power:** 10.0 to 15.5 vols provided via vehicle battery
- **Dimensions:**

  195mm Length(7.76”) 81mm Width(3.16”) 32mm Height(1.27”)

  OBDII connector , 1500mm(59.99”)

3. Product Features

Works on all 1996 and newer cars & light trucks that are OBD II compliant (including the VPW, PWM, ISO, KWP 2000 and CAN protocols)
Reads and clears generic and manufacturer specific Diagnostic Trouble Codes (DTCs)
Reading Freeze Frame Data
Testing I/M Reading Status
Reading vehicle info
Rescanning Data
Works on all VW, AUDI, SKODA, and SEAT vehicles,and so on.

About U585 for CAN OBDII

1. General OBD-II Information

1.1What is OBD-II?

OBD-II stands for On-Board Diagnostics, II generation. It is a set of documents issued by SAE and ISO, which describe the interchange of digital information between on-board emission-related Electronic Control Units (ECUs) of road vehicles and an OBD-II scan tool. OBD-II also commonly refers to the physical on-board diagnostic system of a vehicle, which consists of an ECU (or multiple ECUs), Malfunction Indicator Light(MIL), Diagnostic Link Connector (DLC), and the wiring that connect the different elements.

1.2 How do I know whether my car is OBD-II compliant?

There are several ways.

1996 or newer model year vehicle sold in the United States

United States legislation requires all cars and light trucks model year (MY) 1996 and newer to be OBD-II compliant. More information is available on the EPA's website.

2001 or newer model year gasoline vehicle sold in the European Union

Commission Directive 70/220/EEC, Annex I:

Vehicles with positive-ignition engines

With effect from 1 January 2000 for new types and from 1 January 2001 for all types, vehicles of category M1, except vehicles the maximum mass of which exceeds 2500 kg, and vehicles of category N1 class I, must be fitted with an on-board diagnostic (OBD) system for emission control in accordance with Annex XI. [...]

Note that here "European Union" means countries which were members of the EU in 2000.

2004 or newer model year diesel vehicle sold in the European Union

Commission Directive 70/220/EEC, Annex I:

Vehicles with compression-ignition engines

Vehicles of category M1, except

- vehicles designed to carry more than six occupants including the driver,
- vehicles whose maximum mass exceeds 2500 kg,

from 1 January 2003 for new types and from 1 January 2004 for all types, must be fitted with an on-board diagnostic (OBD) system for emission control in accordance with Annex XI.
Note that here "European Union" means countries which were members of the EU in 2003.

Other vehicles

If your vehicle does not fall into any of the above categories, look under the hood and try to locate a label (Fig. 1) that explicitly states that the vehicle was designed to comply with OBD-II legislation.

Fig. 1 - Vehicle Emission Control Information Label

In this case, OBD-II is used as a general term and can mean any of the following:
OBD II (California ARB)
EOBD (European OBD)
JOBD (Japanese OBD)
You may also consult your vehicle's owner's manual and perhaps contact your local dealer. However, be aware of the fact that many dealers do not know the difference between OBD and OBD-II.
If the vehicle is not OBD-II compliant, you cannot use a generic OBD-II scan tool such as U480 to obtain diagnostic information from your vehicle.

But my car has the 16-pin OBD connector, shouldn't it be OBD-II compliant?

No, not necessarily. A lot of European and Asian manufacturers equipped their vehicles with D-shaped 16-pin connectors long before they began installing OBD-II systems on those vehicles. One curious thing to note here is the fact that most non-EOBD compliant vehicles had a DLC that does not fully conform to SAE J1979. Compare figures 2 and 3, and notice the "ears" on the non-EOBD compliant Ford Focus.

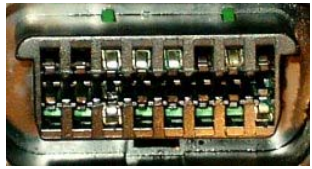


Fig. 2 - Ford Escort DLC (courtesy of DigitalFriction, UK)

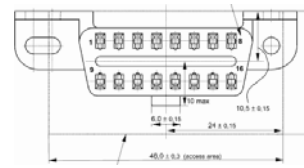


Fig. 3 - J1962 Vehicle Connector, Type A (courtesy of SAE)

1.3 Which OBD-II protocol is supported by my vehicle?

All cars and light trucks built for sale in the United States after 1996 are required to be OBD-II compliant. The European Union OBD legislation is somewhat more complicated.

An OBD-II compliant vehicle can use any of the five communication protocols: J1850 PWM, J1850 VPW, ISO9141-2, ISO14230-4 (also known as Keyword Protocol 2000), and more recently, ISO15765-4/SAE J2480 (a "flavor" of CAN). US car manufacturers were not allowed to use CAN until model year 2003.

There are two types of diagnostic link connectors (DLCs) defined by SAE J1962 - Type A and Type B, shown in Figures 2 and 3, respectively. The main difference between the two connectors is in the shape of the alignment tab.

Location - According to J1962,Type A DLC "shall be located in the passenger or driver's compartment in the area bounded by the driver's end of the instrument panel to 300 mm (~1 ft) beyond the vehicle centerline, attached to the instrument panel and easy to access from the driver's seat. The preferred location is between the steering column and the vehicle centerline."

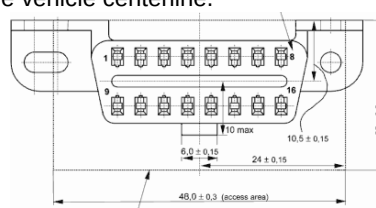


Fig. 1 - J1962 Vehicle Connector, Type A (courtesy of SAE)

Type B DLC "shall be located in the passenger or driver's compartment in the area bounded by the driver's end of the instrument panel, including the outer side, and an imagined line 750 mm (~2.5 ft) beyond the vehicle centerline. It shall be attached to the instrument panel and easy to access from the driver's seat or from the Co-drivers seat or from the outside. The vehicle connector shall be mounted to facilitate mating and unmating."

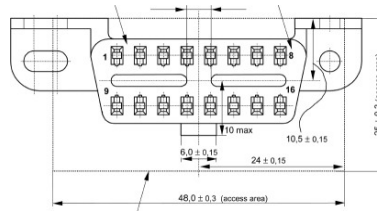


Fig.2 - J1962 Vehicle Connector, Type B
(courtesy of SAE)

As a general rule, you can determine which protocol your vehicle is using by looking at the pinout of the DLC:

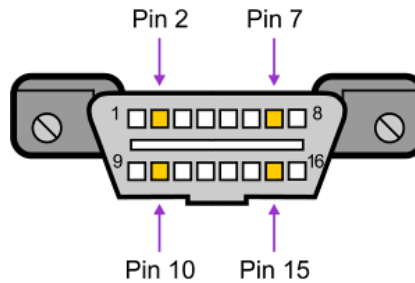


Fig. 3

The following table explains how to determine the protocol:

Pin 2	Pin 6	Pin 7	Pin 10	Pin 14	Pin 15	Standard
must have			must have			J1850 PWM
must have						J1850 VPW
		must have			may have*	ISO9141/14230
	must have			must have		ISO15765 (CAN)

*Pin 15 (also called the "L-line") is optional in newer vehicles that use the ISO9141-2 or ISO14230-4 protocols.

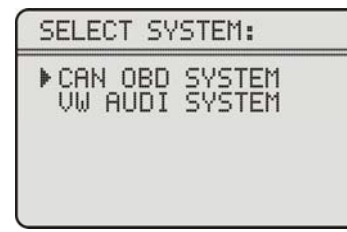
In addition to pins 2, 7, 10, and 15, the connector should have pins 4 (Chassis Ground), 5 (Signal Ground), and 16 (Battery Positive). This means that:

PWM	The connector must have pins 2, 4, 5, 10, and 16
VPW	The connector must have pins 2, 4, 5, and 16, *but not* 10.
ISO	The connector must have pins 4, 5, 7, and 16. Pin 15 may or may not be present.
CAN	The connector must have pins 4, 5, 6, 14, and 16.

2. Operating Instructions

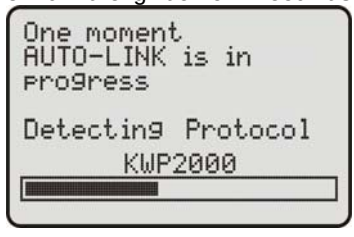
2.1 start Memoscan:

1. Turn the ignition off
2. Locate the 16-pin Data Link Connector (DTC), and plug into the cable connector to the DLC.
3. Press “button power”, Wait for the LCD display



4. select “CAN OBD SYSTEM”

5. Turn the ignition on. Needn’t start the engine . and press any key

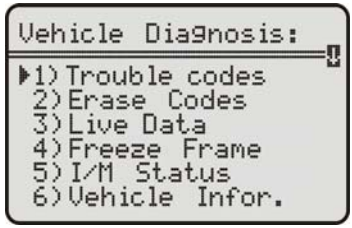


2.2 Read codes:

1. the trouble codes function read DTCs from the vehicle's computer modules there tow types of codes, Malfunction Indicator Lamp(MIL) Codes and pending codes.
   MIL Codes: These codes cause the computer to illuminate the MIL when an emission related or driveability fault occurs. The MIL is also known as the “service Engine Soon” or “Check Engine Lamp”. MIL codes remain in the vehicle’s memory until the fault is repaired.

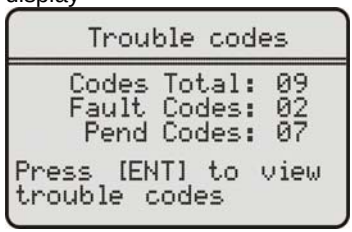
2.Pending Codes: These codes are also referred as “continuous monitor” and “maturing codes”. An intermittent fault will cause the computer to store a code in memory. If the fault does not occur within 40 warm-up cycles, the code will be cleared from memory.If the fault occurs a specific number of times,the code will mature into a DTC and the MIL will turn on.

3.Select Trouble codes and press ENTER, The U585 retrives the DTCs stored in the vehicle's computer modules.



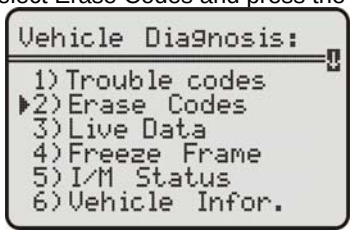
▲ if there are no trouble codes, it will display “NO CODES ARE FOUND”

▲ If there are any trouble codes, all information will be reported on the display

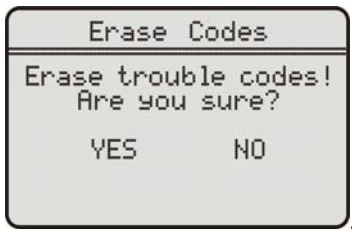


2.3 Erase codes

Select Erase Codes and press the ENTER key.



a message appears asking if you are sure. Press the LEFT/RIGHT arrow keys to move the brackets to the desired response and press ENTER



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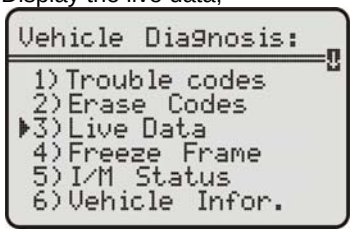
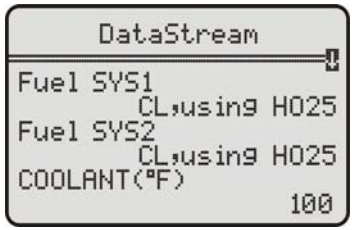
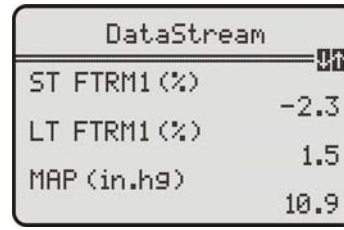
2.4 Live data

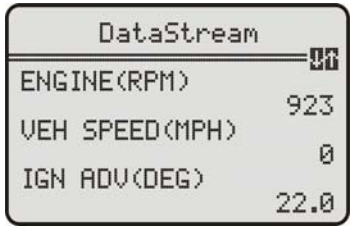
1.Display the live data,

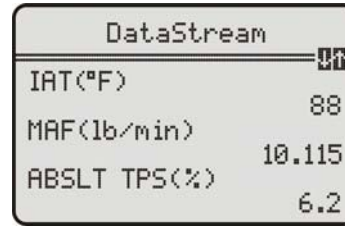


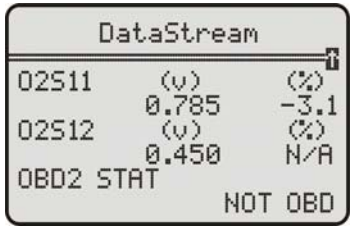
2. All live data are reported on the display





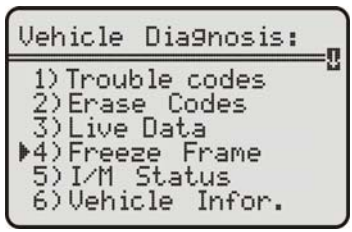




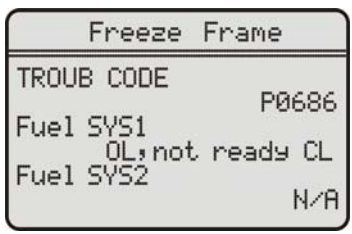


2.5 Freeze Frame

1. when an emission-related fault occurs, certain vehicle conditions are recorded by the on-board computer. this information is referred to as a freeze.
   Frame data.this data can be overwriten by faults with a higher priority.
2. if codes were erased, the freeze frame data may not be stored in vehicle memory.
   Select Freeze Frame from the menu and press ENTER

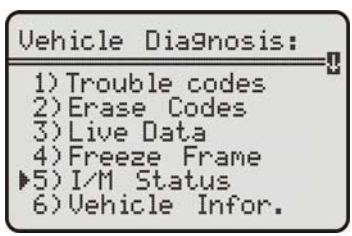


3. All Freeze Frame data are reported on the display

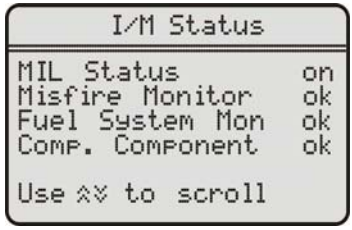


2.6 IM Status

1. select I/M Status and press ENTER



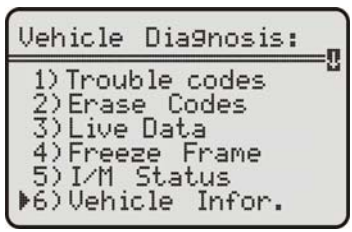
2. using the UP/DOWN arrows to view status of the following monitors.



Abbreviated Name	Expanded Name
-Misfire Monitor	Misfire monitor
-FUEL System Mon	Fuel System Monitor
-Com Component	Comprehensive Components Monitor
-Catalyst Mon	Catalyst Monitor
-Htd Catalyst	Heated Catalyst Monitor
-Evap System Mon	Evaporative System Monitor
-Sec Air System	Secondary Air System Monitor
-A/C Refrig Mon	Air Conditioning Refrigerant Monitor
-OXYGEN Sens Mon	Oxygen Sensor Monitor
Oxygen Sens HTR	Oxygen Heater Sensor Monitor
-EGR System Mon	Exhaust Gas Recirculation System
Monitor	

2.7 Vehicle info

1. Select “Vehicle info” from the main menu,press the “ENTER” button.

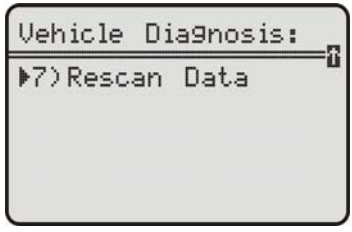


2. Use the SCROLL button to view additional digits of the 17-digit string.

3. If the vehicle does not support this mode, a message will show " the selected mode is not supported!"

2.8 Rescan Data

Select "Rescan Data" from the main Menu, and press the "ENTER" button. U585 will Retest you car



2.9 Battery

1. Open the battery compartment and install the battery.
2. When U585 connect with the car, the batter power on automatically, after completing the testing, pull out the OBDII connector cable from your car, the U585 still power on, U585 keep the trouble codes. You can read it anytime anywhere. Press Enter key to turn it off (press 6 seconds)

Attention: if the battery power is not enough, the U585 will emit some noise (Piiiiiiii), please to replace the old battery.

About U585 for VW/AUDI

1. Applications

U585 is a powerful, affordable handy scanner designed for all VW, AUDI, SKODA, and SEAT vehicles. It is small in size, robust in design, competitive in price and easy to use. With only 10% of the cost of a large special tool, it can nearly do the same work as that of a VAG1551/1552. This is a stand alone unit; it does not need a laptop computer to operate.

2. Available Functions

- Control Unit Information
- Read Fault Codes
- Measuring Blocks
- Clear Fault Codes
- Basic Setting
- Adaptation
- Single Reading
- Output Tests
- Code Module
- Login
- Service Oil Reset
- Code Modes
- Dealership Code Set

3. Supported Systems

U585 can support the following systems:

- Engine
- Transmission
- Airbag, etc. there are 78 systems available.

4. Main Features

- Low price: the price is only about 10% of that for a large special tool
- Powerful functions: it can nearly do the same work as that of a VAG1551/1552
- Powered via diagnostic connector, no additional power is needed
- Plug and play, ease to use
- High reliable and accurate

Operation Instructions

1. Preparation for Testing

The U585 aids in monitoring electronic and emissions-related faults in your vehicle and retrieving fault codes related to malfunctions in these systems. Mechanical problems such as low oil level or damaged hoses, wiring or electrical connectors can cause poor engine performance and may also cause a “false” fault code. Fix any known mechanical problems before performing any test. See your vehicle’s service manual or a mechanic for more information.

Check the following areas before starting any test:

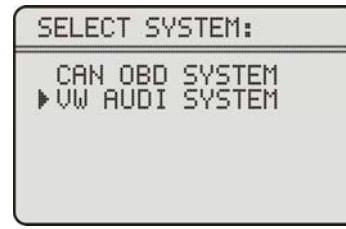
- Check the engine oil, power steering fluid, transmission fluid (if applicable), engine coolant and other fluids for proper levels. Top off low fluid levels if needed.
- Make sure the air filter is clean and in good condition. Make sure all air filter ducts are properly connected. Check the air filter ducts for holes, rips or cracks.
- Make sure all engine belts are in good condition. Check for cracked, torn, brittle, loose or missing belts.
- Make sure mechanical linkages to engine sensors (throttle, gearshift position, transmission, etc.) are secure and properly connected. See your vehicle’s service manual for locations.
- Check all rubber hoses (radiator) and steel hoses (vacuum/fuel) for leaks, cracks, blockage or other damage. Make sure all hoses are routed and connected properly.
- Make sure all spark plugs are clean and in good condition. Check for damaged, loose, disconnected or missing spark plug wires.
- Make sure the battery terminals are clean and tight. Check for corrosion or broken connections. Check for proper battery and charging system voltages.
- Check all electrical wiring and harnesses for proper connection. Make sure wire insulation is in good condition, and there are no bare wires.
- Make sure the engine is mechanically sound. If needed, perform a compression check, engine vacuum check, timing check (if applicable), etc.

2. Connect the U585 for VW/AUDI

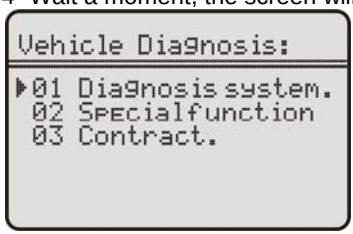
2.1 Turn the ignition off.

2.2 Locate the vehicle's 16-pin Data Link Connector (DLC).

2.3 Connect the U585 cable connector to the vehicle's DLC. Turn on the ignition, Press [power button], The U585 will auto start, the following screen will be displayed.



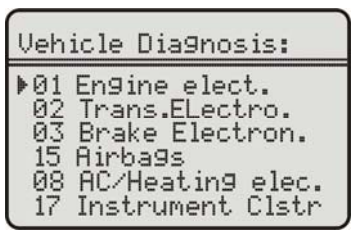
2.4 Wait a moment, the screen will auto display the main menu:



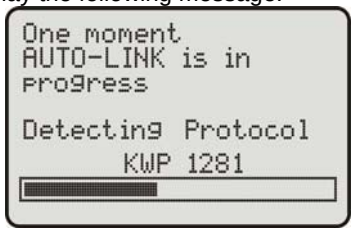
- **[Diagnosis system]**: enter the control module selection menu.
- **[Specialfunction]**: specialfunction.
- **[Contrast]**: adjust the contrast.

3. Diagnosis system

Select [Diagnosis system] and then press [enter] key. The screen will display the system selection menu as follow:

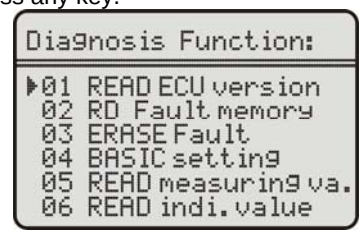


There are 78 systems available. Here let's take [01. Engine Elec.] for example. Select [01. Engine Elec.], and press [Enter] key. The screen will display the following message:



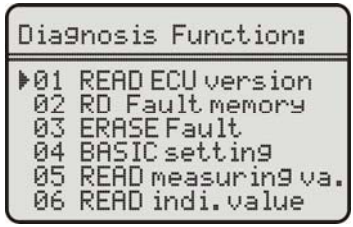
After successful communication, the screen will display the ECU version information as shown in the figure below:

press any key.



Select [01. READ ECU version], and press [Enter] key. The screen will display the following message:

press [Esc] key, U585 will enter the function menu for engine electronics system:

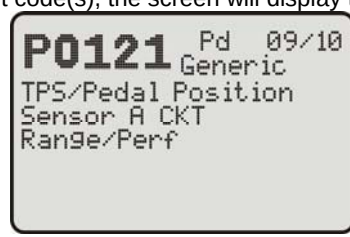


3. 1 READ ECU version

Select [01.READ ECU version] and then press [Enter] key. The screen will display the control unit information:

3.2 Read Fault memory

Select [02. RD Fault memory] and then press [Enter] key. If the system has fault code(s), the screen will display the fault code(s) and descriptions:

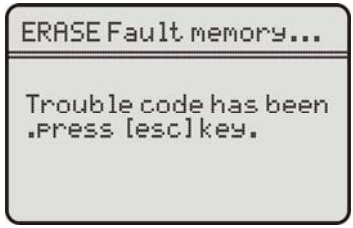


As seen on the top right corner, the front digit is the No. of the displayed fault code, while latter digit is the number of total fault codes.

Press [down] key to read the next page, press [up] key for the previous page.

3.3 ERASE Fault

Select [03. ERASE Fault] and then press [Enter] key. The fault codes will be erased.



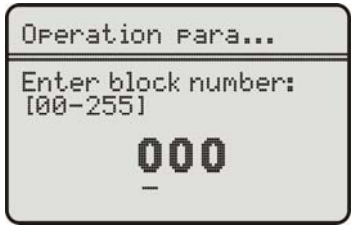
3.4 Basic Setting

Basic Settings mode is very similar to Measuring Blocks. The content of each display group is the same. The difference between the functions is that the Control Module may try to perform various calibrations while in Basic Settings mode.

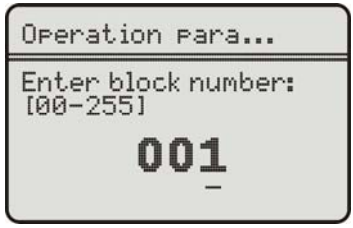
Warning!

You should refer to the Factory Repair Manual for your particular car (or some other documented procedure) before "playing" with the Basic Settings function. Failure to follow the proper procedures can result in serious damage to the vehicle.

Select [04. Basic Setting] and then press [enter] key. The screen will be displayed as shown below.



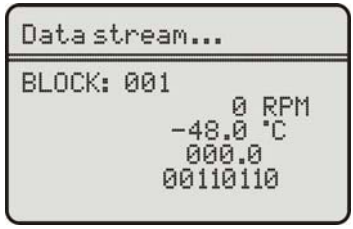
You should input the Channel Number first (from 0-255).



You can input the Channel Number with the [up], [down], [left],[right]and [enter] key:

- [up] and [down] keys: increase or decrease the number.
- [left] and [right] keys: moves the cursor [---] and select the digit.
- [enter] key: confirm and enter.

For example, enter Channel number 001 and press [enter] key, the screen will display the data stream for data block 001, as shown in the figure below:

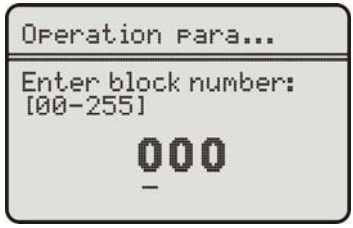


Notes:

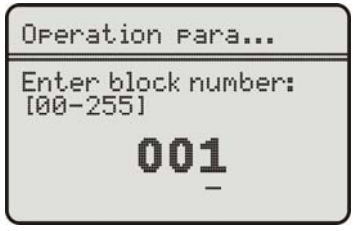
Multiple Groups are not permitted in Basic Settings. The data presented in each Basic Settings Group varies greatly from Control Module to Control Module and between different models and years. Some groups are documented in the Factory Repair Manuals, but many are not.

3.5 READ Measuring value

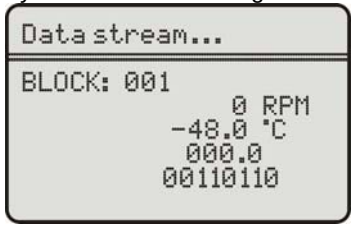
Select [05. READ Measuring value] and then press [enter] key. The screen will be displayed as shown below.



You should input the Channel Number first (from 0-255).



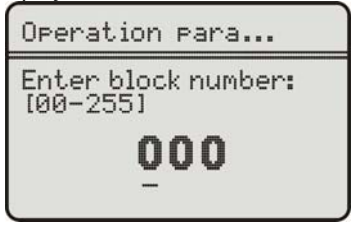
When the Block number is entered, press [enter]. The screen will be displayed as shown in the figure:



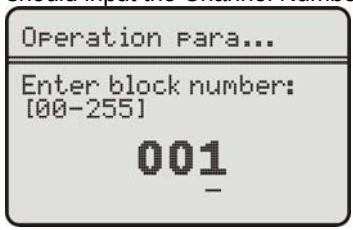
Here you can press [down] key to switch to the next block, or press [up] to return to the previous block.

3.6 READ indi. value

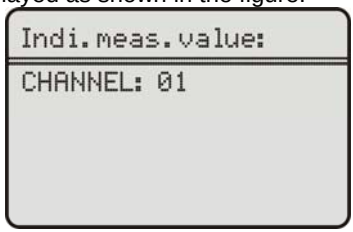
Select [06. READ indi. value] and then press [enter] key. The screen will be displayed as shown below.



You should input the Channel Number first (from 0-255).



When the Block number is entered, press [enter]. The screen will be displayed as shown in the figure:

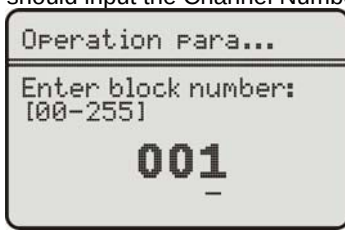


3.7 Adaptation

The Adaptation function allows you to alter certain values and/or settings in control modules that support it.

Select [07. Adaptation] and then press [enter] key. The screen will be displayed as shown below.

You should input the Channel Number first (from 0-255).

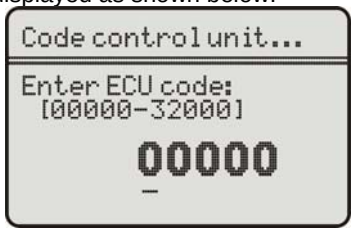


When the Block number is entered, press [enter]. The screen will be displayed as shown in the figure:

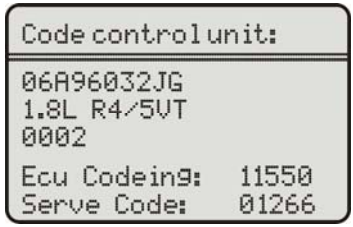
Here you can press [up] and [down] keys to adjust the adaptation value, and then press [enter] key to save the adaptation value, or press [esc] key to cancel the operation and return.

3. 8 Code Control unit

Select [08. Code Control unit] and then press [enter] key. The screen will be displayed as shown below.

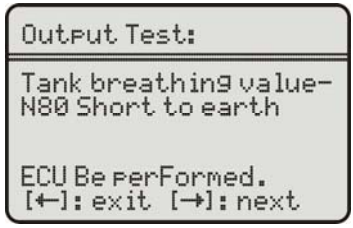


Input the Channel Number and press [enter] key, The screen will display the control unit information:



3.9 FND Output

Select [09. FND Output] and then press [enter] key. The screen will be displayed as shown below.



The U585 is testing the displayed actuator. Here you can press [up] key to switch to the next actuator, or press [down] key to cancel the operation and return.

3.10 Login procedure

The Login Function must be used on some (but not all) Control Modules before you can Recode or change Adaptation values. On others, it "enables" certain features like cruise control. Valid Login codes can be found in the Factory Repair Manual for your car.

Select [10. Login procedure] and then press [enter] key. The screen will be displayed as shown below.

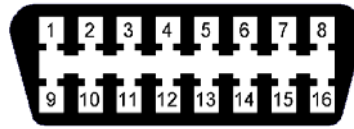
Warning!

Make sure get the correct module code before performing this function; otherwise the system may be destroyed.

4. Location of Data Link Connector

The OBD-II 16pin connector is as shown in the figure below. For Golf, it is located on the right side of steering column; For Jetta, it is located in the left driver room below instrument panel; For Santana, it is located in front of the gearbox dust cover.

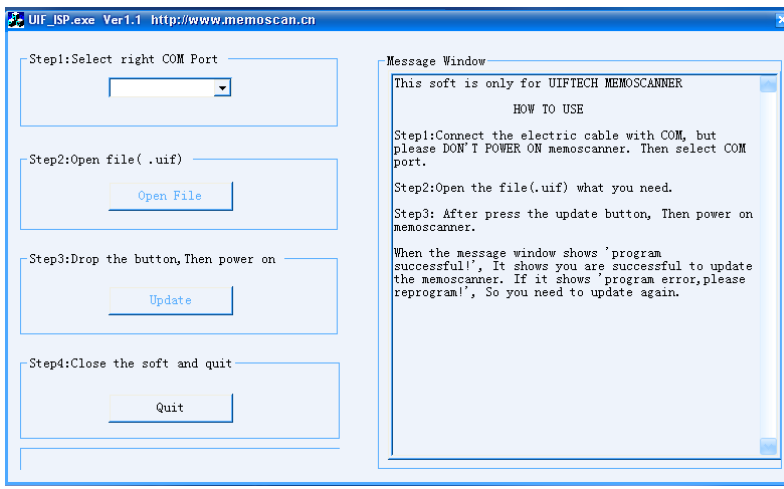
For more detailed information, please refer to the Repair Manual of your vehicle.



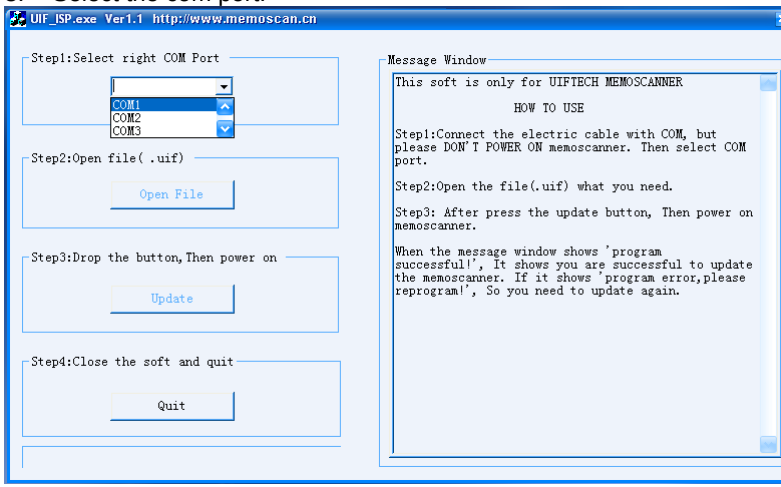
The use of upgrading software

Correct installation of updated software is through com cable connecting the com mouth of the computer. (You don't need to open the power of the memo scanner.)

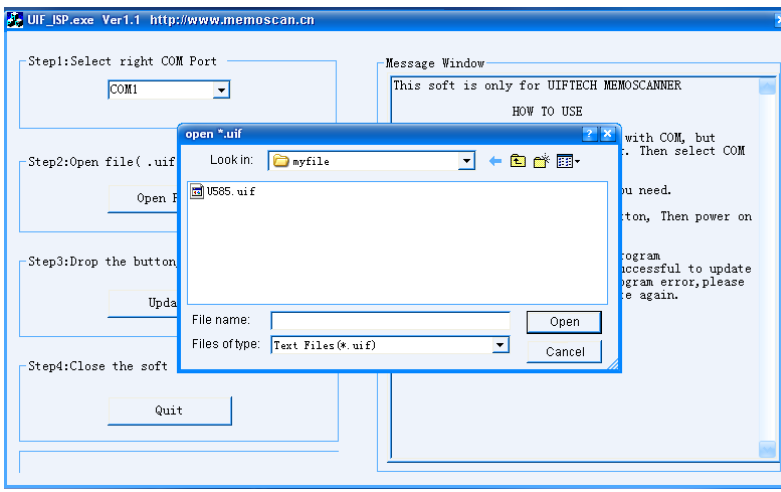
1. visit website ww.memoscan.cn, download the software
2. Run UIF-ISP,. there will be the interface as follows



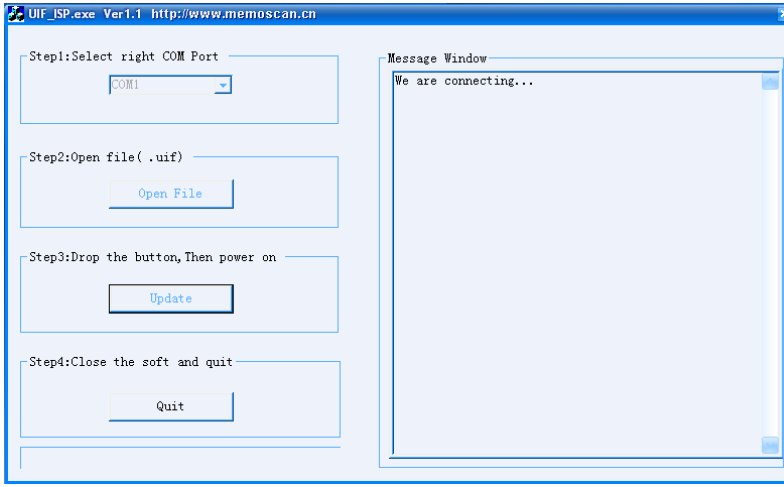
3. Select the com port.



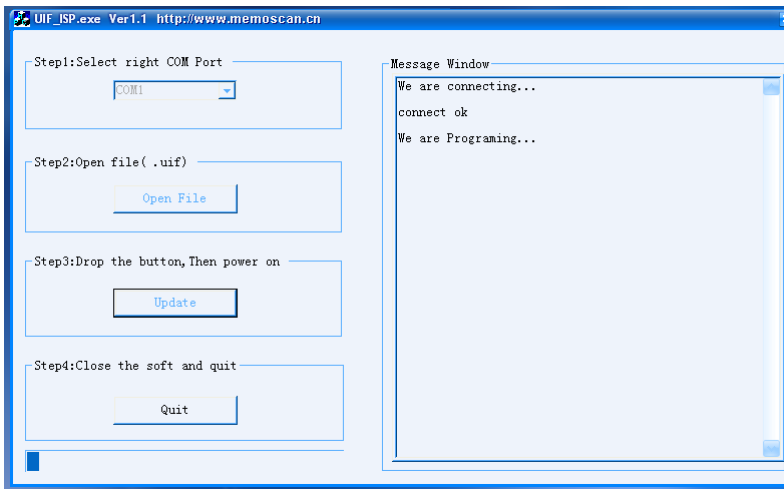
4. Press “Open File” button, select the file for update(expand: .uif)



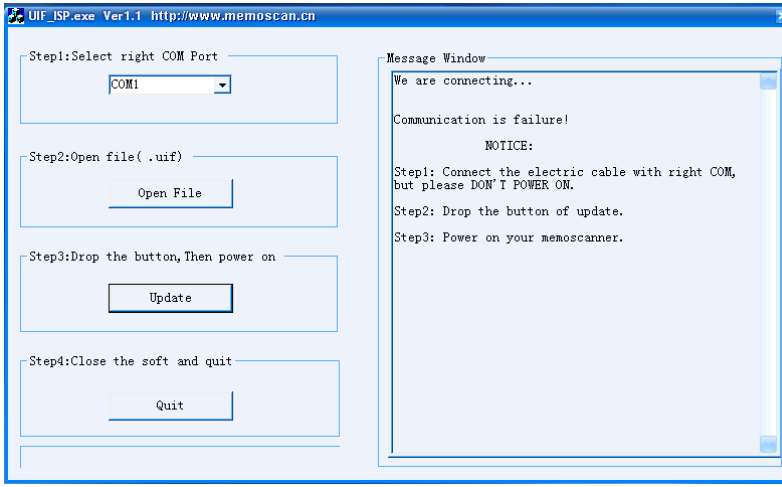
5. Press “update”, open the power of memo scanner, there will be the interface as follows. The Memo scanner is trying to connect with PC.



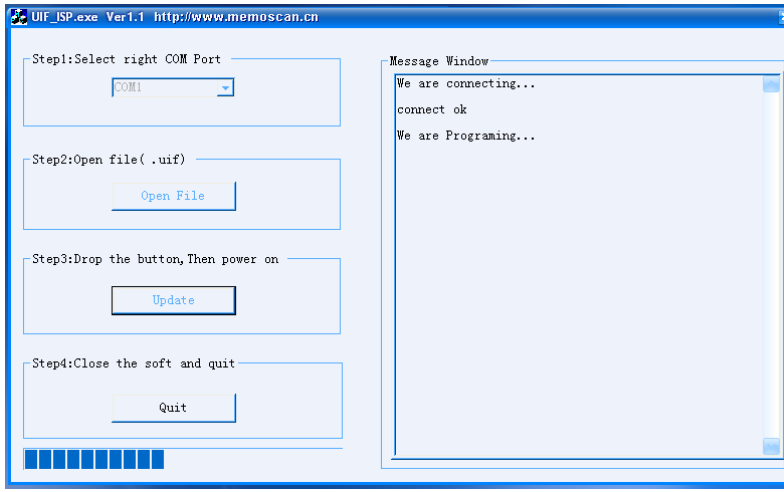
5-1. The blow interface will appear if the connection is success.



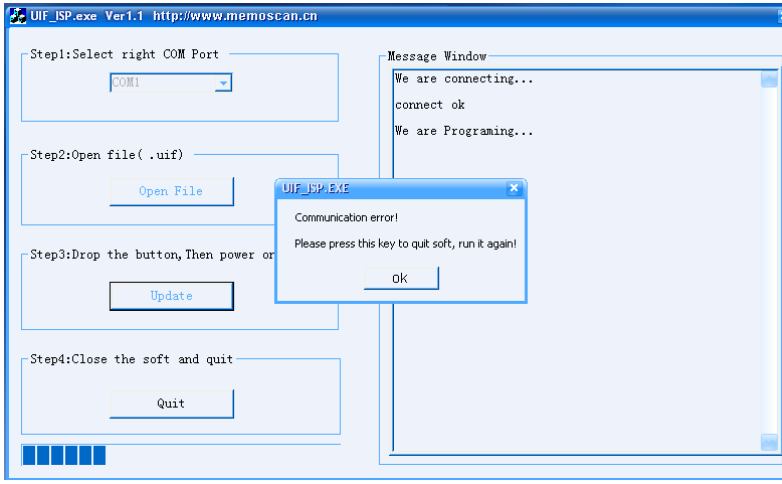
5-2. If the connection is fail, this time requests to close the power of memo scanner and check whether the connection and the choice of COM mouth are right or not.



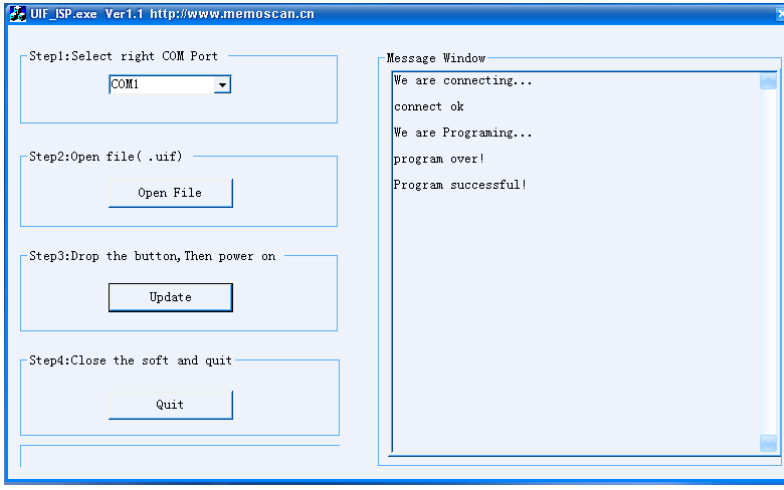
6. Connection succeed, upgrading starts.



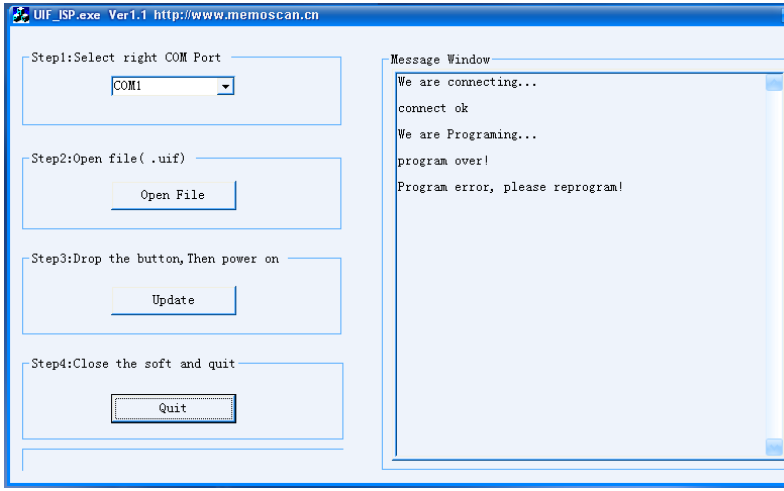
6-1. If the below interface appears in the process of upgrading, that's to say the communications failures, this time requests to close the procedures and re-run the programmer



7. update successful



7-1. If the below interface appears, that's to say the upgrading failure. This time requests to close the power of memo scanner and back to step 1 to re-upgrading .



Warranty and Servicing

1. One Year Warranty

1.U585 warrants to its customers that this product will be free of all defects in materials and workmanship under normal use and maintenance for a period of one (1) year from the date of the original purchase.

2.This warranty does not apply to damages caused by improper use, accident, abuse, lightning , or if the product was altered or repaired by anyone other than the Manufacturer's Service Center.

2. Service Procedures

If you have any questions, please contact our local store, distributor or the Service Center