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# Safety Precautions

*To prevent personal injury or damage to vehicles and/or the scan tool, read this instruction manual first and observe the following safety precautions at a minimum whenever working on a vehicle:*

- Always perform automotive testing in a safe environment.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- Operate the vehicle in a well ventilated work area: Exhaust gases are poisonous.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Keep a fire extinguisher suitable for gasoline/chemical/ electrical fires nearby.
- Don't connect or disconnect any test equipment while the ignition is on or the engine is running.
- Keep the scan tool dry, clean, free from oil/water or grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.

## Location of Data Linking Connection.

Refer to the picture of OBD-II 16pin as the following. For VW GOLF, it locates in the right side of steering column; for Jetta, it locates in the left side of the bottom of the dashboard which is at the driver's ca. For more details, please refer to the vehicle repairing manual.
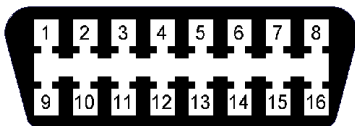
# Product Information

## 1. Applications

*Mini VAG505A/VAG506M/VAG506/V801 is the higher version with powerful function. It supports all cars under brand of VW, AUDI, SKODA and SEAT. With its smart appearance but powerful function, it can be conveniently used and can be run detachedly without support of PC. And it Support UDS vehicle protocols*.

## 2. Available Functions

- Controller Info
- Fault Codes
- Clear Codes
- Measure Blocks
- Output Tests
- Basic Settings
- Adaptation
- Coding
- Security Access
- Readiness
- Advanced ID

## 3. Supported Systems

- Engine
- Transmission
- ABS Brakes
- Auto HVAC
- Central control
- Airbags
- Steering wheel
- Instruments
- Immobilizer
  With other systems totally over ten here not listed one by one.

## 4. Professional function.

- Oil Reset
- Airbag Reset
- Odometer

- Stop/Activate SBC
- AUDI O2 sensor service
- VW O2 Sensor service

📝 *NOTE*: ***Only V506/V801 has the following features:***

- Throttle adjustment
- Tilt Angle sensor calibrate

## 5. Main features

- Favorable----about only 10% of that of professional tool.
- Powerful function-----with all the function of VAG1551/1552.
- Powered via diagnostic connector, no need of power exteriorly charged.
- Conveniently connection and simply operation.

## 6. Appearance and Key Descriptions

### V801/VAG506
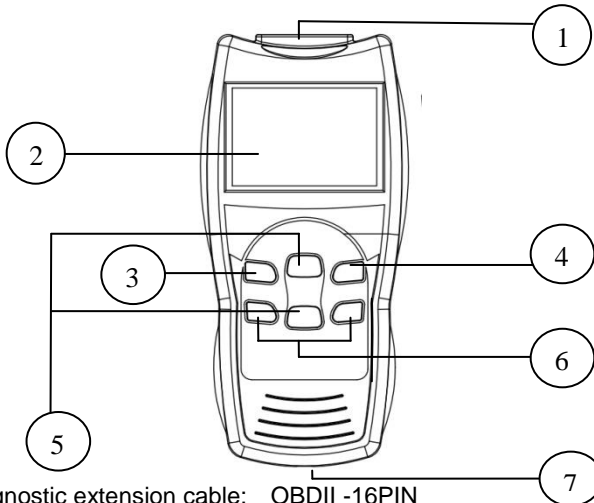


① Diagnostic extension cable:  OBDII -16PIN
② LCD screen: VAG506 is backlit LCD, 128*64 pixel display. V801 is 2.8" TFT true color 320*240
③ ENTER key:  confirm selection and enter
④ Esc key:  go back to the previous screens

⑤  UP/DOWN arrows: moves the selection pointer and scrolls up or down
⑥  LEFT/RIGHT arrows: move cursor. For V801 also to flip page
⑦  USB interface: connect to USB cable
Dimensions: Length 201mm (7.9"), Width 94mm (3.70"),Height 36mm (1.74")
OBDII connector, 900mm (35.4")

## VAG506M
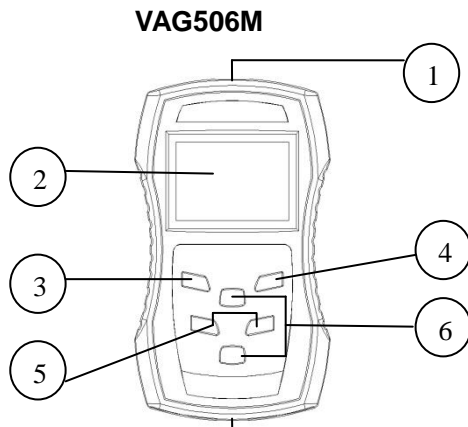


①  OBDII Connector: connect car and the scan tool
②  LCD screen: Backlit LCD, 128*64 pixel display.
③  ENTER key:   confirm selection and enter
④  Esc key:     go back to the previous screens
⑤  LEFT/RIGHT arrows:   move cursor.
⑥  up/down arrows:   moves the selection pointer and scrolls up or down
⑦  USB interface: connect to USB cable
Dimensions: Length 125mm (4.92"), Width 75 mm (2.95"),Height 23 mm (0.90")
OBDII connector, 735mm (28.9")

**Mini VAG505A**
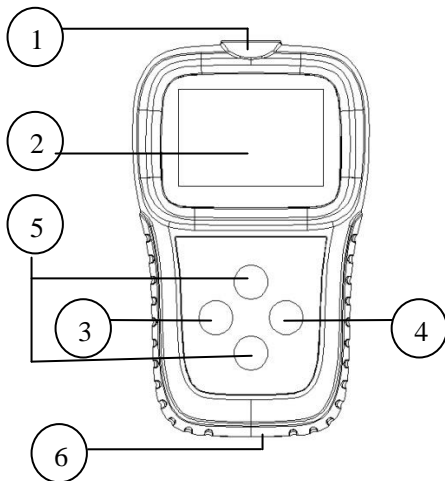


① OBDII Connector: connect car and the scan tool
② Screen: 128*164 pixel display, Backlit LCD
③ ENTER: confirm selection and enter
④ ESC: go back to the previous screens
⑤ UP/DOWN: up and down to choose different menu, press it for 1-2 seconds to choose the number of places(move the cursor)
⑥ USB interface: connect to USB cable
⑦ **Press UP/DOWN button for one to two seconds, the key change to LEFT/RIGHT**

Dimensions: Length 117mm (4.70"), Width 72mm (2.83), Height 22mm (0.87")
OBDII connector, 735mm (28.9")

## Product Specifications

- Operating Temperature- 0 to $50^{O}C$(-32 to $122^{O}F$)
- External Power: 10.0 to 15.5 volts provided via vehicle battery

# **Operation Instructions**

## **1. Connect the Mini VAG506/VAG506M/VAG506/V801**

1.1 Turn the ignition off.

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

1.3 Plug the OBDII connector to the vehicle's DLC.

1.4 Turn the ignition on. Engine can be off or running.

The tool will auto start, the following screen will be displayed.

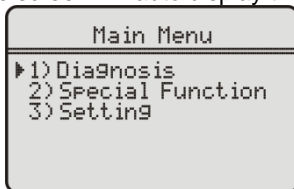Wait a moment, the screen will auto display the Main Screen.

```
      Main Menu
▶1)Diagnosis
  2)Special Function
  3)Setting
```

Figure 1

## **2. Diagnosis system**

With the scan tool in **Main Screen** (Figure 1.1), select the **Diagnosis**, and press **ENTER** button. Wait for the Diagnosis screen to appear. The scan tool will list all Control Unit.

```
   AUDI_VW Diagnosis:
▶1)Common
  2)Drivetrain
  3)Chassis
  4)Comfort/Conv.
  5)Electronics 1
  6)Electronics 2
```

Figure 2

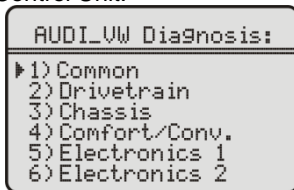### **2.1 Select Control Unit**

With the scan tool in **Control Mode** screen (Figure 2), use **UP/DOWN** scroll button to select system, and press **ENTER** button. The scan tool will list all systems, and you can manually select the detecting system, the scan tool will list all **Systems** screen (Figure 2.1).
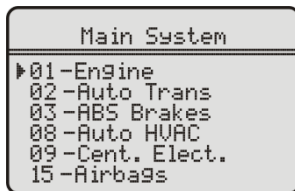
```
        Main System
▶01-Engine
  02-Auto Trans
  03-ABS Brakes
  08-Auto HVAC
  09-Cent. Elect.
  15-Airbags
```

Figure 2.1

## 2.2 Select System

With the scan tool in **System** screen (Figure 2.1), use **UP/DOWN** scroll button to select the detecting system, and press **ENTER**.
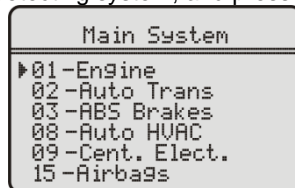
```
        Main System
▶01-Engine
  02-Auto Trans
  03-ABS Brakes
  08-Auto HVAC
  09-Cent. Elect.
  15-Airbags
```

Figure 2.2

## 2.3 connect with the vehicle's ECU

```
One moment
AUTO-LINK is in
progress

Detecting Protocol
     KWP 1281
[███████████      ]
```
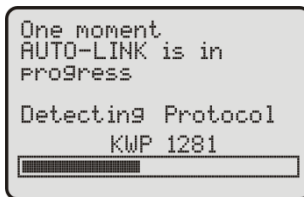
● **If the scan tool fails to communicate with the vehicle's ECU (Engine Control Unit), a "Fail to connect" message shows up on the display.**

✓ Verify that the ignition is ON.

✓ Check if the scan tool's OBD II connector is securely connected to the vehicle's DLC.

✓ Verify that the module is supported.

✓ Turn the ignition off and wait for about 10 seconds. Turn the ignite on back to on and repeat the procedure from step 2.3

✓ *If the "Fail to connect" message does not go away, then there might be problems for the scan tool to communicate with the vehicle. Contact your local distributor or the manufacturer's customer service department for assistance.*

If it runs successfully, then the following will be displayed.

```
          Version
VAG: Z 1Kd920853
Component: KOMBIINSTR
UMENT 5G10
Shop#Imp:sy768m infor
Extra:Geraet  00026
COD: 0003103
WSC: 00000
```

Figure 2.3

## 2. 4 **Function**

Press **ESC** button. Wait for the Select **Function** screen to appear.

```
          01-Engine
▶01-Read ECU info
 02-Fault Codes
 05-Clear Codes
 08-Measure blocks
 03-Output Tests
 04-Basic Settings
```
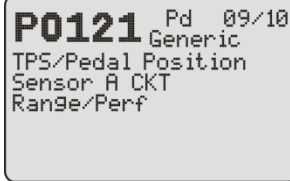
Figure 2.4

### **2. 5 READ ECU version**

Select **Controller Info** from the Function menu, and press **ENTER** button. The screen will display the control unit information:

```
          Version
VAG: Z 1Kd920853
Component: KOMBIINSTR
UMENT 5G10
Shop#Imp:sy768m infor
Extra:Geraet  00026
COD: 0003103
WSC: 00000
```

Figure 2.5

### **2.6 Read Fault Codes**

1. Selec**t Fault Codes** from the **Function** menu (Figure 2.4), and press **ENTER** button, If the system has fault code(s), the screen will display the fault code(s) and descriptions:

```
P0121 Pd  09/10
      Generic
TPS/Pedal Position
Sensor A CKT
Range/Perf
```

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.

2. If more than one DTC is found, use the [down] key to read the next page, press [up] key for the previous page.

● If no data is recorded, a message "**There is no codes in the vehicle!**" shows on the screen.
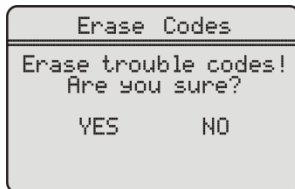
## 2.7 Erase fault codes

*CAUTION: Erasing the Diagnostic Trouble Codes may allow the scan tool to delete not only the codes from the vehicle's on-board computer, but also "Freeze Frame" data and manufacturer specific enhanced data. Further, the I/M Readiness Monitor Status for all vehicle monitors is reset to Not Ready or Not Complete status. Do not erase the codes before the system has been checked completely by a technician.*

◪ *NOTE: Erasing codes does not mean that trouble codes in ECU have been eliminated completely. As long as there is fault with the vehicle, the trouble codes keeps on presenting.*

● *This function is performed with key on engine off (KOEO). Do not start the engine.*

1. Use the **UP/DOWN** scroll button to select **05-Clear Codes** from Function menu (Figure 2.4), and press **ENTER** button, a message will come up asking you to confirm the ignition and engine status. If you select "Yes", a warning message will come up asking your confirmation.
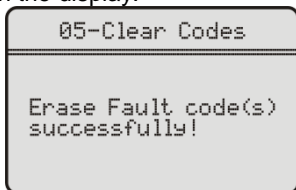
```
      Erase Codes

Erase trouble codes!
   Are you sure?

    YES      NO
```

2. If you do wish to erase the codes, use **LEFT/RIGHT** scroll button to check YES,   then press **ENTER** button.

- If the codes are cleared successfully, a message confirmation message shows on the display.

```
05-Clear Codes

Erase Fault code(s)
successfully!
```

● If the codes are not cleared, then an **"Erase Failure!"** message appears. Press any button to return to the previous menu.

## 2.8 Read measuring data value
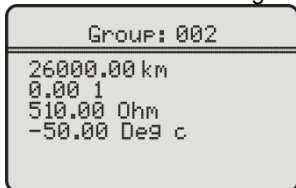
1.Use the **UP/DOWN** scroll button to select **08-Measure Blocks** from **Function menu** (Figure 2.4), and press **ENTER** button.

```
    Input group(0-255)
002
```
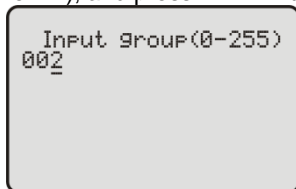
You can input the Channel Number with the [up], [down], [left],[right]and [enter] button:

- [up] and [down] keys: increase or decrease the number.
- [left] and [right] keys: moves the cursor [---] and select the digit.
  **Mini VAG505A**：Press **UP/DOWN** button for one to two seconds to moves the cursor [---] and select the digit.
- [enter] key: confirm and enter.

2. For example, enter Channel number 002 and press [enter] key, the screen will display the data stream for data group 002:

```
        Group: 002
26000.00 km
0.00 1
510.00 Ohm
-50.00 Deg c
```

● Press [↓] key to switch to the next group, or press [↑] to the previous.

## 2.9 Output test.

1. Use the **UP/DOWN** scroll button to select [03-Output Test] from **Function menu** (Figure 2.4), and then press **ENTER** button.

```
03-Output Tests
Tachometer (G5)


          NEXT
```
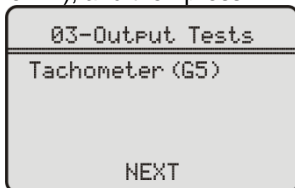
You can press **ENTER** button to test. Press **ESC** button to exit. If this testing is finished, you can press **ENTER** button to continue testing.

- If the function is not supported by the vehicle, a **"Function not supported by this ECU!"** message shows on the screen.
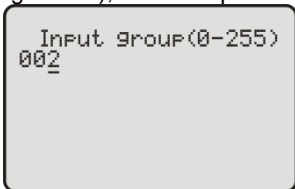
## 2.10 Basic setting.

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.

✍ *NOTE: 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.*

1. Use the **UP/DOWN** scroll button to select [04-Basic Settings] from **Function menu** (Figure 2.4), and then press ENTER.
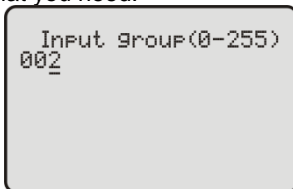
```
  Input group(0-255)
002
```

When the Group number is entered, press [enter].

```
       Group: 002

26000.00 km
0.00 1
510.00 Ohm
-50.00 Deg c
```

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## 2.11 Adaptation

1. Use the **UP/DOWN** scroll button to select [10-Adaptation] from **Function menu** (Figure 2.4), and then press ENTER. Now you can select the group that you need.

```
   Input group(0-255)
 002_
```

- [up] and [down] keys: increase or decrease the number.
- [left] and [right] keys: moves the cursor [---] and select the digit.
- **Mini VAG505A**：Press **UP/DOWN** button for one to two seconds to moves the cursor [---] and select the digit.
- [enter] key: confirm and enter.

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

```
        Group: 002
 26000.00 km
 0.00 1
 510.00 Ohm
 -50.00 Deg c
```
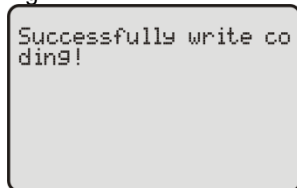
- Press [↓] key to switch to the next group, or press [↑] to the previous.

3. Press **ENTER** button, you can input adaption value that you need to adjust, the value number is entered, press [ENTER].
   The scan tool list live data, stored value and new value

4. Press **ENTER** button, you can see the stored value is adjusted.

5. Press **ENTER** button, a "Do you want to save new adaption value?" Message will come up asking your confirmation, if you do wish to store the new value, press **ENTER** key.
   - If the value is stored successfully, a **"Success"** message shows on the screen. Press any button to return to the previous menu.
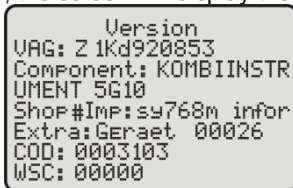
## 2.12 Coding

1. Use the **UP/DOWN** scroll button to select [07-Coding] from **Function menu** (Figure 2.4), and then press ENTER. It will display as the following.

```
Input Software coding:

00003103
_
```

```
Input Equipment Numbe
r:
00000026
_
```
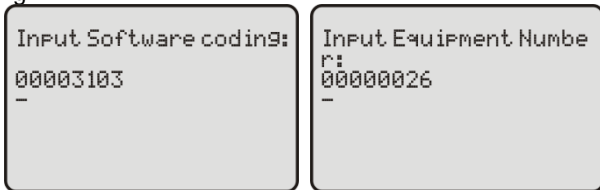
2. All information written, press ENTER.   If operation is successful, it will display as the following:

```
Successfully write co
ding!
```

3. Press ENTER button, the screen will display the control unit information:

```
        Version
VAG: Z 1Kd920853
Component: KOMBIINSTR
UMENT 5G10
Shop#Imp:sy768m infor
Extra:Geraet  00026
COD: 0003103
WSC: 00000
```

## 2.13 Login the system

1. Select **11-Security Access** from **Function menu** (Figure 2.4). Press ENTER button.
2. You can select "Use 5-diagit PIN/SKC" or "Use 7-diagit PIN/SKC"
   For example we select "Use 5-diagit PIN/SKC":

```
    Input password:
00000
_
```

4. Press the **LEFT/RIGHT** to choose the number of places, by **UP/DOWN**
  button to select the input number and press ENTER button to confirm.

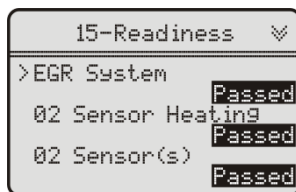5. If you login successfully. It shows as "Successfully login!"

```
11-Security Access


Seccessfully login!
```
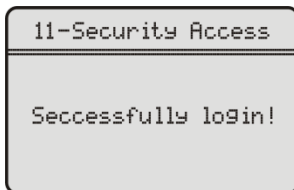
- If failed, it shows as "Coding value is unacceptable!".

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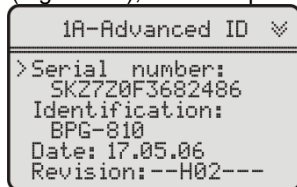  this function; otherwise the system may be destroyed.**

## 2.14 System being ready

 1. Use the **UP/DOWN** scroll button to select [15-Readiness] from
   **Function menu** (Figure 2.4), and then press ENTER.

```
    15-Readiness   ∨
>EGR System
                 Passed
 02 Sensor Heating
                 Passed
 02 Sensor(s)
                 Passed
```

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

## 2.15 Advanced ID

 1. Use the **UP/DOWN** scroll button to select [1A-Advanced ID] from
   **Function menu** (Figure 2.4), and then press ENTER.

```
   1A-Advanced ID ∨
>Serial  number:
  SKZ7Z0F3682486
 Identification:
  BPG-810
 Date: 17.05.06
 Revision:--H02---
```

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

# 3. Professional function

Use the **UP/DOWN** scroll button to select [Special Function] from **Function menu** (Figure 1.2), and then press ENTER. The tool will list all **Special Function screen** (Figure 3.1).
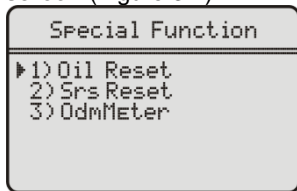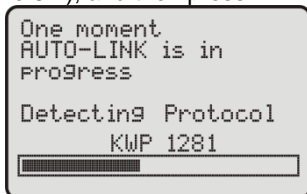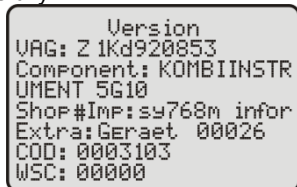
```
      Special Function

▶1) Oil Reset
 2) Srs Reset
 3) OdmMeter
```

Figure 3.1

## 3.1 Oil Reset

1. Use the **UP/DOWN** scroll button to select [**Oil Reset**] from **Special Function** (Figure 3.1), and then press ENTER button.

```
One moment
AUTO-LINK is in
progress

Detecting Protocol
       KWP 1281
██████████████
```

2. If it runs successfully:

```
         Version
VAG: Z 1Kd920853
Component: KOMBIINSTR
UMENT 5G10
Shop#Imp:sy768m infor
Extra:Geraet  00026
COD: 0003103
WSC: 00000
```

3. Press ENTER button, the tool will list:

Old Audi 2.0T (LED)

Audi 2.0T (with LED)

New Audi small maintenance

New Audi major maintenance

### 3.1.1 Old Audi 2.0(with LED)

1. Select [Old Audi 2.0T (LED)], and then press ENTER. An "Operation is completed, service interval back to the factory defaults: 1500 km. If you want to set other " message shows on the screen.

2. Press ENTER button, a "Please enter the number of miles you want to change, Note: less than 15,00 km " message shows on the screen, you

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can enter the number of miles you want change.
- If the function executed successfully, a "finish" message shows on the screen.

### 3.1.2 Audi 2.0T(with LED)
Select [**Audi 2.0T(with LED)**], and then press ENTER button.

- If the function executed successfully, a message of "Operation is complete,15000 km away and 365 days remained for next service" shows on the screen

### 3.1.3 . New Volkswagen Audi - small maintenance
1. Select [**New Audi small mainte**], and then press ENTER button, then the message appears as following:
2. A message of "change the mileage?" shows on the screen
3. If you can select ENTER button, a message of "Input new mileages: (<=15000)" shows on the screen. You can input the mileages you want change.
4. After you input the number, press ENTER button, a message of "Input new days (<=365):" shows on the screen. You can input the days you want change.
5. If the function executed successfully, a message of "Finish " shows on the screen.

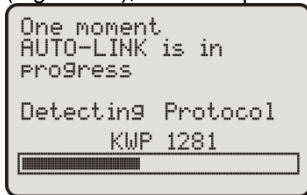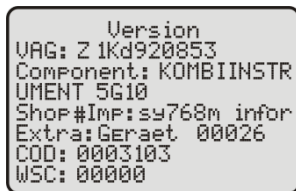### 3.1.3 New Volkswagen Audi - major maintenance
1. Select [**New Audi major mainte**], and then press ENTER button, then the message appears as following:
2. A message of "change the mileage?" shows on the screen.
3. If you can select ENTER button, a message of "Enter the milestone number: (<=6000)" shows on the screen. You can input the milestone you want change.
4. A message of "Change the number of days?" shows on the screen. You can press ENTER button.
5. After you input the number, press ENTER button, a message of "Enter new days (<=730): "shows on the screen. You can input the days you want change.
6. If the function executed successfully, a message of "Finish " shows on the screen.

- If the function executed unsuccessfully, the message appears as "Failed to communicate!"
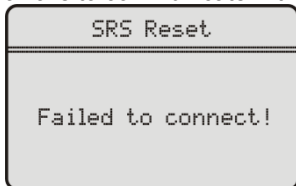
### 3.2 Airbag reset

1. Use the **UP/DOWN** scroll button to select [**Airbag Reset**] from **Special Function** (Figure 3.1), and then press ENTER button.
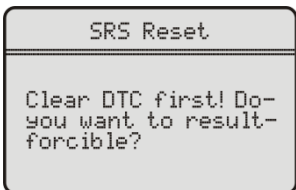
```
One moment
AUTO-LINK is in
progress

Detecting Protocol
        KWP 1281
████████████
```

2. If the scanner to successfully communicate with the car's ECU.

```
        Version
VAG: Z 1Kd920853
Component: KOMBIINSTR
UMENT 5G10
Shop#Imp:sy768m infor
Extra:Geraet  00026
COD: 0003103
WSC: 00000
```

● If the scan tool fails to communicate with the vehicle's ECU

```
        SRS Reset

   Failed to connect!
```

3. If the function executed successfully, the message appears as following:

```
        SRS Reset

Clear DTC first! Do-
you want to result-
forcible?
```

4. Then, press ENTER and it will force the implementation of reset

command and will display as the following after success.
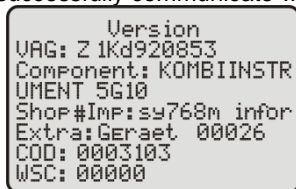
```
       SRS Reset


          Finish
```

- If you don't want to force the implementation of reset command, please press [Esc] to draw out. After finishing code erasing, you can reset airbag.

### 3.3 Odometer

1. Use the **UP/DOWN** scroll button to select [**Odometer**] from **Special Function** (Figure 3.1), and then press ENTER button.
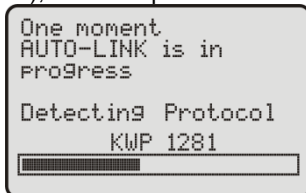
```
One moment
AUTO-LINK is in
progress

Detecting  Protocol
     KWP 1281
```

2. If the scanner to successfully communicate with the car's ECU.

```
          Version
VAG: Z 1Kd920853
Component: KOMBIINSTR
UMENT 5G10
Shop#Imp:sy768m infor
Extra:GEraet  00026
COD: 0003103
WSC: 00000
```

3. Press ENTER button, then the message appears as "Input new mileages:(<=15000)". You can input the milestone you want change.

4. If the function executed successfully, a message "Change mileages success!" appears.

- If the function executed unsuccessfully, a message "This feature is not supported for the vehicle!" appears.

### 3.4 Stop/Activate SBC

Use the **UP/DOWN** scroll button to select [**Stop/Activate SBC**] from **Special Function** (Figure 3.1), and then press ENTER.

### 3.5 AUDI O2 sensor service
Use the **UP/DOWN** scroll button to select [**AUDI O2 sensor service**] from **Special Function** (Figure 3.1), and then press ENTER. Use the **DOWN** scroll button to select the next page.
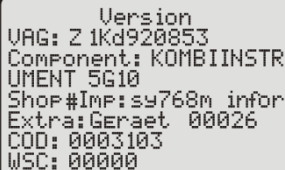
### 3.6  VW O2 Sensor service
Use the **UP/DOWN** scroll button to select [**VW O2 Sensor service**] from **Special Function** (Figure 3.1), and then press ENTER. Use the **DOWN** scroll button to select the next page.

*NOTE: MINI VAG505A and VAG50M is not support Function following. (3.7-3.8)*
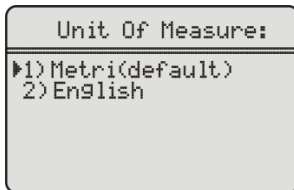
### 3.7 Throttle adjustment
1. Use the **UP/DOWN** scroll button to select [**Throttle adjustment**] from **Special Function** (Figure 3.1), and then press ENTER button.
2. If the scanner to successfully communicate with the car's ECU.

```
           Version
VAG: Z 1Kd920853
Component: KOMBIINSTR
UMENT 5G10
Shop#Imp:sy768m infor
Extra:Geraet  00026
COD: 0003103
WSC: 00000
```

3. Press ENTER button, the tool will list:
   Common models
   Special models

4. For example, we select "common models", a "Confirm: Battery voltage>11.5v. Without default codes. Coolant temperature 5-115 degC" message shows on the screen.
5. Press ENTER button
   • If failed, it shows as the following: a "This feature is not supported for the vehicle." message shows on the screen.

### 3.8 Tilt Angle sensor calibrate

1. Use the **UP/DOWN** scroll button to select [**Tilt Angle sensor calibrate**] from **Special Function** (Figure 3.1), and then press ENTER button.

2. If the scanner to successfully communicate with the car's ECU.

```
         Version
VAG: Z 1Kd920853
Component: KOMBIINSTR
UMENT 5G10
Shop#Imp:sy768m infor
Extra:Geraet  00026
COD: 0003103
WSC: 00000
```

3. Press ENTER button, the tool will list:
   Common models
   Special models

4. Press ENTER button
   If failed, it shows as the following: a "This feature is not supported for the vehicle." message shows on the screen.

## 4. Setting

Choose [setting] at the main menu. The screen will display as the following.

```
      System Setup:

▶1) Contrast Adjust
 2) Unit Of Measure
 3) Tool Self-test
 4) Beep Switch
```

**4.1** Choose [Contrast Adjust] at the main menu. Then press [ENTER]. The screen will display as the following.

```
       Contrast

Contrast(38%)
■■■■■■■■

Use ← or → to change
```

- Press left/right arrow to set and then press [ENTER] to confirm.

**4.2** Choose [Unit of measure] at the main menu. Then press [ENTER] button. The screen will display as the following.

21

```
     Unit Of Measure:
▶1)Metri(default)
 2)English
```
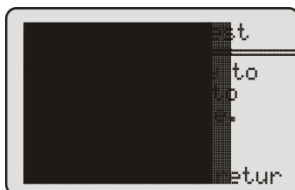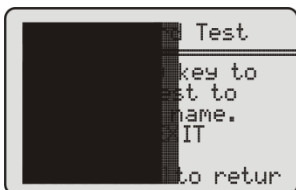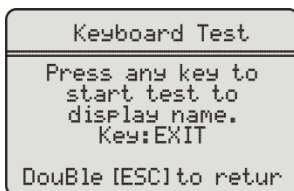
- Use the **UP/DOWN** scroll button to select, press ENTER button.

**4.3** Choose [Tool Self-test] at the menu. Then press [ENTER] button. The screen will display as the following.

```
     Tool Self-test:
▶1)Display Test
 2)Keyboard Test
```

**4.3.1** Choose [Display Test] at the main menu, Press [ENTER].The screen will display the following dynamic image.

```
┌──────────────┐   ┌──────────────┐
│        █ Test│   │            █st│
│         key to│   │            to│
│        st to │   │            █p│
│        name. │   │            █r│
│        █IT   │   │            █ │
│        to retur│ │            etur│
└──────────────┘   └──────────────┘
```

**4.3.2** Choose [Keypad Test] at the main menu. Press [ENTER]. The screen will display the following interface.

```
       Keyboard Test

     Press any key to
       start test to
       display name.
         Key:EXIT

   DouBle [ESC]to retur
```

- Press any key then the screen will flash due to corresponding to your cooperation. Double [Esc], you can withdraw from the testing.

# The use of upgrading software

# 1. Install hardware drive

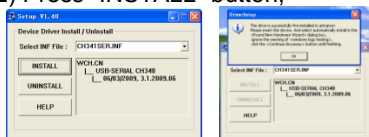Scanner connected to the computer via USB cable.



Visit our website: www.vehicletooltech.com, download the PC software, hardware driver and scanner new version diagnostic software and DTC library.
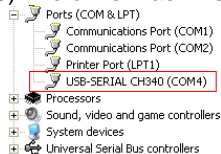
1) Install the driver. Open the file that you download, then run it.
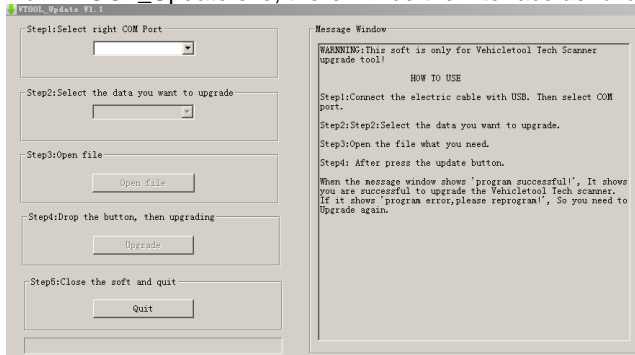
  CH341SER.EXE

2) Press "INSTALL" button,



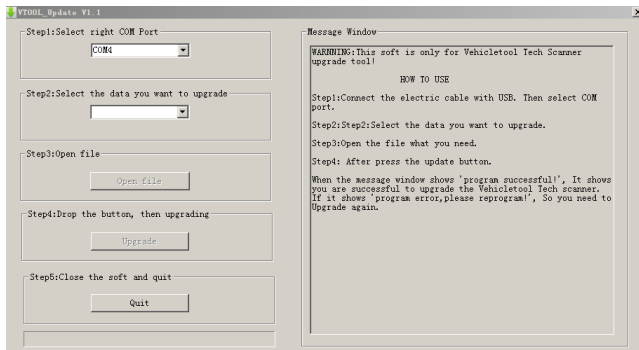3) The driver has finished being installed and can run now.
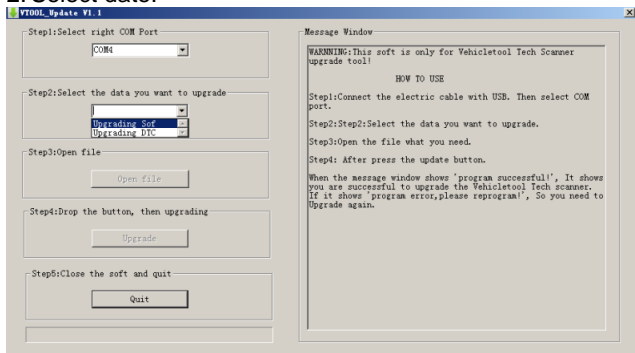


# 2. The use of upgrading software

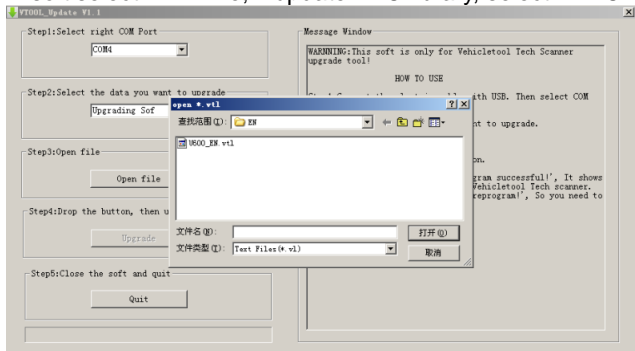Run VTOOL_Update.exe, there will be the interface as follows:



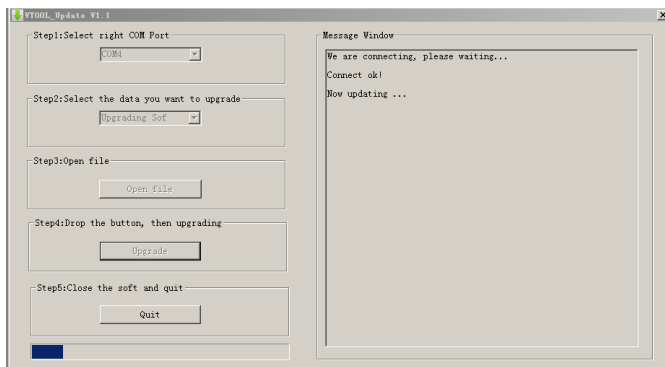1. Select the com port. Com port number please see page 22.

2. Select date.



3. Press "Open File" button, select the file for update. If update diagnostic soft select *.VTL file; if update DTC library, select *.DTC file.
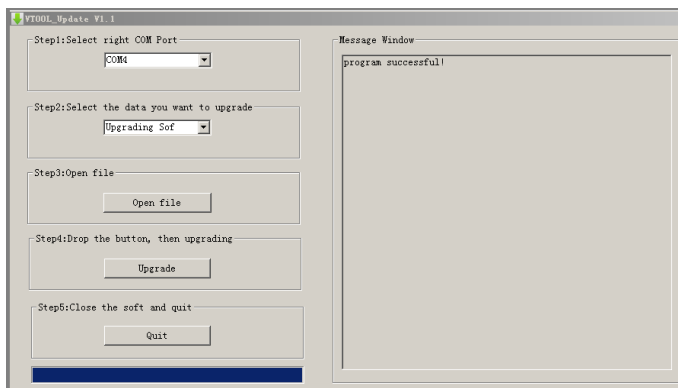


4. Press "upgrade", the scanner is trying to update. There will be the

interface as follows.



4-1 If the update is success, the blow interface will appear.



4-2 If the update failed, the "Program error, please reprogram!" message displays, this time requests to check whether the connection and the choice of COM mouth are right or not. Proceed as follows:
1) Disconnect and reconnect the scanner using the USB cable..
2) Check Device Manager in the "COM port and LPT" devices are not displayed correctly.
   Specified in the Device Manager brackets COM port must be the same COM has been selected in this update software.
3) Select the correct upgrade file (software or DTC).