



**ECOBAT**  
BATTERY TECHNOLOGIES

EBT 420 VALIDATION TOOL



**EBT420**  
**VALIDATION TOOL**  
**USER GUIDE**





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# 1 INTRODUCTION

## 1.1 TOOL DESCRIPTION

This section illustrates external features, ports and connectors of the tool.



**FIGURE 2-1 FRONT VIEW**

**1 Diagnostic Port** - provides between the vehicle and the tools.

**2 LCD Display** - Shows menu's, test results and operation tips.

**3 Function Keys** - (F1, F2, F3) - Three keys that correspond with different functions of the device. These can be used to carry out special commands and provide quick access to the most frequently used device functions.

**4 Direction Key** - select an option or scroll through a screen of data or text.

**5 ENTER Key** - Executes a selected option and generally goes to the next.

**6 Back Key** - Exits screen and generally returns to previous screen.

**7 HELP Key** - Displays helpful information.

**8 SD Car Port** - Hold the SD memory card for data backup and software update.

**9 USB Port** - Provides a USB connection between EBT420 and PC/laptop.

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### IMPORTANT

Do not use solvents such as alcohol to clean keypad or display. Use a mild nonabrasive detergent and a soft cotton cloth.

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## 1.2 ACCESSORY DESCRIPTIONS

This section lists the accessories that go with the tool. If you find any of the following items missing from your package, contact your local dealer for assistance.

1 **User's Guide** - provides operation instructions for the usage of the tool.

2 **USB cable** - provides connection between the tool and a computer for software update.

3 **Memory Card** - contains the tool's operating software and applications.

### IMPORTANT

Do not remove the memory card unless performing updates to the card.

4 **Diagnostic Cable** - connects the tool with diagnostic connector.

5 **Nylon Carry Pouch** - stores the tool and its accessories.

## 1.3 TECHNICAL SPECIFICATIONS

Display: Backlit, 240\*320 TFT color display  
Working Temperature: 0 to 60 °C (32 to 140 °F)  
Storage Temperature: -20 to 70 °C (-4 to 158 °F)  
Power Supply: 8-18V vehicle power, 3.3V USB power  
Dimensions (L\*W\*H): 200\*100\*38mm  
Weight: 1.0Kg



## 2 GETTING STARTED

This section describes how to provide power to the tool, provides a brief introduction of applications loaded on the tools, display screen layout and illustrates how to input text and numbers.

### 2.1 POWERING TOOL

Before using the tool, make sure there is power to it.

The unit operates on any of the following sources:

- 12-volt vehicle power
- USB connection to personal computer

#### 2.1.1 CONNECTING VEHICLE POWER

The tool powers on when connected to the data link connector (DLC).  
To connect to vehicle power:

1. Locate the data link connector (DLC). The DLC is generally located under the dash on the driver side of the vehicle.
2. Attach the diagnostic cable to the tool and tighten the captive screws to ensure a good connection.
3. Connect the data cable to the vehicle's DLC.
4. Switch the ignition key to the ON position.
5. The tool automatically boots up.

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#### IMPORTANT

Never try to provide power for the scan tool from USB connection when the scan tool is communicating with a vehicle.

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## 2.1.2 CONNECTING TO PC WITH USB CABLE

The scan tool also receives power through the USB port when it is connected to a PC for updating software and transferring saved files.

To connect to PC:

1. Insert the small end of the USB cable to the USB port at the right side of the tool and the large end to a computer.
2. Press the power switch of the scan tool to power it on.

## 2.2 APPLICATION OVERVIEW

When the scan tool boots up, the Home screen opens. This screen shows all applications loaded on the unit. Following applications are preloaded into the tool:

BRT

– leads to screens for battery replacement process.

Setup

– leads to screens for adjusting default settings to meet your own preference and view information about the tool.

Playback

– leads to screens for access to saved data files.

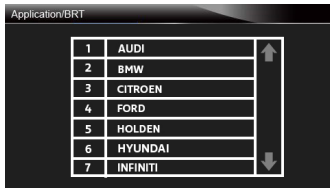




### 3 BRT OPERATIONS

This section illustrates how to use the tool to validate a new battery, how to clear faults from the dashboard and display current battery details for vehicles.

1. Replace the old battery with the new one, ensuring the key is not in the ignition.
2. Connect EBT420 to the vehicle's 16 pin Data Link Connector (DLC) with the diagnostic cable.
3. Boost the device and select BRT, the following screen will display with all the vehicle makes available. Scroll with the arrow keys to highlight the vehicle make press the **ENTER** key to start.



#### NOTE

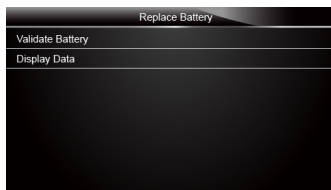
Not all steps listed above are applicable to all vehicles. The procedure may vary by the year, model and make of the test vehicle.

### 3.1 AUDI/SKODA/SEAT/VW OPERATION

1. Follow the on screen instruction step by step to enable the device to communicate with the ECU.



2. The following Replace Battery menu will display when the vehicle model is selected correctly.

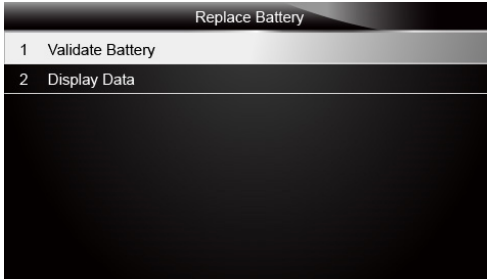




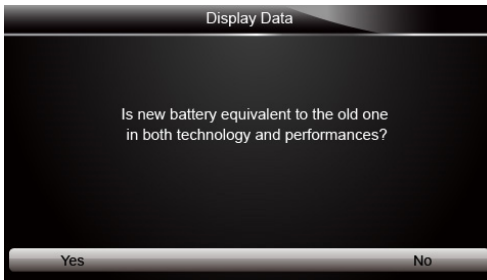
### 3.1.1 VALIDATE BATTERY

The validate battery menu enables you to recode the new battery to the vehicle ECU and to turn off the dashboard warning lights.

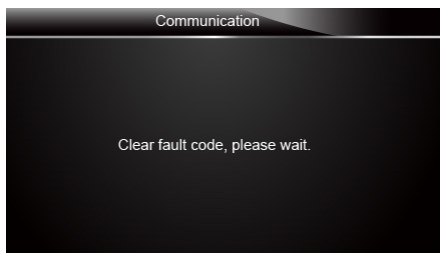
1. Scroll with the arrow keys to highlight Validate menu and press ENTER to start.



2. The following Display Data menu will display when the vehicle model is selected correctly.



3. The device communicates with the vehicle and will clear the current stored DTCs from the battery system.







- When the codes are cleared, the following battery manufacturer list displays. Use the up and down arrow keys to highlight the new battery brand and press **ENTER** to confirm.

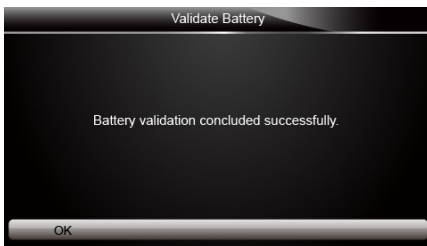


- You are required to enter the current date and time, at which the battery is changed. Please press **F2** key to bring up the keyboard. Scroll with the arrow keys to highlight your desired number and press **ENTER** to confirm.

(Date/time format: YYYY/MM/DD/HH/MM)



- When the battery validation procedure is completed, the following screen displays. Please press **F1** to confirm.



**NOTE**

Not all steps listed above are applicable to all vehicles. The procedure may vary by the year, model and make of the vehicle.

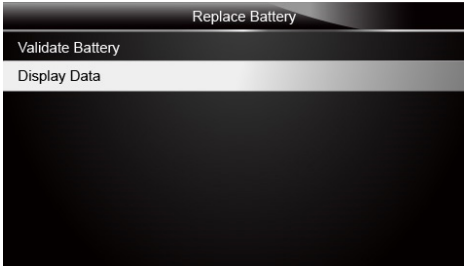




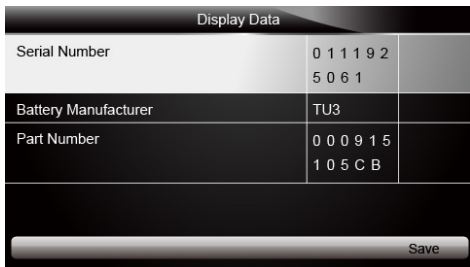
### 3.1.2 DISPLAY DATA

The Display data function enables you to check the battery information or the replacement record.

1. Use the up and down arrow keys to highlight Display Data in the main menu and press **ENTER** to start



2. The following screen displays the battery manufacturer, serial number, and part number.





## 3.2 CITROEN/PEUGEOT OPERATIONS

1. Follow the on screen submenu to select Vehicle Model, Fuel, Year and System step by step.



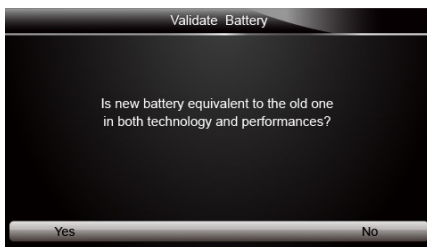
### NOTE

Not all steps listed above are applicable to all vehicles. The procedure may vary by the year, model and make of the vehicle.

2. The following Identification screen will display, showing the part number of the new battery. If no part number shows, please check the connection.

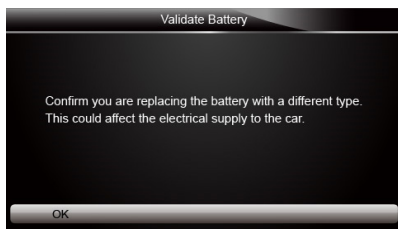


3. Follow the on screen instructions to answer the question and continue the procedure.



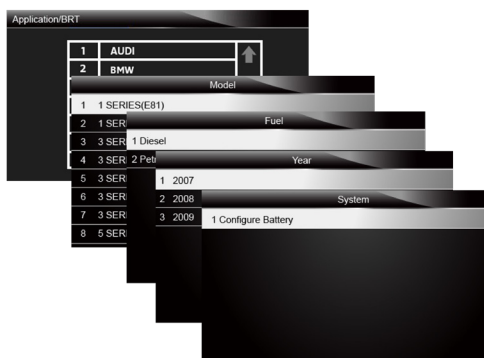


- When the battery validation procedure is completed, the following screen displays. Please press F1 to confirm.



### 3.3 BMW/VOLVO OPERATIONS

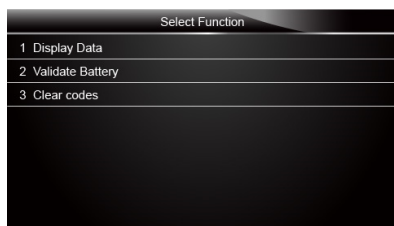
- Follow the on screen submenu to select Vehicle Model, Fuel, Year and System step by step.



#### NOTE

Not all steps listed above are applicable to all vehicles. The procedure may vary by the year, model and make of the vehicle.

- The following Select Function menu will display when the vehicle model is selected correctly.

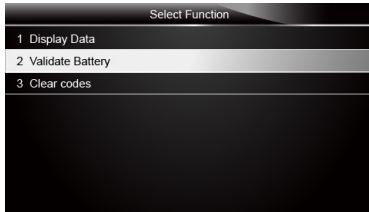




### 3.3.1 VALIDATE BATTERY

The validate battery function enables you to recode the new battery to the vehicle ECU and to turn off dashboard warning lights.

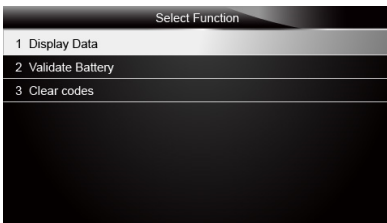
1. Scroll with the arrow keys to highlight Validate Battery and press **ENTER** to start.



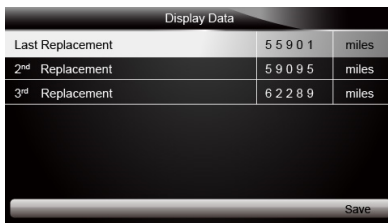
### 3.3.2 DISPLAY DATA

The Display data menu enables you to check the battery information or battery replacement record of the vehicle.

1. Use the up and down arrow keys to highlight Display Data on the main menu and press **ENTER** to start.



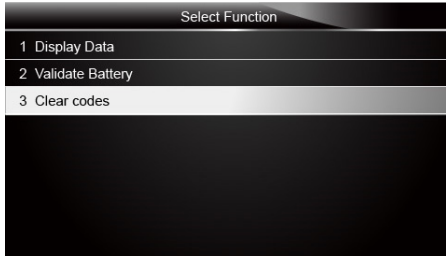
2. The following screen displays with battery manufacturer, serial number, part number, battery voltage, the last replacement days or the battery replacement records (not all items listed here display, it varies by different car make).



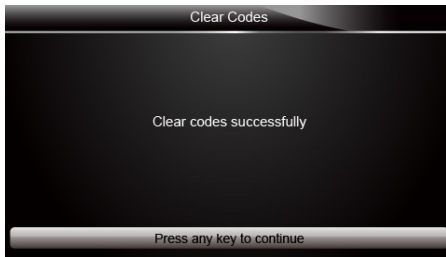


### 3.3.3 CLEAR CODES

1. Scroll with the arrow keys to highlight Clear Codes and press **ENTER** to start.



2. The following screen displays when the fault codes cleared successfully.



## 4 SYSTEM SETUP

This section illustrates how to program the tool to meet your specific needs.

When Setup application is selected, a menu with available service options displays. Menu options typically include:

- Language
- Unit
- Beep Set
- Key Test
- LCD Test
- About
- Shortcuts





## 4.1 SELECT LANGUAGE

Selecting Language opens a screen that allows you to choose system language. The scan tool is set to display English menus by default.

To configure system language:

1. Scroll with the arrow keys to highlight Language from Setup menu and press the **ENTER** key.



2. Press the LEFT/RIGHT arrow key select a language and press the **ENTER** key to confirm. Press the Back key to exit and return.



## 4.2 CHANGE UNITS

Selecting Unit opens a dialogue box that allows you to choose between US customary or metric units of measure.

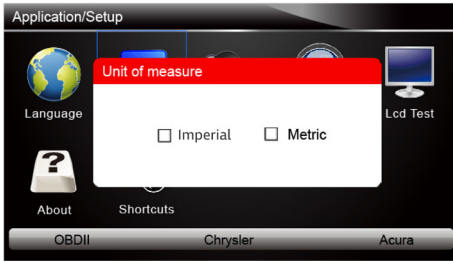
To change the unit setup:

1. Scroll with the arrow keys to highlight Units from Setup menu and press the **ENTER** key.





2. Press the LEFT/RIGHT arrow key select an item and press the **ENTER** key to save and return.



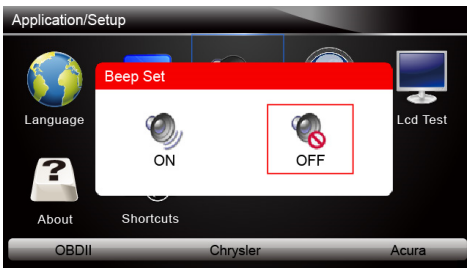
## 4.3 CONFIGURE BEEPER

Selecting Beep set opens a dialogue box that allows you to turn on/off the beeper:

1. Scroll with the arrow keys to highlight Beep Set from Setup menu and press the **ENTER** key.



2. Press the LEFT/RIGHT arrow key select an item and press the **ENTER** key to save and return.







## 4.4 TEST KEYPAD

Selecting Key Test option opens a screen that allows you to check the functionality of the keypad.  
To test the keypad:

1. Scroll with the arrow keys to highlight Key Test from Setup menu and press the **ENTER** key.



2. Press any key to start test. The virtue key corresponding with the key you pressed will be high lighted on the screen if it works correctly.



3. To quit the test, click the F2 function key twice.

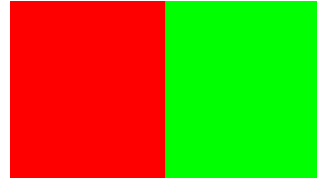




## 4.5 LCD KEYPAD

Selecting LCD Test option opens a screen that allows you to check the functionality of the display. To test the display:

1. Scroll with the arrow keys to highlight LCD Test from Setup menu and press the **ENTER** key to start test. Check if there are any missing spots in the LCD screen.



2. To quit the test, press the **Back** key.

## 4.6 TOOL INFORMATION

Selecting About option opens a screen that show information about your scan tool, such as serial number and register password which may be required for product registration.

To view information of your scan tool:

1. Scroll with the arrow keys to highlight **About** from Setup menu and press the **ENTER** key



2. A screen with detailed information of the tool displays



3. Press the Back key to exit and return to the Setup menu.





## 4.7 CONFIGURE SHORTCUT KEYS

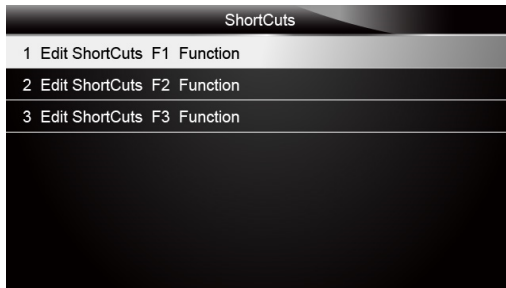
Selecting the shortcuts option allows you to change the functionality the shortcut buttons.

To assign a function to a shortcut button:

1. Scroll with the arrow keys to highlight Shortcuts from Setup menu and press the ENTER key. A screen with available shortcut keys displays.



2. Press the **UP/DOWN** arrow key select a shortcut key and press the **ENTER** key. A screen with a list of loaded applications displays.



3. Scroll with the **UP/DOWN** arrow keys to highlight an application and press the **ENTER** key to assign the application to the shortcut key. Press any key to exit.






## 5 UPDATE

The scanner can be updated to keep you current with the latest vehicle developments. This section illustrates how to register and update your scan tool.

To update your scanner, please follow the three steps as below:

- Step 1: Obtain an Ecobat ID.
- Step 2: Register the product with the product serial number and product password.
- Step 3: Update the product by using the update application ecobat scanner.

### 5.1 CREATE AN ECOBAT ID

1. Visit our site [www.ecobat.tech/brands/onebox](http://www.ecobat.tech/brands/onebox), find your product model and click it to view the product profile. Select Download tab to download the PC application file.
2. Unzip the application file. Follow instructions on your computer screen to install the application and driver.
3. Double click the desktop icon  to launch the application.

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4. Click Register button, a Register window will pop up.

**ECOBAT SCANNER**

**Register**

- User Name  (Less than 30 characters)
- Password  (6-16 characters)
- Confirm Password  (The passwords must match.)
- First Name
- Middle Name
- Last Name
- Email
- Telephone  (Numbers only)
- Address
- Country
- State/Province
- City
- Zip Code

By creating an account, you agree to Foxwell's conditions of use and privacy notice.

5. Create an unique user ID and password, complete the following registration form and click Register to confirm.

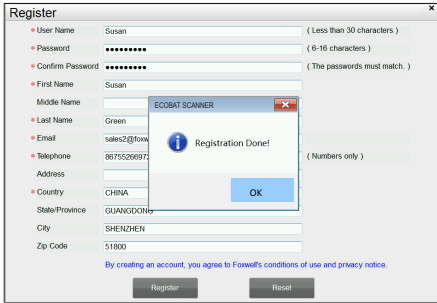
**Register**

- User Name  (Less than 30 characters)
- Password  (6-16 characters)
- Confirm Password  (The passwords must match.)
- First Name
- Middle Name
- Last Name
- Email
- Telephone  (Numbers only)
- Address
- Country
- State/Province
- City
- Zip Code

By creating an account, you agree to Foxwell's conditions of use and privacy notice.



6. A Registration Done message will appear if you registered successfully and an email will be sent to your registered email address containing a link with which you can activate the Foxwell ID. Please log in to your email and activate the account.



7. Clicking OK reverts back to the log in page, where you can input your Ecobat ID and password to sign in.

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## 5.2 REGISTER WITH ECOBAT SCANNER

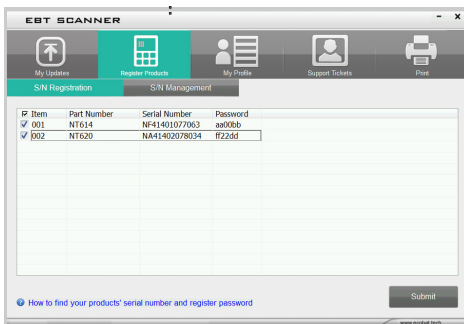
To register with Ecobat Scanner:

1. Launch the PC application Ecobat Scanner. Log in with your Ecobat ID / register email and password



2. Please select Register Products to register it. Select the right part number, input serial number and password to complete product registration. If you have multiple scanners to be registered, please enter all serial numbers you wish to register and then click Submit to register them together.

Registration Screen






## 5.3 UPDATE THE SCANNER

To update scanner, you need the following tools:

- The scan tool
- PC application Ecobat Scanner
- PC or laptop with USB ports/SD port and Internet explorer
- Internet service
- SD card reader (unnecessary if there is SD port in your PC)

To be able to use the update tool, your PC or laptop must meet the following minimum requirements:

- Operation System: Win98/NT, Win ME, Win2000, Win XP, VISTA and Windows 7.
- CPU: Intel PIII or better
- RAM: 64MB or better
- Hard Disk Space: 30MB or better
- Display: 800\*600 pixel, 16 byte true color display or better
- Internet Explorer 4.0 or newer

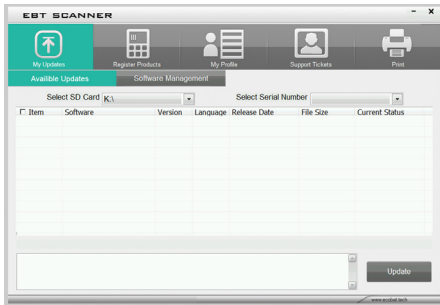
1. Double click the desktop icon  to launch the application.
2. Remove the SD card from the scanner, put it into the card reader and plug the reader into the computer. Or just plug it into the SD port if there is SD port in your computer.
3. Log in with your Ecobat ID and password.

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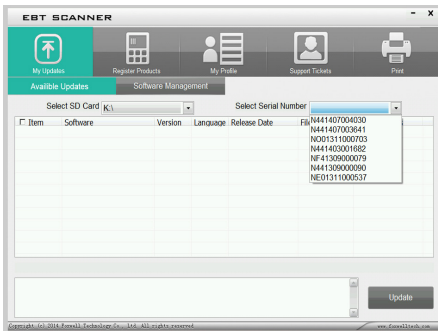




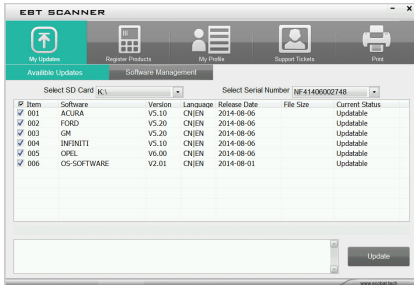
- Click **My Updates-> Available Updates** and all updates applicable to your scanner display.



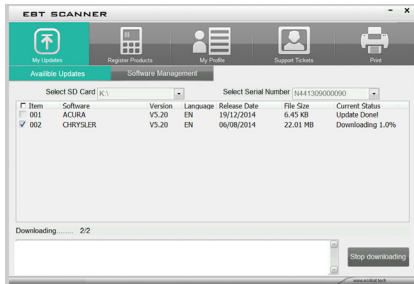
- In case you formatted your SD card or want to install the updates in an empty memory card, select the right serial number. Please make sure the serial number you selected matches the device you are going to update.



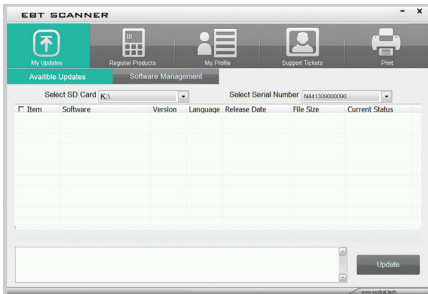
- Click the check box(es) in front of the software(s) you wish to update and then click the Update button to download.



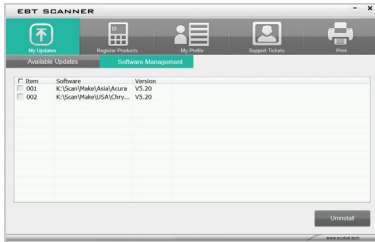
- When Update button is clicked, it begins to download. And you can check the **Current Status**. If the Current Status shows Downloading, please do not close the update application.



- When all the items are updated, an "Update Done!" message displays and the Available Update items will be blank.



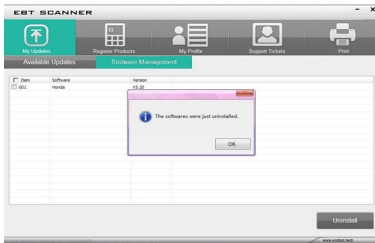
- Please click Software Management to review all the updated software.



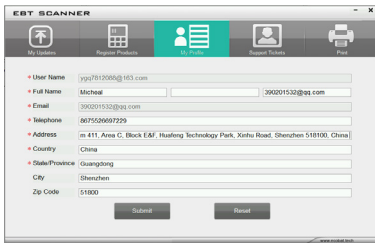
**NOTE**

If "Update Failed" dialogue comes up, it indicates that the software updates failed. Please check the network connection or SD card. If the problem still exists, please email [support@oneboxsupport.tech](mailto:support@oneboxsupport.tech) or you local dealer for assistance.

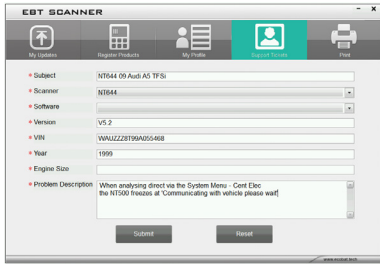
- To uninstall a software or all software select them and click the Uninstall button. And the uninstalled items can be found in the **Updates** screen.



- Please click **My Profile** to view your personal information. To modify your personal information, just type in the message box and click Submit. To help us provide better service please make sure that the telephone, email and country are correctly entered.



- Should you have any questions regarding the product ,please click **Support Tickets**, fill in all required information and click **Submit** to send us your issue.



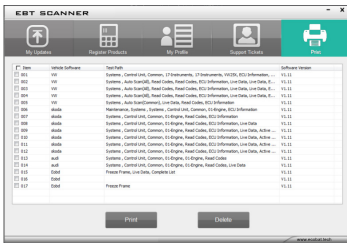
## 6 PRINT TEST RESULTS

### 6.1 ONLINE PRINTING

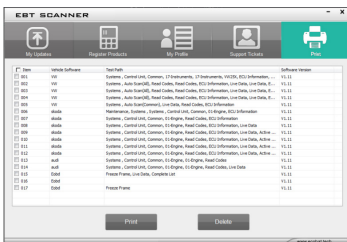
Vehicle test results stored in the SD card can be printed through computer.

To print test results through computer in online mode:


- Insert the SD card into the computer.
- Launch the Ecobat Scanner and log in with your Ecobat ID.
- Click Print to view all stored test results.



- Click the check(s) in front of each line and click Print.



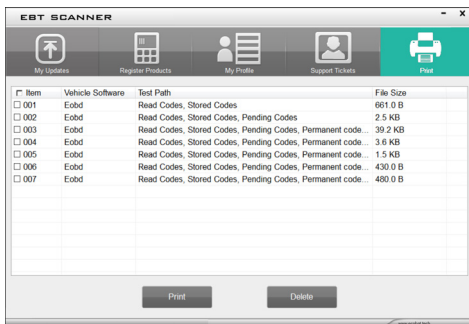
## 6.2 OFFLINE PRINTING

1. Insert the SD card into the computer.
2. Double click the desktop icon  to launch the application.
3. Click the offline mode directly, no need to log in.

### ECOBAT BATTERY TECHNOLOGIES ONE BOX

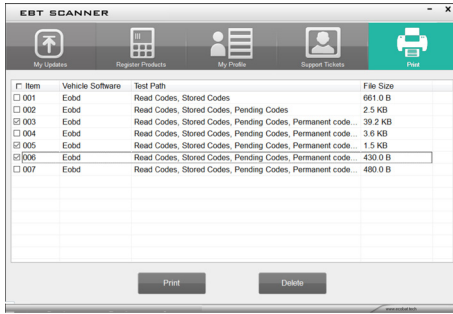


4. Click Print to view all the stored test results.





5. Click the check(s) in front of each line and click **Print**, test result will be printed out.







# Equipment Land.

