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-This device is produced for assisting automotive locksmiths.

-Before using device, read the user manual carefully.

-Avoid strokes to device and accessories.

-Avoid device and accessories contacting with water and conductive liquids.

-Use only original accessories.

-After using device unplug power adapter.

-Do not use device under high electromagnetic field.

-Use the device in a sturdy, dust-free, well-ventilated place.

-Updated user manuals can be downloaded from web page.

MAINTENANCE AND CLEANING 2

-After using device, unplug all accessories and keep them in the package.

-Do not place heavy materials on the package.

-Keep package in room conditions.

-Clean the device with soft and dry piece of cloth.

-If a problem occurs do not disassemble the device. Contact your local distributor or device manufacturer.

ACCESSORRIES 3

Complete package

Zed-BULL security login card

PC Usb cable

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Power Adapter

Lighter Adapter

Transponder box

SPECIFICATIONS	4

DIMENSIONS	4.1

Width	=	285 mm
Height	=	285 mm
Depth	=	105 mm
Weight	=	0,6 kg
External Power Supply		100/250 V – 50/60Hz AC
Current	=	117 mA
Power consumption	$\cong$	1,05 Watt
Adapter Type		9-12 V DC

TECHNICAL DETAILS	4.2

Transponder Frequencies		125 Khz -134 Khz
Communication Interface		USB and Serial Port
Temperature range	$\cong$	-5 C to 40C

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Zed-BULL is a friendly automotive locksmithing tool, it has been developed for all range of automotive locksmiths from beginners to advanced. It's ease in use, technical support and unique properties makes it a powerfull device in the market.

Let's take a look what Zed-BULL can do.

It can identify all transponders used in autmotive industry, copy all fixed coded transponders, copy some of 40, all 41, all 42, unlocked 44(VAG), all 45 and all 4D transponders.

Also it can copy all type of Texas 4C transponders to batteryless TPX1 transponder.

It can prepare transponder from EEPROM or MCU datas of car which directly starts car or ready to match with diagnostic devices.

It can calculate pin codes from EEPROM, MCU, VIN number or key data of the car for some car models.

Device is supported with PC software, which you can find usefull informations about transponders and matching car models and remote programming procedures. Storing unlimited(limited with Pc harddrive capacity) customer information to database is another advantage of Zed-BULL PC Software.

Zed-BULL PC Software also has all functionalities of the device itself such as reading, identifying and writing to transponder.

Zed-BULL PC Software is capable of reading and writing to new generation Philips Hitag 2 crypto transponders.

One of the most usefull property of the PC Software is transponder production property. User can prepare their own transponders such as; 11, 12, 13, 4C, 33, 40, 41, 42, 44 VAG, 44 Mitsubishi, 45, 46, 61, 62, 65 and 73 for diagnostic devices.

There are 2 types of tokens, one token is device token, which is free of charge and the other one is Pc token which is used for Eeprom & Mcu applications and transponder production applications(with charge).when device is turned on, before logging in number of tokens, 16 digit device serial number, device software version, device applications information (ZB:refers to Zed-BULL which is consisted of transponder cloning functions, ZBE:refers to Zed-BULL + Eeprom and MCU application, ZBET:refers to Zed-BULL + Eeprom & Mcu Application + transponder production) are displayed on the
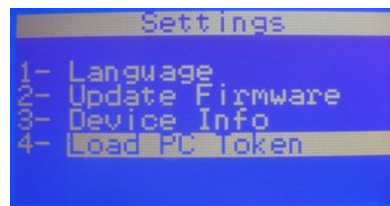
Zed-BULL screen.

> S.NO:3365BF6F010000FA
>
> VERS:04.01-ZBET
> Device Token :609
> PC Token   :184
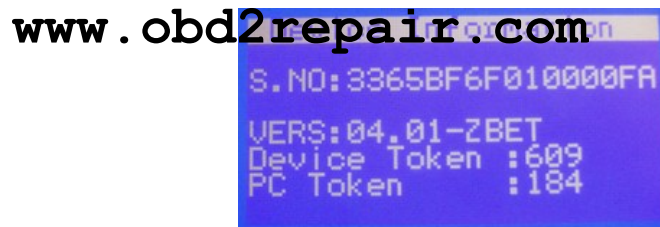
User should contact local distributor for both device and Pc token. Tokens are loaded as in the steps below.

1.Choose 5th choice(settings) in the main menu.

> MENU
>
> 1- Read & Identify
> 2- Clone Chip
> 3- Manual Programming
> 4- Test
> 5- Settings

2.Choose 4th choice(Load PC token) in the settings sub menu.

> Settings
>
> 1- Language
> 2- Update Firmware
> 3- Device Info
> 4- Load PC Token

3.Device will give Outcode, outcode should be given to local distributor, Local distributor will give user In code, this In code should be entered carefully and correctly to the device, if 5 times repeatedly In code is entered wrong, device will want new In code. If In code is entered correctly tokens will be loaded to the device.

> Loading Token
>
> OUTCODE:
>   3932653375ADA6AD
>   C7D11EBD11352CB2
> INCODE:
> ↑↓0000000000000000
>   0000000000000000
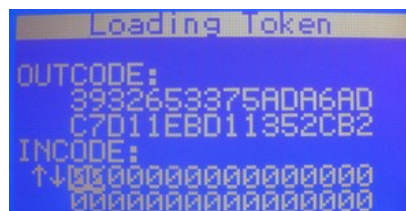
All connections of Zed-BULL are shown in the picture below.
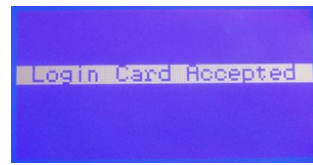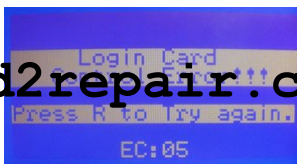

After Power switch of the Zed-BULL is turned on, user should put the Security login card on the antenna. Unless Security login card is put on the antenna at start up, the Zed-BULL functions won't work, Pressing button "R" allows to try logging in again. The Security login card is put on the antenna as in the picture below;
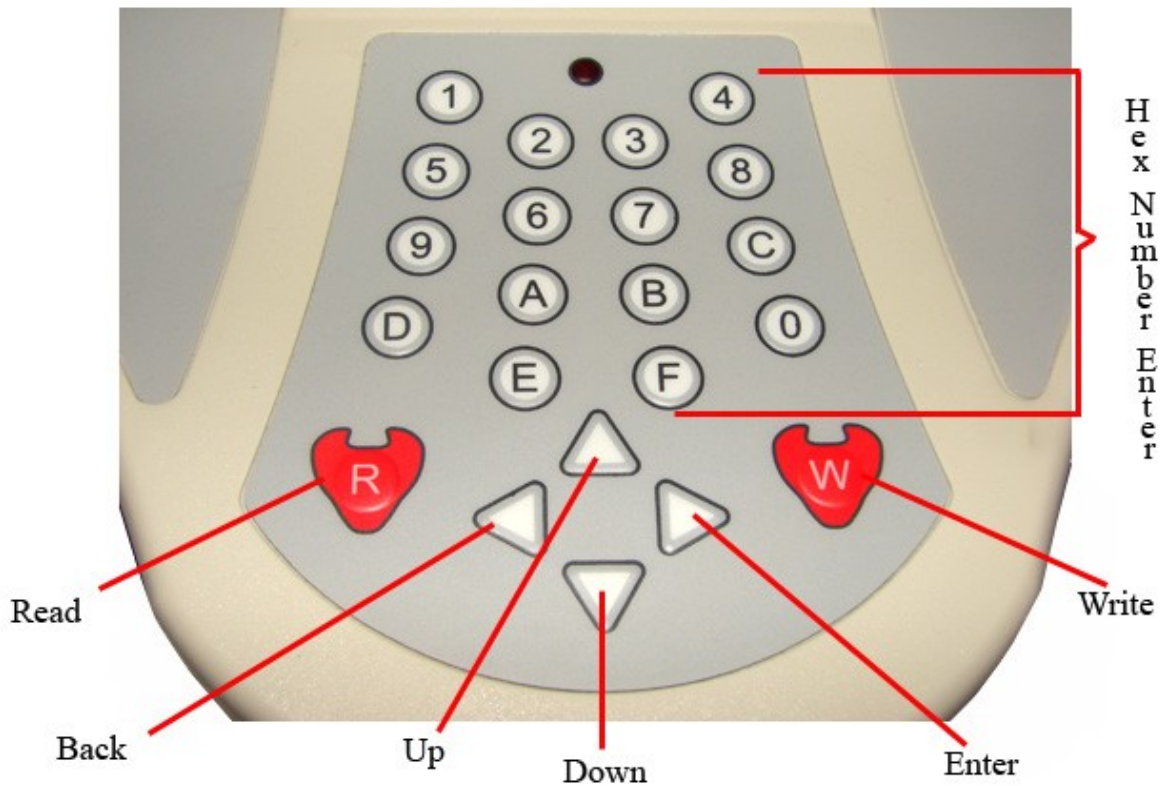
Screen at start up   Screen at login card error   Screen at successfull login

If user looses or has problem with security login card, local distributor should be contacted immediately.

Functions of the key pad buttons are described in the figure below.

All the functionalities of Zed-BULL such as, transponder identification, transponder cloning, transponder production, Eeprom and Mcu applications, Pc Software are upgradable, it is possible to improve fuctionalities of Zed-BULL with new developed technologies.

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This menu is used for reading and identifying transponder. Transponder ID, transponder logic, lock status and car type for some models are displayed on the Zed-BULL screen. Also for Renault 33 transponders, pin-code of the car is diplayed.

Usage:

Insert customer key to the Zed-BULL antena and Press "R" button on Zed-BULL keypad or use up and down arrow to highlight choice 1 on main menu and press enter(right arrow).

An important point is; while reading the transponder, It should be put on the antenna perpendicular. See pictures below.

Zed-Bull screen displays of some of identified transponders are as below.

DATA:5F00000007E2A67D

TYPE:11 TEMIC WR

DATA:3E8199C1A3A3261D

TYPE:12 TEMIC WR

DATA:FF81344CCAE7E31E

TYPE:13 MEGAMOS WR
Opel Frontera
Master Key

DATA:300700FCC001E007
0EE038F003FF0F1C

TYPE:33 GM WR

DATA:7EA5E077C0000000
0068D17E0000

TYPE:4C TEXAS WR

DATA:00008003D89D0515
781348C2B7480000

TYPE:73 MTSB WR

DATA:30C78103F87F0007
0EFCF8F1E3FF0F1C

TYPE:40 CRYPTO

DATA:4141CCBA1A88969E
BC40B1B3D26B90B8

TYPE:41 PRECODED CHIP

DATA:3038FEE3FFFF1FFF
FF1F00FE03000000

TYPE:42 CRYPTO VAG WR

OBD programmable

DATA:000080026ECAD84F
422B4B5043BC0000

TYPE:44 MITSB OBD

OBD programmable

DATA:FFFFFFFFFF30C22F
12732FFFFFFFFFFFF

TYPE:45 CRYPTO PEU WR

PRESS B FOR PIN CODE

ID :DEFA8619

TYPE:46 CRYPT Philips

Hyndai,Kia,Ctroen,Peu

CHIP:PCF7936
MODE:Password-Mnchstr

ID :D4426355
UM1 :AA0F8765
UM2 :AAAAAAAAAAAAAAAA

TYPE:48 CRYPT Megamos

Magic II

FF 00 3E325311 **L*

TYPE:4D 60 CRYPTO WR

Rs1:AF5A1B Rs2:4224A6

---

19 00 4B183711 L*LL

TYPE:4D 61 CRYPTO WR

Mitsubishi

Rs1:AF5A1B Rs2:4224A6

FF 00 4B25CF11 L*L*

TYPE:4D 62 CRYPTO WR

Mitsubishi - Subaru

Rs1:AF5A1B Rs2:4224A6

---

04 00 01AB6E01 **L*

TYPE:4D 63 CRYPTO WR

Ford (Fiesta-Fusion)

Rs1:3DEB3A Rs2:9D7848

FF 00 3854F311 **L*

TYPE:4D 64 CRYPTO WR

Chrysler - Ren.Megane

Rs1:1B91A6 Rs2:7FDAF3

F9 00 4B26B311 L*L*

TYPE:4D 65 CRYPTO WR

Suzuki

Rs1:AF5A1B Rs2:4224A6

---

32 03 946A2F0C LLLL

TYPE:4D 67 CRYPTO WR

Toyota Master Key

Rs1:70974E Rs2:591B34

DATA:5555555555555655
5555555555555555

TYPE:PCF7935

8

This menu is used for cloning transponders.

Usage:

Insert customer key to the Zed-BULL antenna and highlight choice 2(Clone chip) on main menu and press enter(right arrow).

press "R" button on Zed-BULL keypad, transponder details will be displayed on the screen,

after this step press button "W". If there is more than 1 choice for the transponder type to write onto, suitable transponders to write onto will be displayed on the Zed-BULL screen, remove customer key from antenna and insert suitable transponder. Select the transponder type by pressing the listed numbers on the display.

After transponder type is selected and enter button is pressed the following expressions will be seen on Zed-BULL screen.


transponder cloning process is completed. If transponder must be cloned with PC software , "Copy with PC Software" expression is displayed on the screen. All 4D transponders are cloned to Silca Electronic Heads (EH2)with Zed-BULL 4D client PC software.

Copying 4D transponders is possible only with Zed-BULL Client PC Software.

User must connect to server to copy 4D transponders. Zed-BULL PC Software connects to the server and gets necessary datas to write on to electronic key. User should choose correct communication port, car manufacturer, car model and model year, if these informations are not selected correctly, copy operation will be successfull but in order to reduce the copying process time, these informations should be selected correctly.

After informations are selected, copy button is pressed, server will give approximate time for copy process, when user confirm the given time copying process will start. If user wants to end process before it is completed "Disconnect" button should be pressed. After server makes the calculation "write" button is pressed to write the datas to electronic head. Copying process is completed.

Note:To copy 4D transponders user should use a PC which has internet connection.
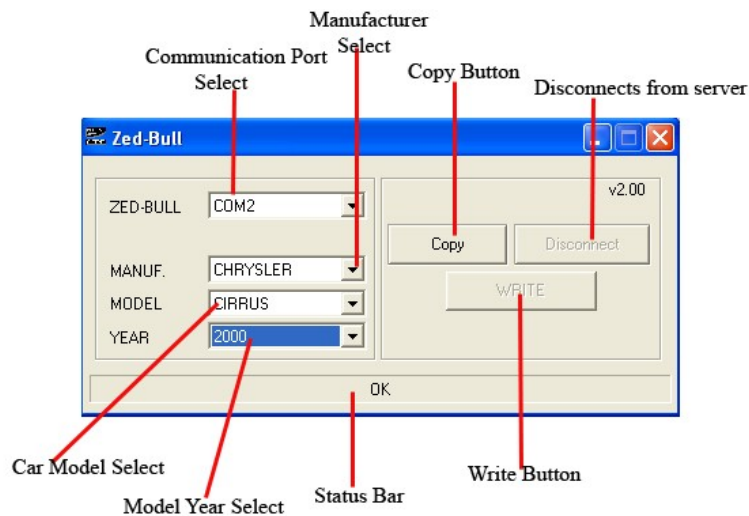
TYPING TRANSPONDER DATA MANUALLY   6.3

If customer transponder data is present, it is possible to type these datas manually using Zed-BULL keypad. This transponder is ready to start the car.

In main menu highlight choice 3 using up and down arrows and press enter(right arrow). Type of transponder will be asked to user. Using up and down arrows choose transponder type that you want to write data. Press enter(right arrow), using key pad type the datas manually and press enter(right arrow). Use up and down arrows to choose the type of transponder that the datas will be written into. Finally press "W" button to write datas to the transponder.

An important point is that the data entered manually, must include valid information for the 11, 12, 13 and 4C type transponders. Before writing process starts, Zed-BULL checks the validity of the data and informs the user if the data is non-valid.
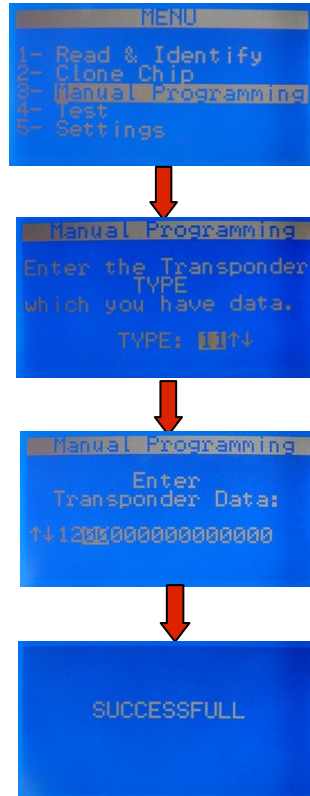
For example:

ID 11 : should have at least 1 "5F" byte in data string.

ID 12 : should have at least 1 "C1" byte in data string.

ID 13 : should have at least "1111 1111 xxxx xxx1" bit string in data string.

ID 4C : Crc calculation must be valid for the data string.

TESTING   6.4

This menu is used for checking whether key has a working transponder inside or not.

Usage:

Highlight choice 4 using up and down arrows and press enter(right arrow). When there is transponder inside the key "TRANSPONDER" expression will be displayed on Zed-BULL screen, if there is no transponder inside the key only "TEST" expression will be displayed on the screen for some seconds and main menu will be displayed back.

SETTINGS   6.5

This menu is used for choosing device language, updating device, getting device info and loading Pc token.

Usage:

Highlight choice 5 using up and down arrow and press enter(right arrow), for language selection highlight choice 1 and press enter(right arrow), language options will be displayed on the screen. Highlight your language using up and down arrows and press enter(right arrow) selected language choice is now activated. Use exit button(left arrow) to return back to main menu.

Updating Firmware: When user wants to update device this choice should be selected. The loader version and the serial number is displayed on the screen. Detailed information of firmware update is described in the Pc software settings sub menu.

Loading Pc Token: Load Pc Token sub menu should be choosed in settings menu. In main menu highlight 5th choice(settings) using up and down arrow and press enter(right arrow), highlight choice 4(Load Pc token) and press enter(right arrow).

The device will give an outcode, user should give this outcode to the local distributor, Local distributor will give user an in code. User should enter the in code carefully and correctly. At most 4 times user can enter wrong in code, for the fifth time if wrong incode is entered system will refresh the outcode and realting to this, incode will be refreshed, previous in code will not be used.

OVERVIEW OF PC SOFTWARE   7

Zed-BULL PC software is used for EEPROM and MCU applications, transponder production, Hitag 2 reading and writing, storing customer information, getting informations about transponders and matching car models, key-fob programming procedures, distributor contact details.

Transponder reading and writing can be both done with or without PC software. **www.obd2repair.com**
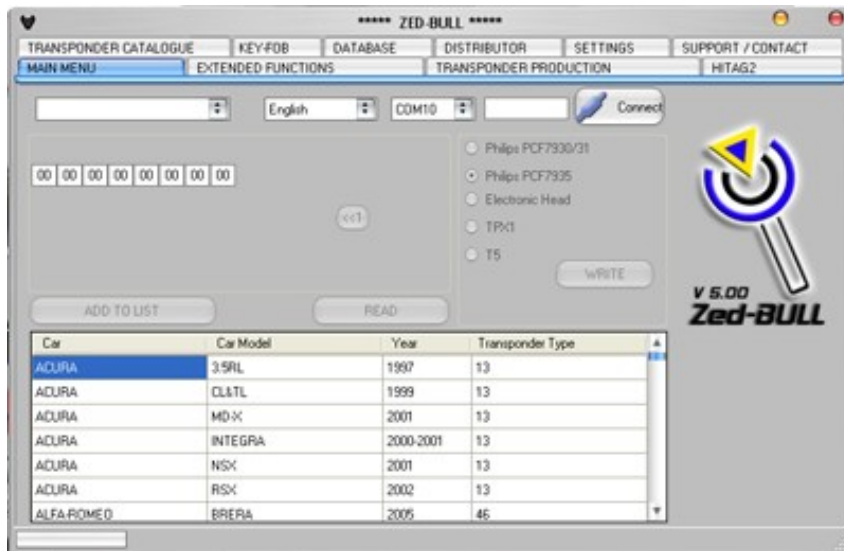
Software Setup:

Double click on the setup.exe icon and install the software. After installing software, with the USB cable given, connect Zed-BULL to PC using any of the USB ports. Click on Zed-BULL.exe to run the software.

Note: to use the software .NET framework(minimum version 2.0) should be installed in your PC.

MAIN MENU   7.1

In this menu all settings must be done correctly in order to use the software. Choose language and com port. To learn which com port you are using, right click on My Computer, click on properties, click on hardware, click on device manager, and finally click on the ports choice. The communication port that you are using will be displayed on that menu.

After choosing correct com port, click on connect button, if connection fails, an error message will be displayed, if connection is succesfull all buttons will be active.

In main menu window, normal read write operations are done, when "READ" button is clicked, the transponder identification is displayed on the software window.

Writing to transponder is done in 2 steps; first the transponder type to write onto is choosen later "WRITE" button is clicked.

Transponder informations are added to database after clicking on "ADD TO LIST" button.

On bottom left side status bar gives information about the existing process. When process is completed the bar becomes totally blue.
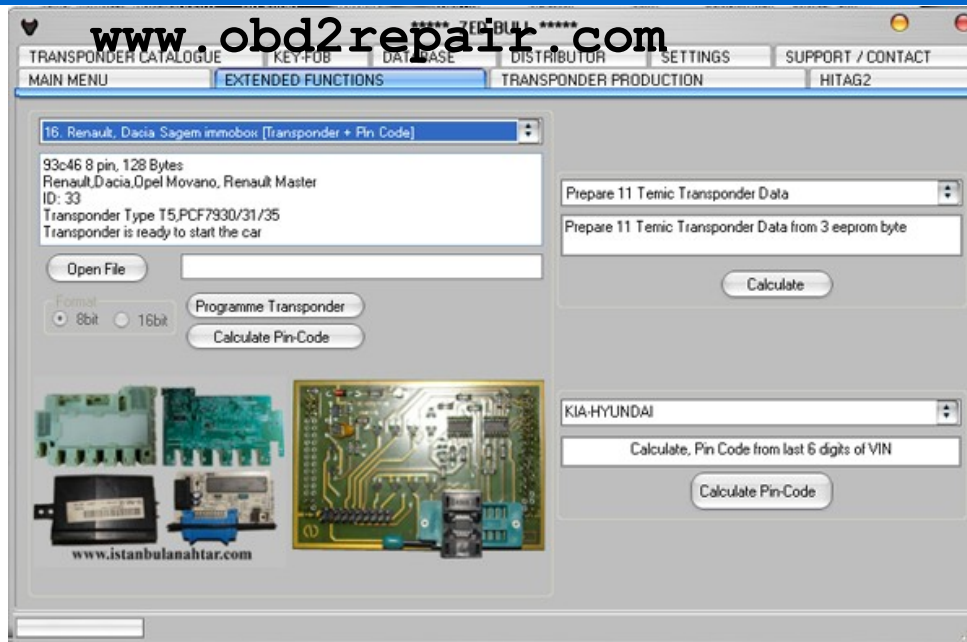
Left side of the window is reserved for EEPROM and MCU applications. Picture of the immobox and suitable adapter of the IC programmer is displayed on left bottom side. Details of the selected module is displayed on the text box just below the selected module. When IC programmer adapter picture or immobox picture is clicked bigger picture of each is displayed on another window, the IC that must be removed from board is marked with red buble. See the pictures below.

The EEPROM or MCU of the selected module is read with IC Programmer. File with ".bin" extension is selected using open file button from the exact location of the file in PC hard drive. After choosing the correct file choose the format correctly, if the output file of the IC programmer is 8 bits use 8 bit format, if the output file of the IC programmer is 16 bits use 16 bit format. Choosing wrong format will cause corrupted data and calculated datas will be wrong. To programme transponder, place the correct transponder to the Zed-BULL antenna and click on button "programme transponder"

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The Eeprom & Mcu application list is as below. As long as new solutions are obtained number of the aaplications will be increased soon, new applications will be added to software with new updates.

Eeprom & Mcu applications have token system, for each application 1 token is needed.

Car	ID	Immo box	Pin code	Transponder for diagnostic	Transponder to start car
Opel	40	siemens	√		√
Vw, seat	42	Siemens immo 2	√		√
Vw, seat	44	Valeo immo 3	√		√
Fiat, lancia,citroen, peugeot	13	delphi			√
Alfa romeo, iveco	33	Bosch code 1			√
Honda, acura	13	megamos			√
Honda, rover	33	valeo			√
Fiat, lancia	11	Immo 001.01 marelli			√
Fiat, lancia	11	Immo 110.01 marelli			√
Mercedes sprinter, vito	12	temic			√
Fiat, lancia, alfa romeo	48	magnetti marelli	√	√	
Vw, skoda, seat	33	Siemens immo 1	√		√
Renault laguna	33	valeo	√		√
Renault, dacia	33	sagem	√		√
renault	46	Uch siemens	√		
Fiat, lancia, alfa romeo	48	delphi	√	√	
Bmw	33R	ews1			√
Bmw	33R	ews2			√
Bmw	33R	ews3			√
Toyota corolla 98-99	4C	toyota			√
Toyota corolla 00-02	4C	Delson ic900			√
Toyota corolla	4C	bosch			√
Toyota yaris II	4C	toyota			√
Toyota corona	4C	toyota			√
Renault laguna	46	renault	√		

iveco	46	iveco	√	√	
Renault megane II	46	renault	√		
Alfa romeo code 2	44	bosch			√
mitsubishi	44	bosch			√
Volvo	44	Bosch immo 3			√
Peugeot,Citroen	33	Valeo	√		√
Mitsubishi Lancer	4C	Mitsubishi			√
Daihatsu 98-00	4C	Daihatsu			√
Audi	13	Delphi			√
Nissan,Subaru	33	Siemens			√
Mercedes Sprinter, Vito	12	Temic			√
Opel	33	Siemens			√
Daihatsu 00-01	4C	Daihatsu			√
Mercedes Actros, Atego	13	Temic			√
Suzuki swift	4C	suzuki			√
Toyota corolla 2000	4C	toyota			√
Volvo,mitsubishi carisma	33	bosch			√
Peugeot motorbike	11	marelli			√
Renault	46	sagem	√		
Peugeot 406	45	siemens	√		√
Peugeot 206	45	siemens	√		√
Peugeot, Fiat, lancia, Citroen	33	texton			√
Chrysler	64	Skim type 2	√		√
Mazda 323	12	temic			√
Suzuki Grand Vitara	4C	suzuki			√
Fiat, Citroen, Peugeot	48	delphi	√	√	
Alfa Romeo	33	bosch			√

Important Notes:

-User must use external IC programmer to read the Eeproms and Mcus.

-The pictures of the IC programmer in Zed-Bull Pc software is for brand Omega-Mtrk IC Programmer.

-Omega-Mtrk IC Programmer covers all the applications in the list and we

suggest this programmer.But user is free to use any of the IC programmers in the market. **www.obd2repair.com**

-According to the features of IC Programmer, all the Eeproms and Mcus might need to be desoldered from immo board. For most of the IC programmers in the market Eeproms and Mcus must be desoldered from immo board.

-While desoldering the Eeproms and Mcus, user must be very carefull, since the pins of the Eeproms and Mcus are thin, they might be broken if not disoldered slowly and properly.

-When an Eeprom or Mcu is read with IC Programmer, we strongly recommend user to save a copy of the original Eeprom or Mcu data file. When a problem occurs while using the file , copy of the original file will be still holding the needed datas and might be used for recovery.

-The Eeprom or Mcu must be soldered back in the same direction when it is desoldered.

-While soldering back the Eeprom or Mcu, user must be carefull against unwanted short circuits between pins.

-While reading motorola Mcus, removing the security of the Mcu is suggested. If the Mcu is read without removing the security, all the informations might be deleted for some Mcu types. So user must be carefull about this detail while reading Mcus.

-Some non-original IC programmers in the market might delete Eeprom and Mcu datas while reading. Using original IC programmers is suggested.

-While desoldering the Eeprom or Mcu, user must be careful about not desoldering the neighbour components on the immo board accidentaly.

-For BMW applications, user must be careful about the key number. When customer wants spare key, the original customer key should be read and the key number should be noted. In the PC software window proper key number should be selected.

To make key which directly starts the car for the modules 11,12, and 18 few additional steps required. The prosedure is as below:

1-Desolder the Eeprom or Mcu from immo board.

2-Read Eeprom or Mcu with external IC Programmer.

3-Save the read file with ".bin" extension with any name and to any location as you wish.

4-Open the file that you saved, using the Zed-Bull Pc Software, insert the suitable transponder to the antenna and click the "programme transponder"

button on Zed-BULL Pc Software, precoded transponder is prepared.

5-Do not remove the transponder from antenna, press "Create Image File" button on Extended Function Menu. Save the file with different name such as ".....image.bin" in order not to overwrite on to the previous file.

6-Using the IC programmer write the file that you saved to the eeprom or Mcu of the immo board. The process is completed. The tranponder will start the car directly.
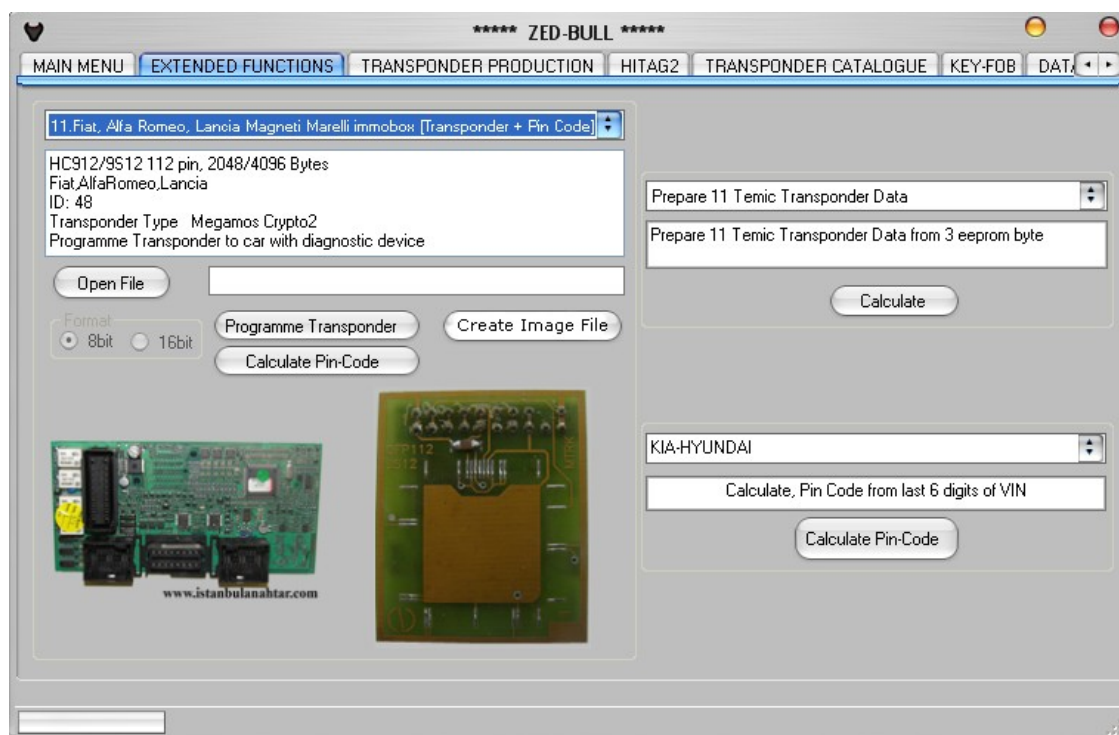
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Right top side of the main menu window is reserved for preparing data for 11,12 temic, 13 megamos, 4C texas and 33 renault transponders from eeprom bytes. This feature is added to the software for professionals. If the location of bytes that is related with transponder data is known this feature is used. The eeprom bytes are written and key data is calculated. This calculated data can be written manually to transponder. Preparing random data, and unlocking 48 megamos crypto transponder is also available in this sub menu.

HYUNDAI KIA PIN CODE CALCULATION   7.2.3

Right bottom side is reserved for Hyundai-Kia pin code application. Hyundai and Kia pin code is calculated from last 6 digits of the VIN. For Hyundai, calculation is not valid for numbers beginning with "0", for Kia all numbers are valid.

TRANSPONDER PRODUCTION   7.3
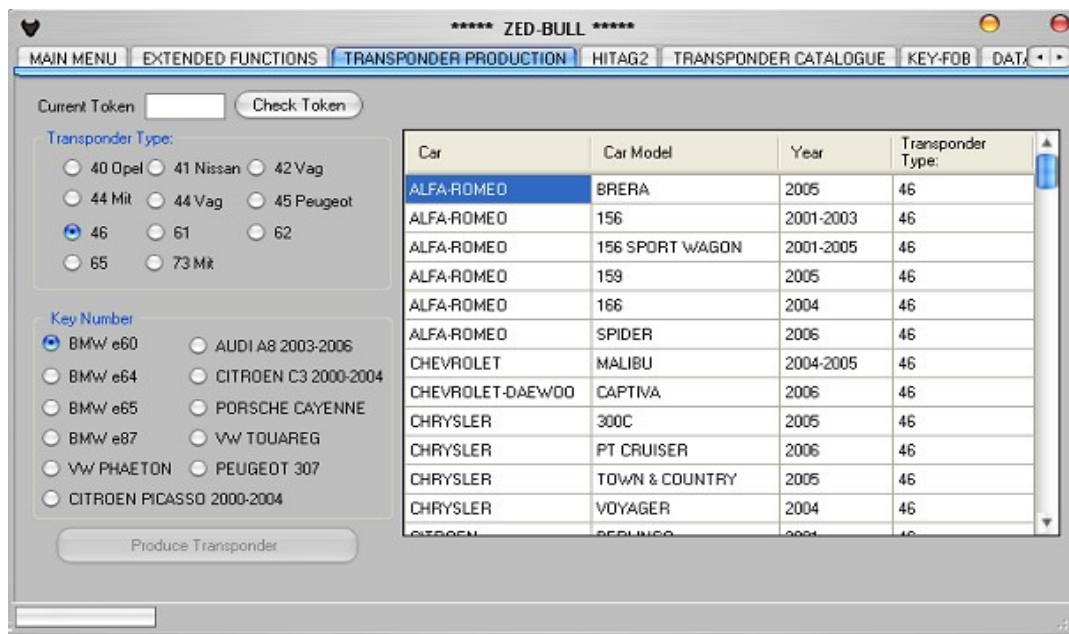
This menu is used for preparing transponders to use with diagnostic devices. Transponders that can be produced with this menu is listed below;
40 opel, 41 nissan, 42 VAG, 44 Mitsubishi, 44 VAG, 45 Peugeot, 46, 61, 62,65 and 73 Mitsubishi.

"Produce Transponder" button will not be active unless "Check Token" button is clicked. User should first check whetter there is enough token for

this application or not.

When transponder is selected key number options are displayed on the same window under transponder type options area. Both transponder type and key number must be selected before clicking the button "produce transponder". Transponders with different key numbers can be programmed to same car.

Transponder production property has a token system, 1 transponder can be produced with 1 token, pressing "check token" button will show the remaining tokens for the application.

On the right side of the window according to the selected transponder type matching car models are displayed.

HITAG 2 7.4
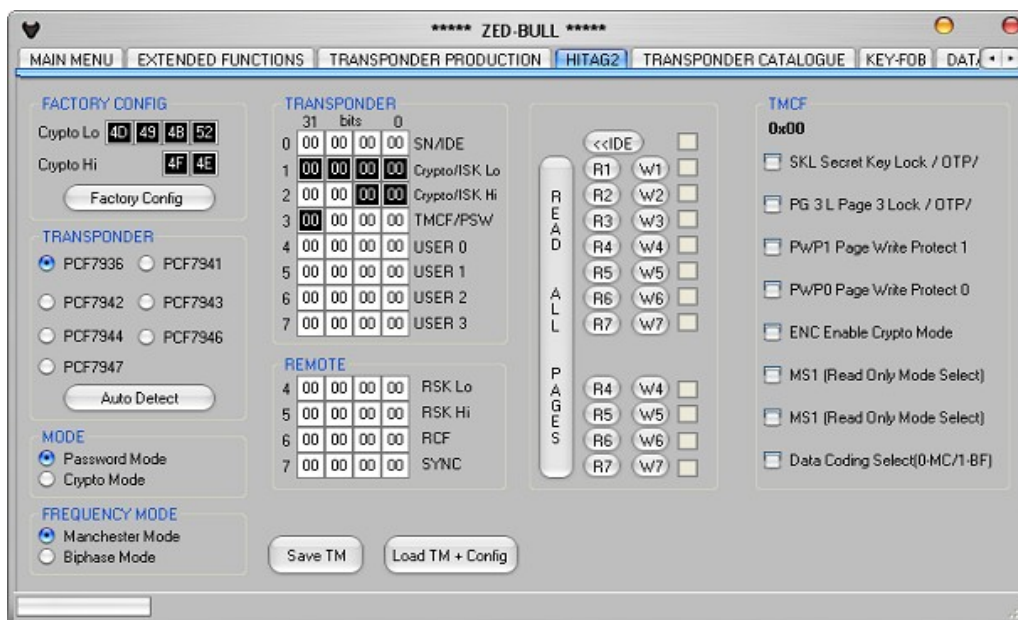
It is possible to edit latest generation transponder hitag 2 with Zed-BULL Pc software. Pages of hitag 2 transponders can be both read and written with Zed-BULL and Zed-BULL PC Software. Software shows transponder type, transponder mode, frequency mode, transponder pages and transponder configuration bits to the user and can be edited by the user.

In transponder catalogue sub menu, user finds usefull informations about transponders and matching car models. Information about the IC type in immo box of the car is also given for most of the car models.

Programming key fobs manually is described step by step in this sub menu. On the left side of the window, car type is selected and on the right side of the window programming procedures are displayed in a text box.

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Unlimited number of customer information can be stored in database section of the PC software. When a customer whose information exists in the database comes again, using recorded information, it is possible to make key.

DISTRIBUTORS 7.8

Here user will find contact details of Zed-BULL distributors around the world.

SETTINGS 7.9

In this menu user can load token and update the device. Loading token will be active soon. User can load token with Zed-BULL menu.

Clicking the button "Serial number-version", user can learn the device serial number and version of the software.

When user wants to update the device, update file is loaded using "open file" button and selecting the correct update file for the device and "Update" button is clicked. Device starts updating it self. The status bar shows the percentage of the process.

Important note: When user wants to update device for additional applications such as; Eeprom & Mcu applications or transponder production applications, uploading ZBC file is required. When user wants to update Zed-BULL for new version; first ZBC file then ZBP file needs to be uploaded to Zed-BULL. User should contact local distributor for ZBC and ZBP files.

Steps for updating Zed-BULL:

1-Choose Update Firmware choice in Settings sub menu.
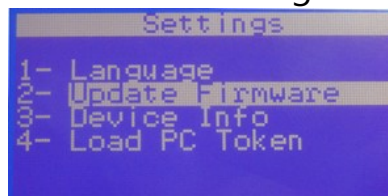
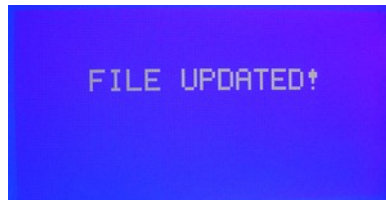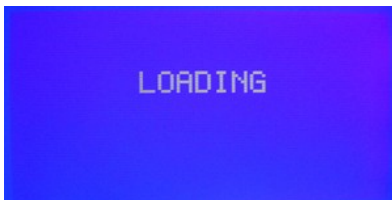2-The device will be in loader mode. The screen display should be as below.

Here user should upload ZBC(Zed-BULL Customer) file using pc software

use button to add
ZBC file

3.After uploading ZBC file user may restart the device and end updating or upload ZBP file if updating to newer version is required.

Device is restarted turning off the power switch.

SUPPORT/CONTACT   7.10

Whenever user has problems or questions this sub menu can be used. An e-mail will be sent to the manufacturer company directly.

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