

**Abritus 72 Ltd**

**Date: 01.03.2008**

## **HITAG-2 key programmer**

### **USER MANUAL**

Version:

4.0

Abritus72 Ltd



| Date        | Sym | Description  | 'new rev. |
|-------------|-----|--|-----------|
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1 INTRODUCTION..... 4

2 HARDWARE REQUIREMENTS ..... 5

3 INSTALLATION ..... 5

4 USING OF PROGRAMMER ..... 6

5 NOTES ABOUT HITAG-2 TRANSPONDERS ..... 8

6 EXTENDED KEY MEMORY ..... 9

7 GENERATION/PROGRAMMING OF KEYS BY DUMP OF THE EEPROM OF IMMOBILIZER ..... 10

## 1 INTRODUCTION

HITAG-2 programmer is device programmer intended for programming of HITAG-2 transponders compatible with PHILIPS PCF7936 transponders. It can be used for reading/programming of following type transponders:

- PCF7936
- PCF7941
- PCF7942
- PCF7944
- PCF7945
- PCF7946
- Compatible with mentioned above

Programmer supports both modes – PASSWORD and CIPHER mode.



Fig.1 PCF7936 transponder

## 2 HARDWARE REQUIREMENTS

- IBM compatible PC running Windows™ 95/98/ME/2000/NT4/XP
- VGA display card (800x600)
- two USB ports

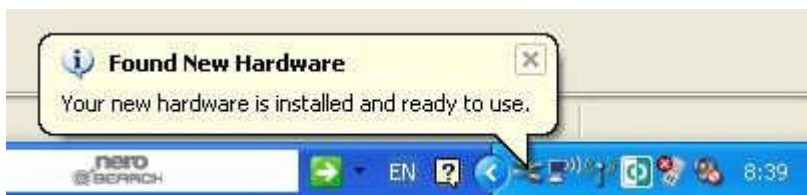
## 3 INSTALLATION

First you need to connect DONGLE (The blue USB device) to USB port of your PC.

- Windows ask you for location of drivers for dongle and you choose - "Dongle Driver USB" folder.

Now you need to install PROGRAMMER drivers. It is placed in the folder "Programmer\_Driver\_USB".

If you using Windows XP/NT/VISTA simply start program "HITAG-2 programmer\Programmer\_Driver\_USB\WIN\_NT\_XP\_VISTA\Executable 2.02.04\ CDM 2.02.04.exe" and when installation is done connect interface to your second USB port. Interface will be automatically detected.

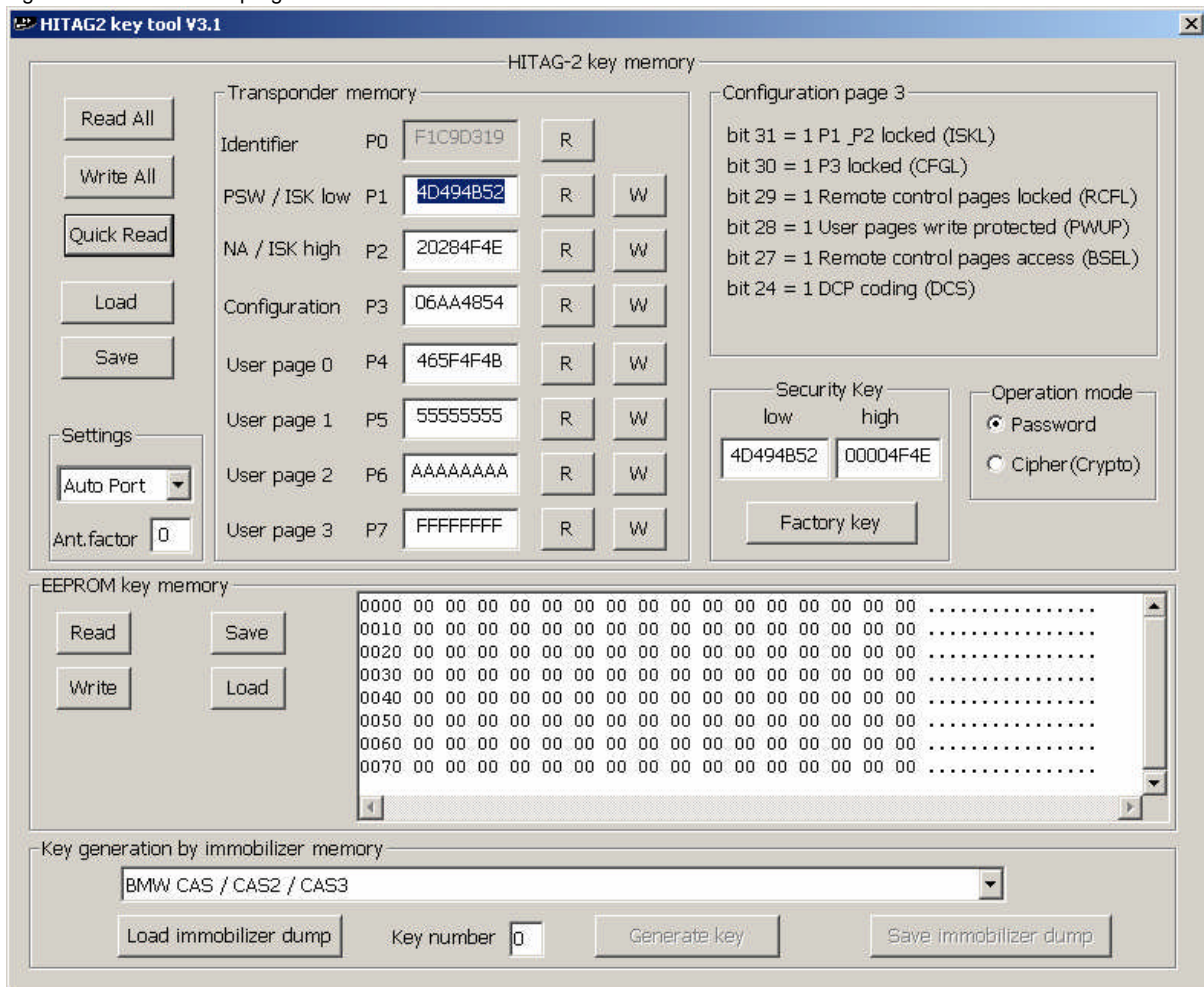


If you using WINDOW98 need to connect interface and when WINDOWS98 ask you for the driver to select "\CAN Trace\Interface\_Driver\_USB\WIN\_98\R10906".

## 4 USING OF PROGRAMMER

Now you can start software of your programmer “HT2.exe” appears following screen:

Fig.3 Main screen of the program



Put transponder/key on it place (refer Fig.4)



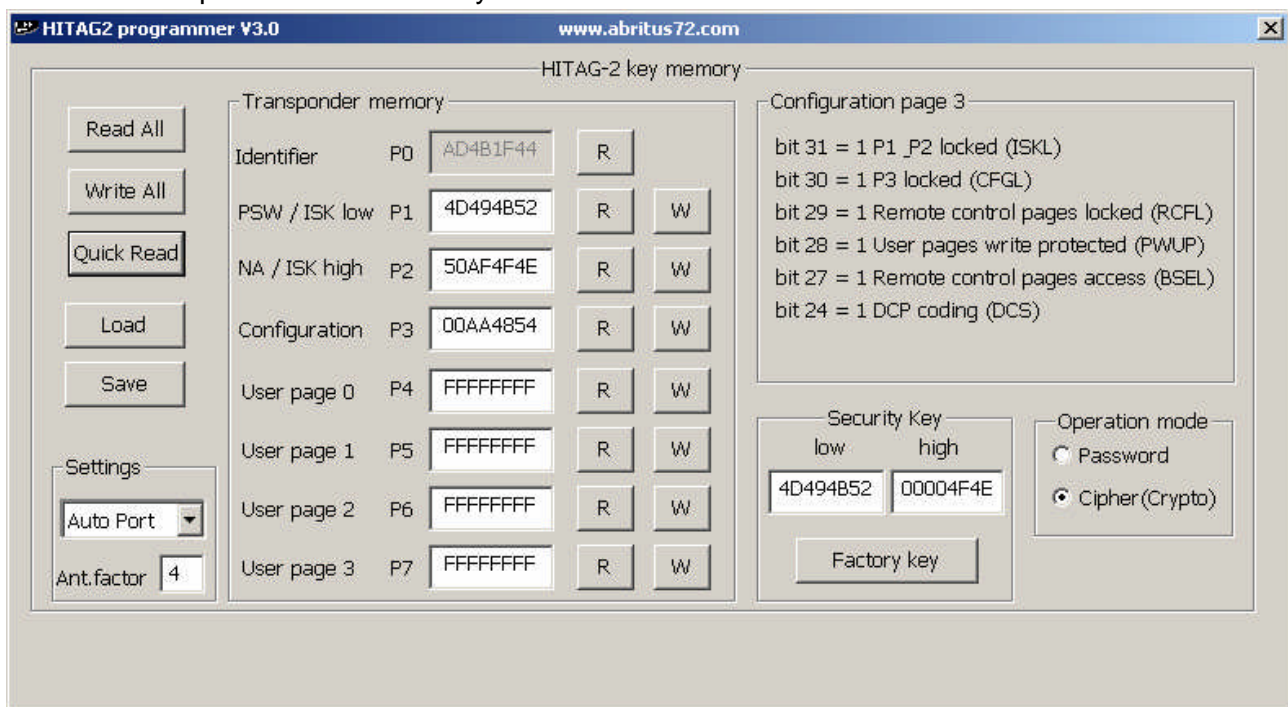
Fig.4 transponder/key place

Before reading or programming of transponder you must choice working mode of transponder PASSWORD or CIPHER mode.



Take into account that transponders can be read or program if you know PASSWORD of transponder (PASSWORD/ CRYPTO WORDS LO+HI).

We have 9 different buttons for reading (“Read All” and 8 “R” separate for each page of transponder) and also 8 buttons for programming (“Write All” and 7 “W” for each programmable page of transponder).

Bellow is example – content from key of BMW E60 – PCF7945:





Buttons  can be used for reading of separate page from transponder. Button  can be used for programming of only one page.



“Read All” and “Write All” read and program all pages of transponder.

Button “Quick Read” is similar to button “Read All” but reading content of transponder without additional checks whether reading is correct. This button is useful when we adjusting antenna setting of our programmer.

Adjusting can be done when reading some transponder using button “Quick Read” and change factor to 2,3,4,5,6 and s.o. until is reached best reading (i.e. each attempt for reading leads to results like previous).

While manufactory programmers are adjusted to have best factor “4” but deviation are possible depends of your working place and PCB where is assembled your transponder (number great than 7936).

## 5 NOTES ABOUT HITAG-2 TRANSPONDERS

**Please before programming of some transponder refer corresponding documents which describes features of transponder.**

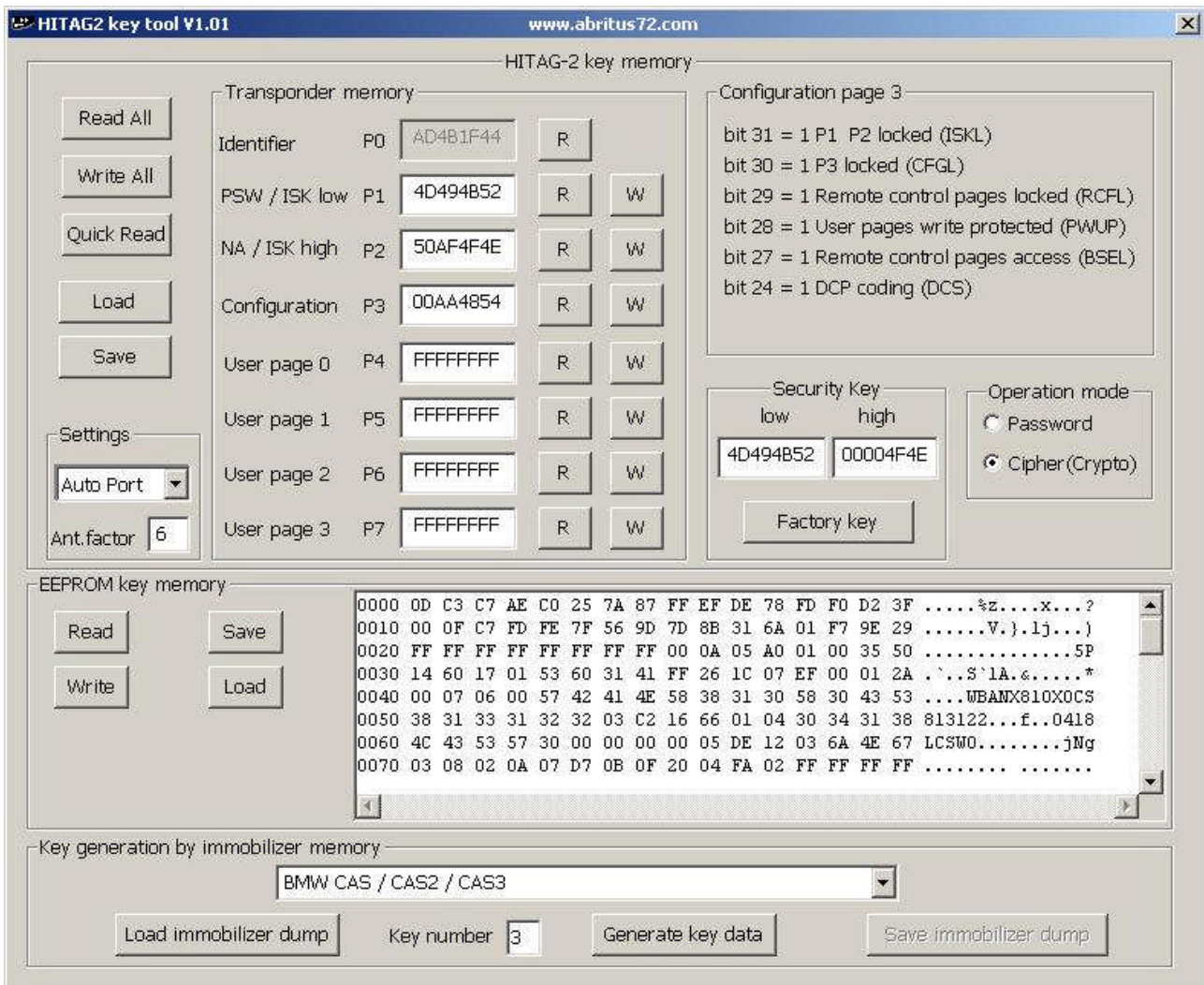
**Transponder must be programmed very carefully because some bits from configuration of transponder can be programmed only once which leads to partial reading or programming of transponder.**

**Additionally changing of password/ISK must be documented always to allow following reading or programming.**



## 6 EXTENDED KEY MEMORY

In the main screen of your programmer is available possibility to read/program internal key memory of BMW keys (models E6x, E7x..).



## 7 GENERATION/PROGRAMMING OF KEYS BY DUMP OF THE EEPROM OF IMMOBILIZER

1. Put key/transponder on programmer and check that you can read it
2. Load corresponding dump (from CASx, EWS2, EWS3 or KESSY)
3. Select key number which you want to be generated
4. Press button "Generate key data"
5. When key is programmed save immobilizer's dump and program it back in immobilizer

### Note:

- Because EWS3,EWS4 using PIT transponder (not HITAG-2) you need to program with different programmer some of transponders "EWSx\_key0.bin", "EWSx\_key1.bin",
- EWS4 supports up to 4 keys