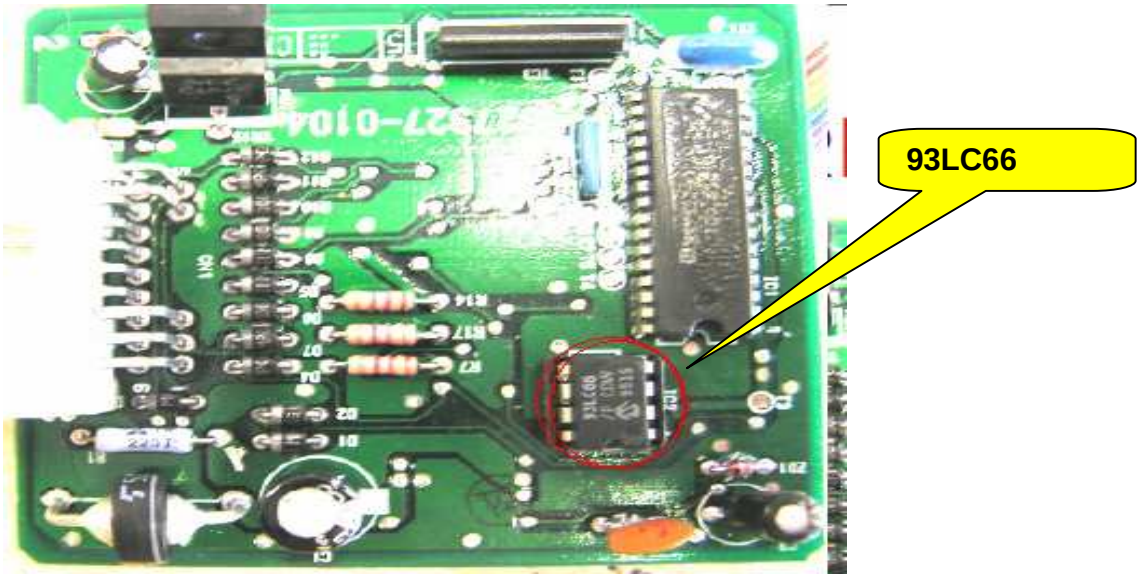
ADDING 4C TRANSPONDER KEYS DATA IN THE IMMO DUMP FILE OF TOYOTA CARS USING ECU IMMOBILIZER

VEHICLES: 1996-1998 Toyota Rav4, 1996-2003 Toyota Corolla, Prado, Sienna,Picnic, 4Runner, Hiace, etc…

NB: Since there are some Toyota/lexus cars fitted with ECU immobilizer which dump belongs to the 4D transponder Chip, it should be noted here that the method described below strictly concerned Toyota/lexus cars using 4C transponder chip and fitted with ECU IMMOBILIZER. Those using the 4D transponder will be described later

ECU IMMOBILIZER INFORMATIONS

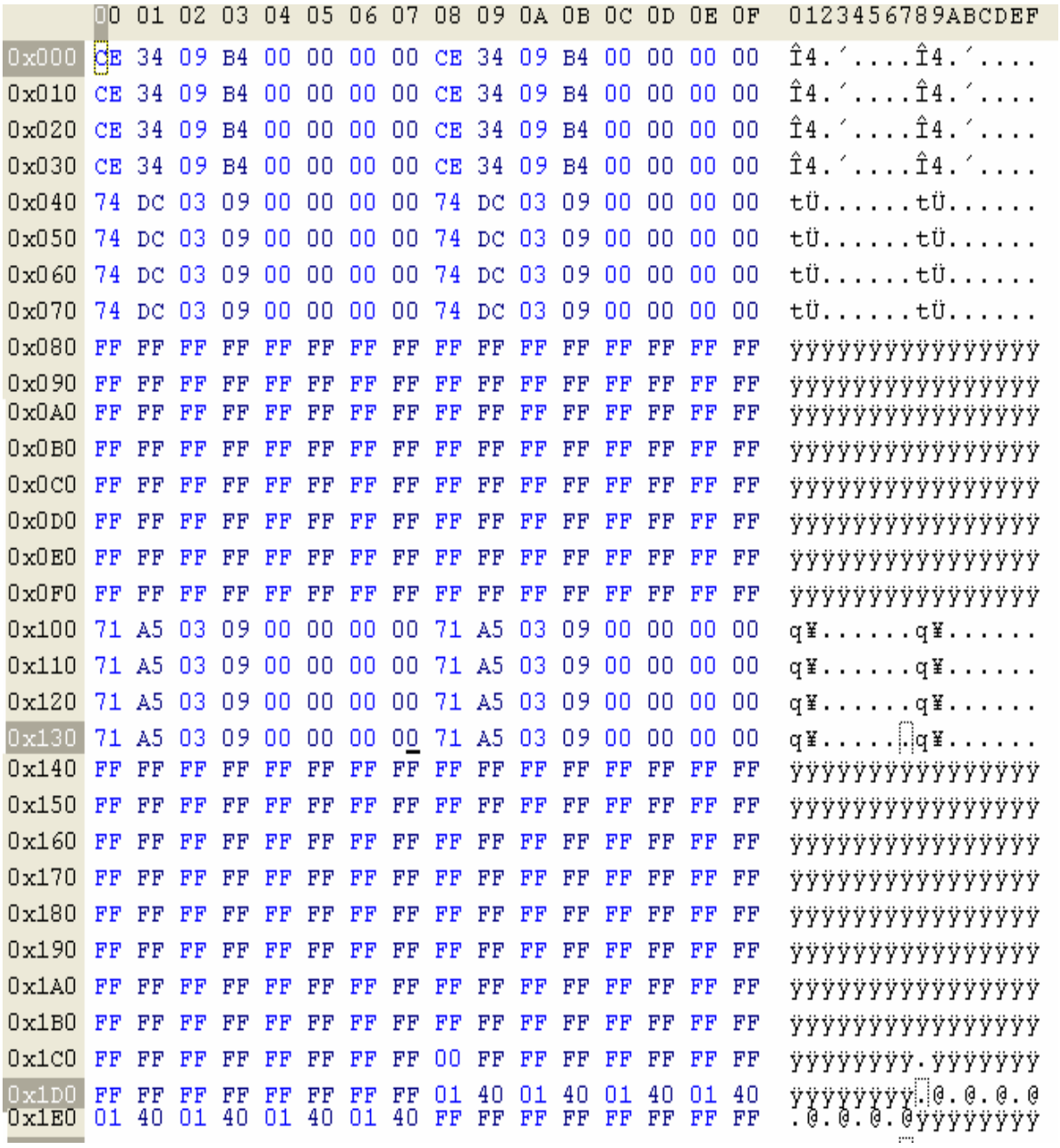
PICTURES	See pictures below
LOCATION ON THE CAR	Behind radio, above the brake pedal, behind the glove box
MEMORY DEVICE	**Type**: 93C66, 93LC66A, 93LC66B,24c04
	Package: 8 pins SMD and 8 pins DIL package
	File size: 512 Bytes



TYPICAL SCREEN DUMP

Look at the dump attached below carefully it contains:

1) **Three keys data, each key data been repeated eight times in the dump.**
2) **The synchronization data between immobox and Engine ECU**



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        00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F  0123456789ABCDEF
0x000   CE 34 09 B4 00 00 00 00 CE 34 09 B4 00 00 00 00  Î4.´....Î4.´....
0x010   CE 34 09 B4 00 00 00 00 CE 34 09 B4 00 00 00 00  Î4.´....Î4.´....
0x020   CE 34 09 B4 00 00 00 00 CE 34 09 B4 00 00 00 00  Î4.´....Î4.´....
0x030   CE 34 09 B4 00 00 00 00 CE 34 09 B4 00 00 00 00  Î4.´....Î4.´....
0x040   74 DC 03 09 00 00 00 00 74 DC 03 09 00 00 00 00  tÜ......tÜ......
0x050   74 DC 03 09 00 00 00 00 74 DC 03 09 00 00 00 00  tÜ......tÜ......
0x060   74 DC 03 09 00 00 00 00 74 DC 03 09 00 00 00 00  tÜ......tÜ......
0x070   74 DC 03 09 00 00 00 00 74 DC 03 09 00 00 00 00  tÜ......tÜ......
0x080   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x090   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0A0   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0B0   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0C0   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0D0   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0E0   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0F0   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x100   71 A5 03 09 00 00 00 00 71 A5 03 09 00 00 00 00  q¥......q¥......
0x110   71 A5 03 09 00 00 00 00 71 A5 03 09 00 00 00 00  q¥......q¥......
0x120   71 A5 03 09 00 00 00 00 71 A5 03 09 00 00 00 00  q¥......q¥......
0x130   71 A5 03 09 00 00 00 00 71 A5 03 09 00 00 00 00  q¥.....q¥......
0x140   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x150   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x160   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x170   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x180   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x190   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x1A0   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x1B0   FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x1C0   FF FF FF FF FF FF FF FF 00 FF FF FF FF FF FF FF  ÿÿÿÿÿÿÿÿ.ÿÿÿÿÿÿÿ
0x1D0   FF FF FF FF FF FF FF FF 01 40 01 40 01 40 01 40  ÿÿÿÿÿÿÿÿ.@.@.@.@
0x1E0   01 40 01 40 01 40 01 40 FF FF FF FF FF FF FF FF  .@.@.@.@ÿÿÿÿÿÿÿÿ
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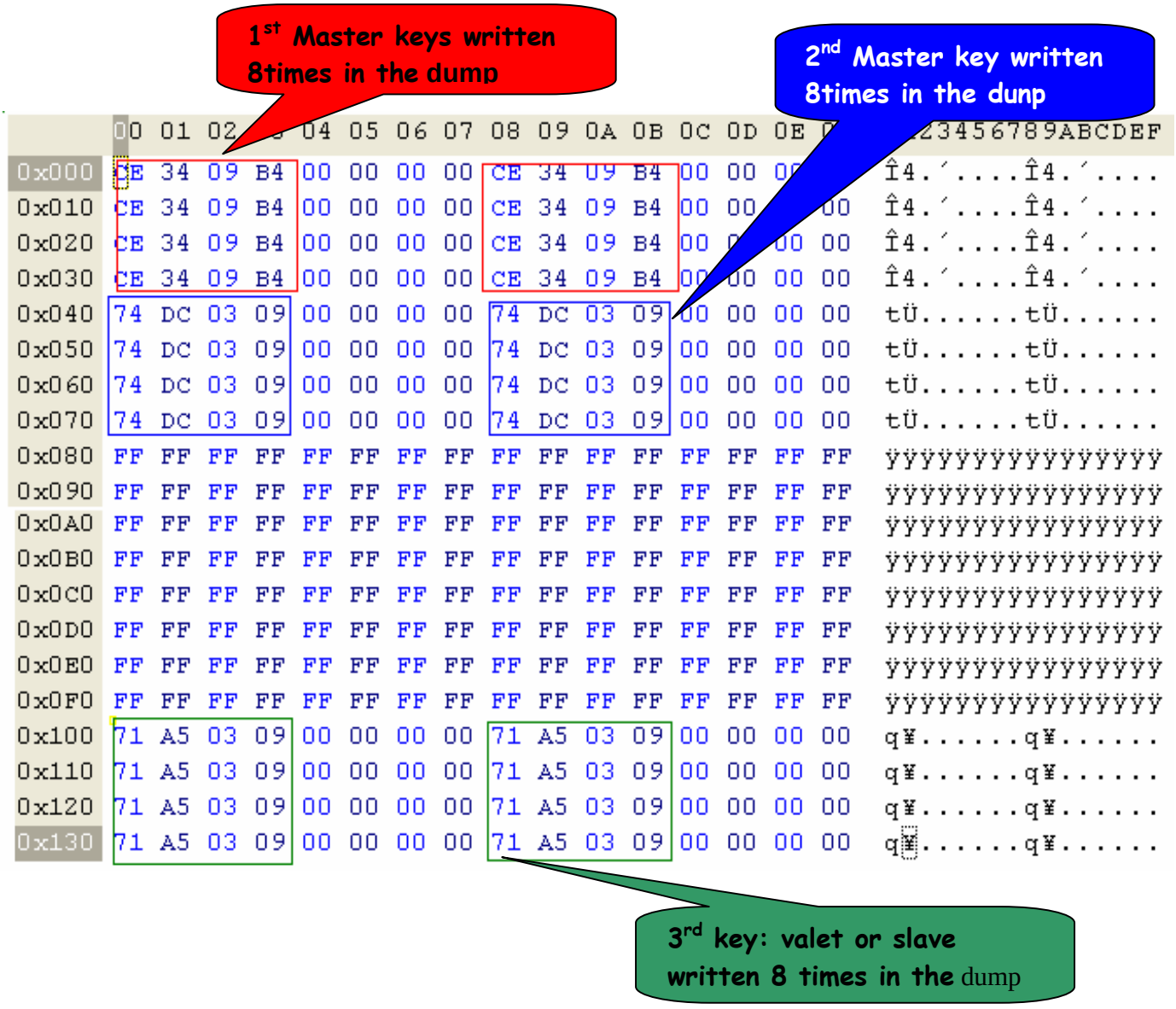
Figure: 2

IDENTIFICATION OF KEY DATA IN THE DUMP



	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	0123456789ABCDEF
0x000	CE	34	09	B4	00	00	00	00	CE	34	09	B4	00	00	00	00	Î4.´....Î4.´....
0x010	CE	34	09	B4	00	00	00	00	CE	34	09	B4	00	00	00	00	Î4.´....Î4.´....
0x020	CE	34	09	B4	00	00	00	00	CE	34	09	B4	00	00	00	00	Î4.´....Î4.´....
0x030	CE	34	09	B4	00	00	00	00	CE	34	09	B4	00	00	00	00	Î4.´....Î4.´....
0x040	74	DC	03	09	00	00	00	00	74	DC	03	09	00	00	00	00	tÜ......tÜ......
0x050	74	DC	03	09	00	00	00	00	74	DC	03	09	00	00	00	00	tÜ......tÜ......
0x060	74	DC	03	09	00	00	00	00	74	DC	03	09	00	00	00	00	tÜ......tÜ......
0x070	74	DC	03	09	00	00	00	00	74	DC	03	09	00	00	00	00	tÜ......tÜ......
0x080	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x090	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0A0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0B0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0C0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0D0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0E0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x0F0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
0x100	71	A5	03	09	00	00	00	00	71	A5	03	09	00	00	00	00	q¥......q¥......
0x110	71	A5	03	09	00	00	00	00	71	A5	03	09	00	00	00	00	q¥......q¥......
0x120	71	A5	03	09	00	00	00	00	71	A5	03	09	00	00	00	00	q¥......q¥......
0x130	71	A5	03	09	00	00	00	00	71	A5	03	09	00	00	00	00	q¥......q¥......

Figure:3

ADDING UP KEY DATA IN THE DUMP

1 PROCEDURE

a) Read the dump from the eeprom and back up the original copy

b) With a suitable transponder key reader (eg.RW4, AD900pro, Tmpro2,key-crypt, etc…) read the Tiris data from the transponder you want to add to the dump

c) Sort out the 4bytes data to be written in the dump

d) Swap the 4 bytes data if necessary: in most cases the bytes have to be swapped before adding them to the dump.

e) Set your programmer in the edit or writing mode and replaced any of the original key code at the screen shot Figure 2 or 3 by the swapped data obtained

f) Save this new dump in your PC and program back the eeprom with.

g) Fit the immo box back to the car,

h) Start the car straight forward after cutting the key

The most important thing to know in this procedure, and for all the methods that will be described in this manual, is how the 4bytes data are swapped before adding them in the dump.

EXAMPLE

Let us assume now that this dump is from a car with all keys lost and you want to write in the transponder key with the following info:

a) Read the dump from the eeprom and back up the original copy

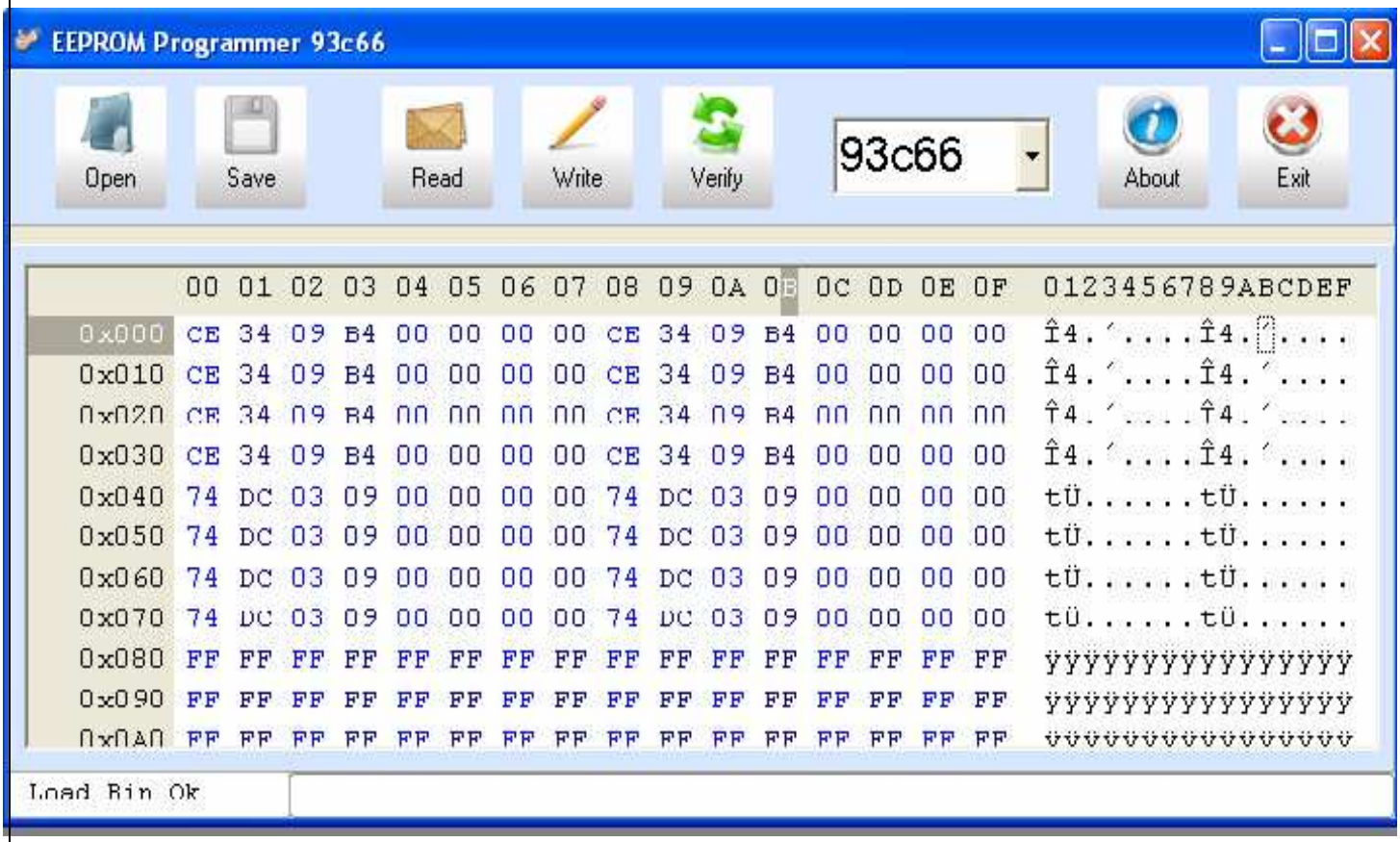


Figure: 4

b) With a suitable transponder key reader (eg.RW4, AD900pro, Tmpro2,key-crypt, etc…) read the Tiris data from the 4C transponder you want to add to the dump

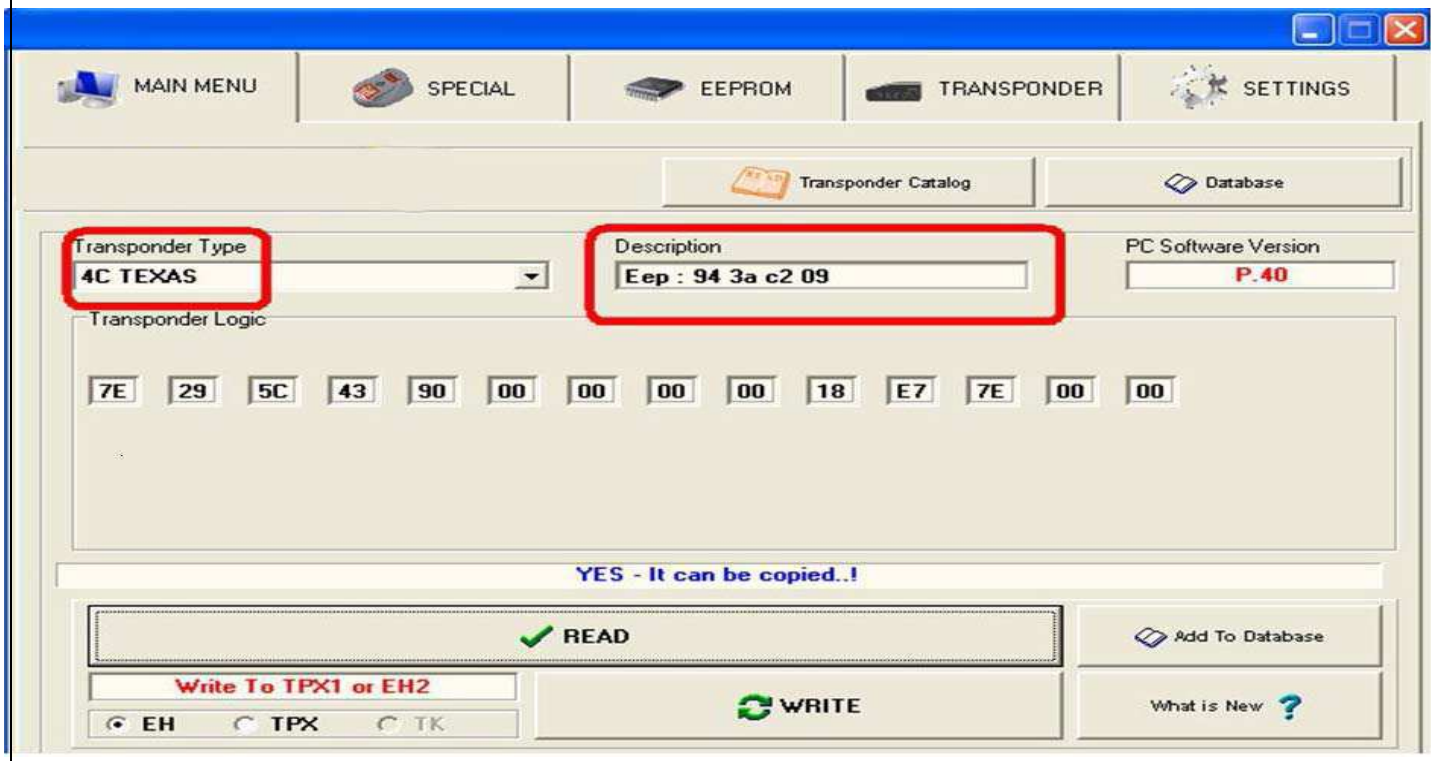


Figure: 5

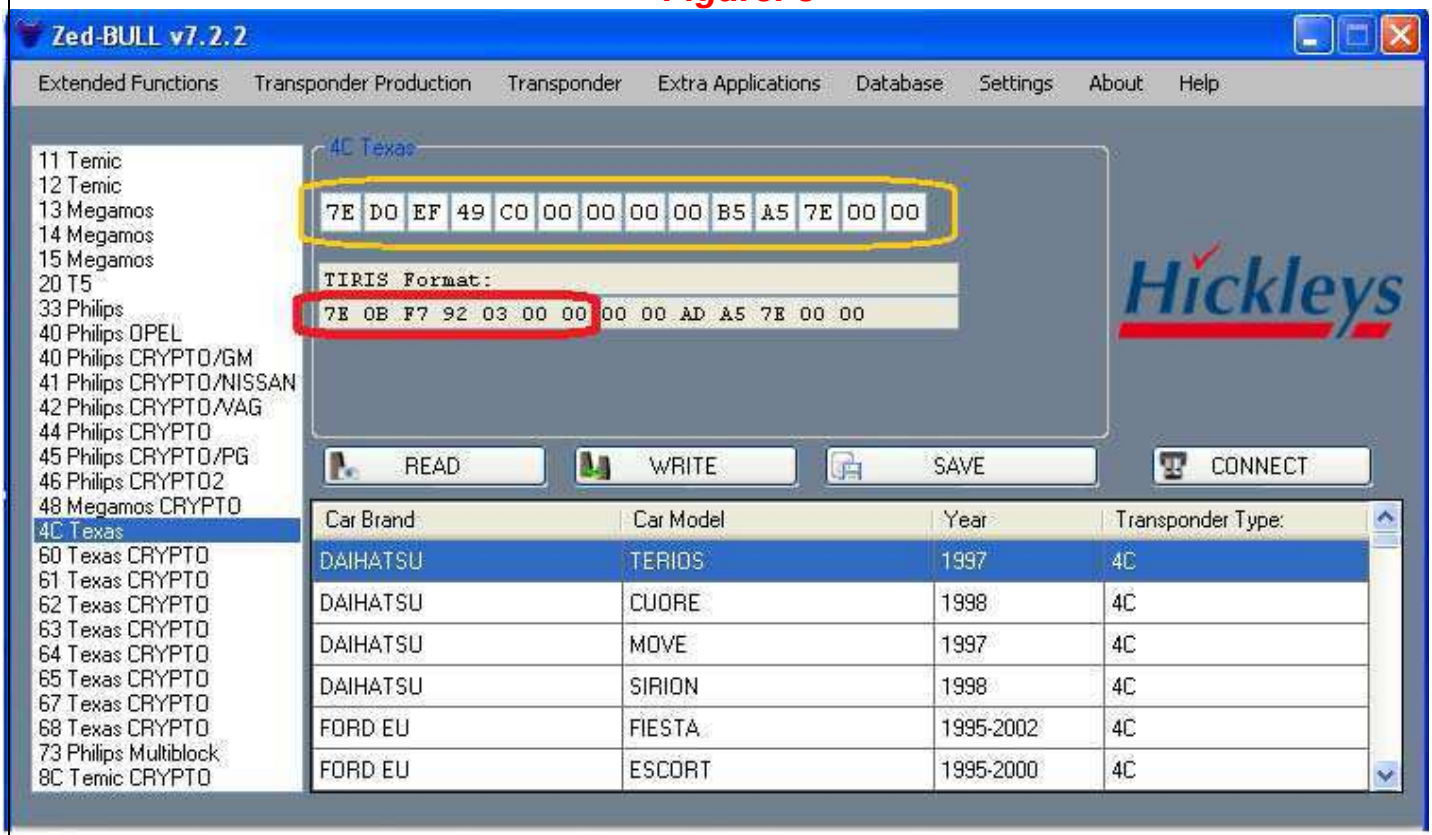


Figure:6

c) Sort out the 4bytes data to be written in the dump

Remember here that from all the transponder data read, only 4bytes data from the TIRIS data or TIRIS format are taken and added in the dump

From the two screen shots of the of the transponder key readers above (Figure: KEYCRYPT and figure: AD900pro or Keycrpt) the 4bytes data are respectively.

AD900pro: → 94 3A C2 09
Zedbull: → 0B F7 92 03

d) Swap the 4 bytes data if necessary: *in most cases the bytes have to be swapped before adding them to the dump.*

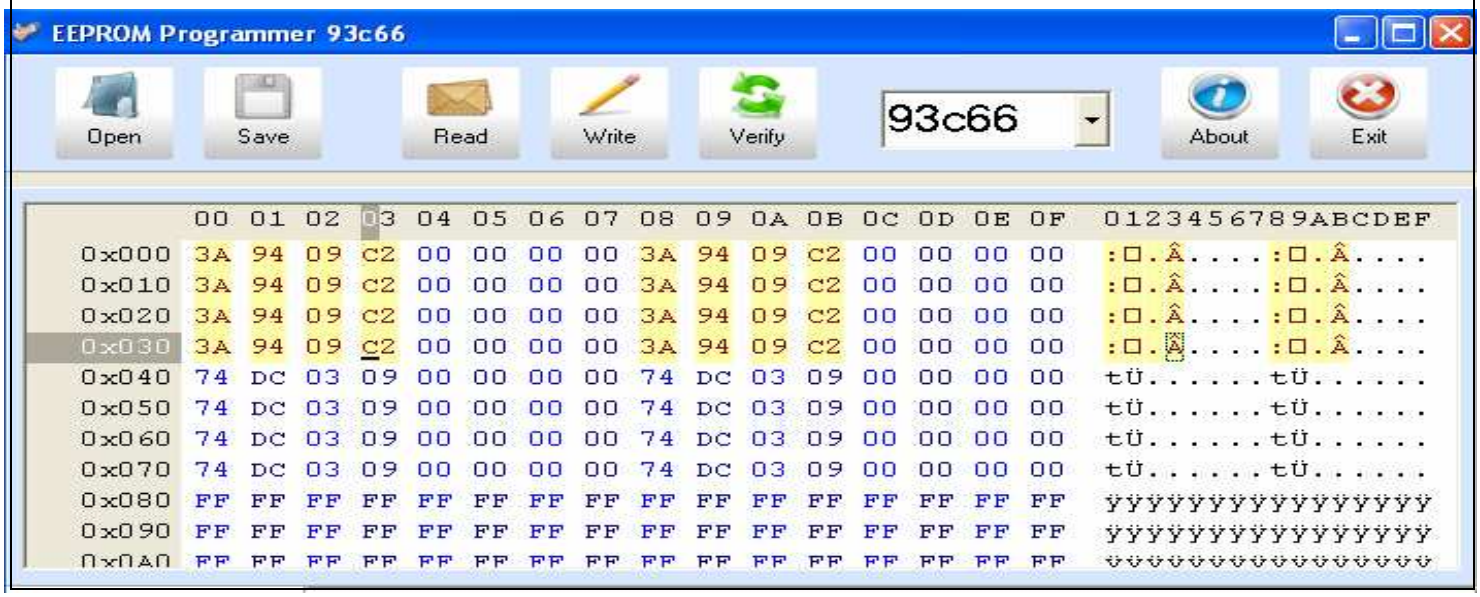
Before swapping, numbered the bytes: →

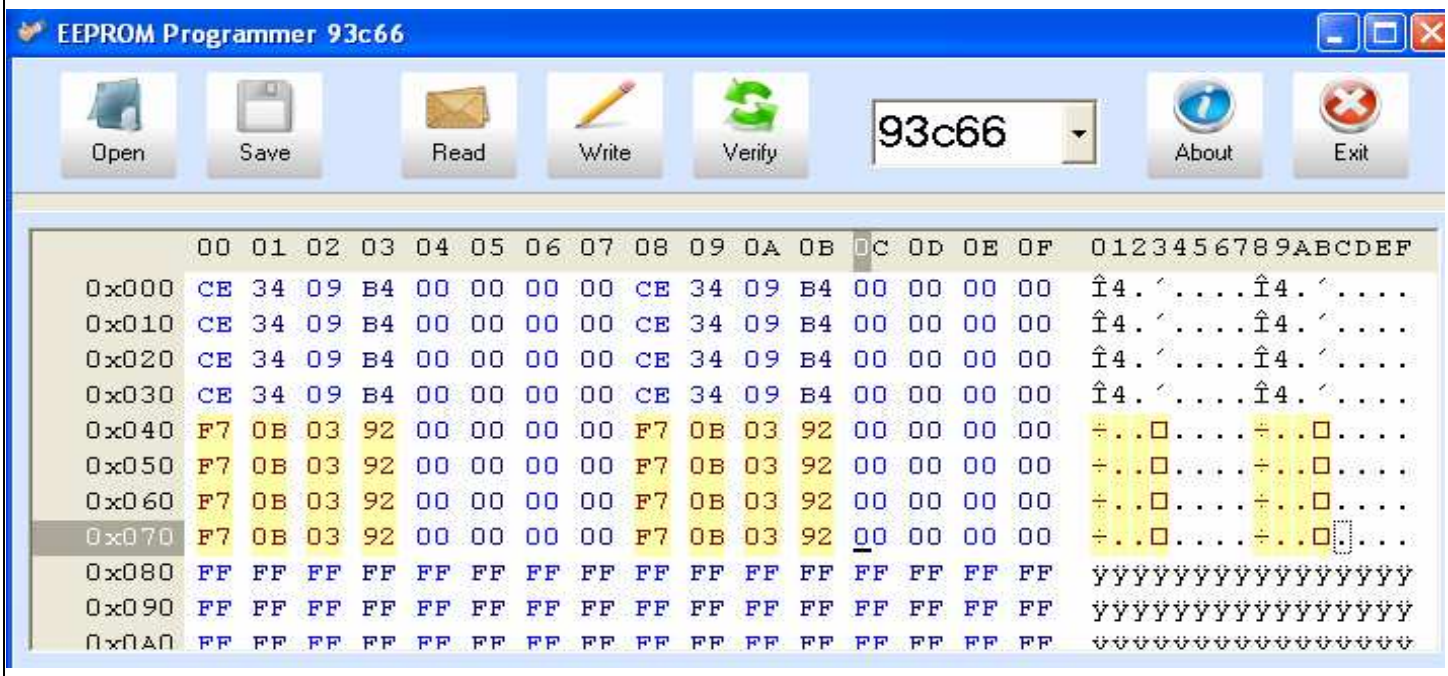
1st, 2nd, 3rd, 4th.
94 3A C2 09
0B F7 92 03

Then swapped the numbers into the swapped bytes to be written in the dump are now : →

2nd, 1st, 4th, 3rd
3A 94 09 C2
F7 0B 03 92

***3A 94 09 C2* or *F7 0B 03 92* is now the swapped 4bytes data you will use to replace one of the existing keys in the dump *Figure:4,* which is assume here, read from a car with all transponder key lost**





Remark*: *transponder data can be written in the position of any of the keys data already present in the dump. That is in the position 1st , 2nd , or 3rd key

e) Save this new dump in your PC

f) Program back the eeprom with this new dump file.

g) Fit the immobox back to the car,

h) Start the car straight forward after cutting the key