1 December, 2009

PHILIPS

HiTag2 Universal keys programmer

v. 3.1



www.avtotools.com www.hitag2.com

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Purpose:

Hitag-2 programmer is universal key programmer, with additional option of key programming from dump. Just insert blank key or appropriate transponder you need to program. Device detects transponder type and will do everything automatically!

Distinctive features of Hitag2 programmer:

- **ALL** types of Hitag2 transponders are fully supported
- Widest range of supported cars, using Hitag2 protocol
- Deep research work, has allowed us to make device, as much as possible correctly adding keys in the car, without damage to its functionality!
- **<u>BMW explorer</u>** support added.

Key generation from dump is available for the following cars:

Make	Immobilizer type	EEPROM/MCU	Login is visible	Radio remote programming possibility	Cars for USA market are supported
BMW	CAS1/2/3/3+	912/9\$12	-	Yes	Yes
AUDI	KESSY	93C86	Yes	Yes	Yes
VW	KESSY	93C86	Yes	Yes	Yes
PORSCHE	KESSY	93C86	Yes	Yes	Yes
BENTLEY	KESSY	93C86	Yes	Yes	Yes
CHRYSLER	SKIM	95040/95080	Yes	Yes	Yes
LAND ROVER	EWSx	9\$12	-	-	Yes
NISSAN	NATS	95080	-	-	Yes
OPEL	CIM	9S12/93C66	Yes	Yes	Yes
RENAULT	UCH	93C66	Yes	Yes	Yes
SAAB	CIM	93LC66	-	Yes	Yes

Supported transponder types

- PCF7936
- PCF7941
- PCF7942/44
- PCF7943
- PCF7945
- PCF7946
- PCF7947
- PCF7952

Supported transponder modes:

- Password mode
- Crypto mode

Supported protocols:

- Manchester
- Biphase

Software window view and description of the buttons:

🗄 HiTag 2 Programmer v3.05							
File Action Iransponder Stop (Esc) Help							
Menu]	Transponder memory (TM)					
Load TM & CRK	PHILIPS	Pg.0 S/N F8 A1 18 11					
Load TM only	(F)	Pg.1 - CRYPTOLO 4D 49 4B 52 R W					
Save TM as		Pg.3 CFG/PSW OE AA 48 54 R W					
Read all TM pages	HITAG-2 device	Pg.4 USER 0 46 5F 4F 4B 🔳 R W					
Write all TM pages	programmer V 3.0	Pg.5 USER 1 55 55 55 55 🔳 🖪 🕅					
Write CFG byte	Hardware	Pg.6 USER 2 AA AA AA AA AA PG.7 USER 3 FF FF FF FF FF R W					
Advanced functions	Ready	Pg.4 RSK LOW 00 00 00 00 R W					
Transponder mode Password mode Crypto mode	PCF7936 CF7941 CF7942/44	Pg.5 RSK HIGH 00 00 00 00 R W Pg.6 RCF 00 00 00 00 R W Pg.7 SYNC 00 00 00 00 R W					
TD coding protocol Manchester Biphase	PCF7943 PCF7945 PCF7946 PCF7947	Crypto Key & Serial Number S/N F8 A1 18 11 Read S/N CRYPTO LO 4D 49 4B 52 Load CRK from					
Exit	Autodetect type	CRYPTO HI 4F 4E Factory CRK					

Load TM & ... – Download "container" with transponder dump and crypto passwords Load TM only – Download transponder dump only Save TM as ... – Save "container" Read all TM pages – To read all of transponder's fields Write all TM pages – To write all of transponder's fields Write CFG byte –To read transponder's configuration field Advanced functions – Key generation by loaded dump

Transponder mode – Transponder's work mode

- Password mode Password mode without additional data encryption
- Crypto mode Data encryption mode

TD coding protocol – Data coding protocol

- Manchester Self-synchronizing protocol with synchro impulses
- Biphase Bi-phase modulated protocol

Exit – Exit 😊

Transponder type – Types of supported transponders **Autodetect type** – Autodetecting of transponder type

R – To read exact transponder's field**W** – To write exact transponder's field

Read S/N – To identify transponder (read serial number) **Load CRK from...** – Download crypto passwords from file **Factory CRK** – Set factory default crypto passwords

Key generation (Advanced functions):

Key adding procedure is described for BMW E70 as for sample. Other models have identical procedure.

- 1. Read EEPROM or MCU dump from immobilizer
- 2. Insert blank key/transponder into Hitag2 programmer and press "Read all TM pages" button. Programmer will read all of transponder fields automatically, led from the right side should lit green (it means transponder is blank and ready to be programmed). If you are using PCF7936 type of transponder switch it to "Crypto mode" with help of "Write CFG byte" option.
- 3. Press [Advanced functions] button to access car select menu and available additional options.

•	Advanced functions	
Í	BMW	BMW functions for PCF7942(44)
[AUDI	IMMO: EEPROM functions
[VOLKSWAGEN	
[PORSCHE	VIN / odometer - read/write VIN and odometer value
[BENTLEY	Keys: additional functions
(CHRYSLER	Read key info - read info from key (VIN, odometer, etc.)
[LAND ROVER	Remote control - read/write remote control data
	NISSAN	EEPROM data - read/write additional EEPROM in key
[OPEL	
[RENAULT	Special functions - key preparation for programming via OBD2
[SAAB	by using "BMW Explorer" software
(OTHER	
[CLOSE	

Note:

Quantity of available options directly depends of transponder type. For ex. "Read Key info", "Remote control", "EEPROM data" are unavailable for BMW keys with PCF7936 transponder inside.

4. Choose "Key maker" option, and load immobilizer dump.

Error	
8	Can't detect EEPROM configuration. Continue only if you sure that correct KESSY EEPROM is loaded. NOTE: Try to swap bytes in file
	OK

Note:

If you see this reminder (unable to recognize downloaded dump configuration), try to press [Swap bytes] button at the bottom of the screen.

5. If dump configuration is recognized successfully, you will get the following message:

Information						
(EEPROM configuration: OK					
	OK					

And HEX-editor windows showing downloaded data will appear.

0x000: FF 00 FF FF 05 40 08 14 3C 08 00 28 00 09 D6 00 □ □段□g<□□ (□□□□) 0x010: FF		Make key from EEPROM																	
0x000: FF 00 FF FF 05 40 08 14 3C 08 00 28 00 09 D6 00 D 08 00 D 00 00 D 00 00 D 00 00 D 00 00 00 0	Γ																		
0x010: FF		0x000:	FF	00	FF	FF	05	40	08	14	ЗC	08	00	28	00	09	D6	00	o 009(<00 (00r0 🔼
DxO20: FF		0x010:	$\mathbf{F}\mathbf{F}$	$\mathbf{F}\mathbf{F}$	FF	FF	FF	$\mathbf{F}\mathbf{F}$	$\mathbf{F}\mathbf{F}$	00	FF	09	$\mathbf{F}\mathbf{F}$	FF	$\mathbf{F}\mathbf{F}$	FF	$\mathbf{F}\mathbf{F}$	FF	
0x030: 19 9F F0 AD 71 88 88 C4 36 3A 34 B2 57 4C 63 E0 DRËmqMU-6:4-WLcp 0x040: 7B 96 0D 15 FF 09 FF FF D4 14 A2 44 1E 16 99 51 (ЩDS □ L¶BDDDDUQ 0x050: C0 1D 8C 3C 20 7D D6 58 3A 9A A8 24 FF FC FF FF LDM<)rX:5m3 P		0x020:	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	
0x040: 7B 96 0D 15 FF 09 FF FF D4 14 A2 44 1E 16 99 51 (ЦП\$ □ L\$BDDDDUQ 0x050: C0 1D 8C 3C 20 7D D6 58 3A 9A A8 24 FF FC FF FF LDM<) rX:5w\$ №		0x030:	19	9F	FO	AD	71	88	88	С4	36	ЗA	34	B2	57	4C	63	ΕO	□ЯЁнqИИ-6:4-WLср
0x050: C0 1D 8C 3C 20 7D D6 58 3A 9A A8 24 FF FC FF FF LDM<) rX: Би\$ №		0x040:	7B	96	OD	15	FF	09	FF	FF	D4	14	A 2	44	1E	16	99	51	{IIDS D L¶BDODIIQ
0x060: C2 AF 38 C8 BE B1 A3 DF 74 3F 49 17 F0 42 CC 7A Tn8Lr-t?IDËB;z 0x070: 3C F3 86 E6 21 88 01 45 A7 BA CC BA 94 D1 3A 54 <ekn!jdes;;; td="" фt:t<=""> 0x080: F8 76 1F 8C 1F 9C 72 50 FF EA FF FF 99 A9 6D B3 °VDMDbrP 5 Щйм; 0x090: DB 0A 96 01 5B E9 B8 A5 A9 1D 11 5A 76 D4 9D BC -DUD[u¬eйDDZVL3- 0x080: A8 6B 7B B6 FF FF FF FF 99 A9 6D B3 DB 0A 96 01 иk(; Щйм;-DUD 0x000: A8 6B 7B 86 FF FF FF FF 99 A9 6D B3 DB 0A 96 01 иk(; Щйм;-DUD 0x000: 7E 74 76 3F 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 ~tv?7GK-[\$\phi Xbuk(; 0x000: 7E 74 76 3F 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 ~tv?7GK-[\$\phi Xbuk(; 0x000: 7E 74 76 3F 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 ~tv?7GK-[\$\phi Xbuk(; 0x000: 7E 74 76 3F 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 ~tv?7GK-[\$\phi Xbuk(; 0x000: 7F 74 76 3F 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 ~tv?7GK-[\$\phi Xbuk(; 0x000: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[\$\phi Xbuk(; 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[\$\phi Xbuk(; 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF FF 99 A9 6D B3 [\$\phi m; -DUD[\$u¬e\$\pmi D2] 0x120: 76 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC vL3-ka-) ~tv?7GK-[\$\phi Xbuk(; 0x120: 76 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC uL3-ka-) ~tv?7GK-[\$\phi Xbuk(; 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76</ekn!jdes;;;>		0x050:	CO	1D	8C	ЗC	20	7D	D6	58	ЗA	9Å	¥8	24	FF	FC	FF	FF	L□M<)гХ:Ъи\$ №
0x070: 3C F3 86 E6 21 8B 01 45 A7 BA CC BA 94 D1 3A 54 <eжп!лпез!!!фт:т< td=""> 0x080: F8 76 1F 8C 1F 9C 72 50 FF EA FF FF 99 A9 6D B3 °vDMDbrP 5 Щйт! 0x090: DB 0A 96 01 5B E9 B8 A5 A9 1D 11 5A 76 D4 9D BC </eжп!лпез!!!фт:т<>		0x060:	C2	AF	38	С8	BE	B1	A3	DF	74	ЗF	49	17	FO	42	СС	7A	Tπ8Lr-t?I□ËB¦z
0x080: F8 76 1F 8C 1F 9C 72 50 FF EA FF FF 99 A9 6D B3 °vDMDbrP ъ Щйт; 0x090: DB 0A 96 01 5B E9 B8 A5 A9 1D 11 5A 76 D4 9D BC □□□[ш¬ей□□2vL3- 0x0A0: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ra-)~tv?7GK-[фXb 0x0B0: A8 6B 7B B6 FF FF FF FF FF 99 A9 6D B3 DB 0A 96 01 иk(; Щйт;-□□□ 0x0C0: 5B E9 B8 A5 A9 1D 13 5A 76 D4 9D BC AA A0 D5 29 [ш¬ей□□2vL3-ra-) 0x0D0: 7E 74 76 3F 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 ~tv?7GK-[фXbиk(; 0x0F0: A9 1D 07 5A 76 D4 9D BC AA A0 D5 29 7E 74 76 3F imm;-□□□[ш¬е 0x0F0: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF 7GK-[фXbuk(; imm;-□□□[ш¬е 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF 7GK-[фXbuk(; imm;-□□□[ш¬е 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[фXbuk(; imm;-□□□[ш¬е 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[фXbuk(; imm;-□□□[ш¬е 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[фXbuk(; imm;-□□□[ш¬е 0x100: 37 6 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC vL3-ra-)~tv?7GK-[фXbuk(; 0x100: 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 99 A9 6D B3 [фXbuk(; imm; 0x120: 76 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC vL3-ra-)~tv?7GK-[фXbuk(; imm; 0x120: 76 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC se -□□□[ш¬e </td <td></td> <td>0x070:</td> <td>ЗC</td> <td>FЗ</td> <td>86</td> <td>Ε6</td> <td>21</td> <td>8B</td> <td>01</td> <td>45</td> <td>Α7</td> <td>BA</td> <td>СС</td> <td>BA</td> <td>94</td> <td>D1</td> <td>ЗA</td> <td>54</td> <td><єЖц!ЛОЕ禦¦ФТ:Т</td>		0x070:	ЗC	FЗ	86	Ε6	21	8B	01	45	Α7	BA	СС	BA	94	D1	ЗA	54	<єЖц!ЛОЕ禦¦ФТ:Т
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0x0C0: 5B E9 B8 A5 A9 1D 13 5A 76 D4 9D BC AA A0 D5 29 [ш→ей⊡□ZvL3-ка-) 0x0D0: 7E 74 76 3F 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 ~tv?7GK-[фХЬиk(] 0x0E0: FF BC FF FF 99 A9 6D B3 DB 0A 96 01 5B E9 B8 A5 - Щйт: -□Щ□[ш→е 0x0F0: A9 1D 07 5A 76 D4 9D BC AA A0 D5 29 7E 74 76 3F йш□ZvL3-ка-)~tv? 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[фХЬиk(] 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[фХЬиk(] 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[фХЬиk(] 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[фХЬиk(] 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[фХЬиk(] 0x120: 76 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC vL3-ка-)~tv?7GK- 0x130: 5B E4 95 9C A8 6B 7B B6 FF FF FF FF FF 99 A9 6D B3 [фХЬиk(] Щйт; 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC -□Щ□[ш→ей□ZvL3- 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ка-)~tv?7GK-[фХЬ ▼ ▼ 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ка-)~tv?7GK-[фХЬ ▼ ▼ 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ка-)~tv?7GK-[фХЬ ▼ ▼ 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ка-)~tv?7GK-[фХЬ ▼ ▼ 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ка-)~tv?7GK-[фХЬ ▼ ▼		OxOBO:	8	6B	7B	B6	FF	FF	FF	FF	99	Α9	6D	ВЗ	DB	OA	96	01	ик{¦ Щйт¦−ОЩО
0x0D0: 7E 74 76 3F 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 ~tv?7GK-[фХЬиk(; 0x0E0: FF BC FF FF 99 A9 6D B3 DB 0A 96 01 5B E9 B8 A5 - Щйт;-□Щ□[щ¬е 0x0F0: A9 1D 07 5A 76 D4 9D BC AA A0 D5 29 7E 74 76 3F й□□ZvL3-ка-)~tv? 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF FF 7GK-[фХЬиk(; 0x110: 99 A9 6D B3 DB 0A 96 01 5B E9 B8 A5 A9 1D 09 5A Щйт;-□Щ□[ш¬ей□□Z 0x120: 76 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC vL3-ка-)~tv?7GK- 0x130: 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 99 A9 6D B3 [фXbиk(; Щйт; 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC -□Щ□[ш¬ей□□ZvL3- 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC -□Щ□[ш¬ей□□ZvL3- 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ка-)~tv?7GK-[фXb ▼ Cancel		OxOCO:	5B	E9	B8	Α5	Α9	1D	13	5Å	76	D4	9D	BC	AA	AO	D5	29	[цьей002vL9-ка-)
0x0E0: FF BC FF FF 99 A9 6D B3 DB 0A 96 01 5B E9 B8 A5 - Щйт;-□Щ□[щ¬е 0x0F0: A9 1D 07 5A 76 D4 9D BC AA A0 D5 29 7E 74 76 3F й□□ZvL3-xa-)~tv? 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[фXbиk(; 0x110: 99 A9 6D B3 DB 0A 96 01 5B E9 B8 A5 A9 1D 09 5A Щйт;-□Щ□[ш¬ей□□Z 0x120: 76 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC vL3-xa-)~tv?7GK- 0x130: 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 99 A9 6D B3 [фXbиk(; Щйт; 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC -□Щ□[ш¬ей□□ZvL3- 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC -□Щ□[ш¬ей□□ZvL3- 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C xa-)~tv?7GK-[фXb 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C xa-)~tv?7GK-[фXb		OxODO:	7E	74	76	ЗF	37	47	88	BC	5B	E4	95	90	8	6B	7B	B6	~tv?7GK-[фХЬик{;
0x0F0: A9 1D 07 5A 76 D4 9D BC AA A0 D5 29 7E 74 76 3F й⊡□ZvL3-ка-)~tv? 0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 7GK-[фХbиk(; 0x110: 99 A9 6D B3 DB 0A 96 01 5B E9 B8 A5 A9 1D 09 5A Щйт;-□Ц□[ш¬ей⊡□Z 0x120: 76 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC 0x130: 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 99 A9 6D B3 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C xa-)~tv?7GK-[фXb] Cancel Swap bytes		OxOEO:	FF	BC	FF	FF	99	Α9	6D	В3	DB	OA	96	01	5B	E9	B8	Α5	– Щйтк¦–ОЩО[щ⊢е
0x100: 37 47 8A BC 5B E4 95 9C A8 6B 7B B6 FF FF FF FF FF 7GK-[\$\Delta Xbuk(; 0x110: 99 A9 6D B3 DB 0A 96 01 5B E9 B8 A5 A9 1D 09 5A Щ\mumitim;-□□□□[um=md□□Z] 0x120: 76 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC vL3-ra-)~tv?7GK- 0x130: 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 99 A9 6D B3 [\$\phi Xbuk(; \u00e4 mm; 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC -□□□[\$\u00e4mm; mim; \u00e4mm; 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC -□□□[\$\u00e4mm; mim; \u00e4mm; 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ra-)~tv?7GK-[\$\u00e4Xb<]		OxOFO:	Α9	1D	07	5Å	76	D4	9D	BC	AA	AO	D5	29	7E	74	76	ЗF	йDDZvL9-ка-)~tv?
0x110: 99 A9 6D B3 DB 0A 96 01 5B E9 B8 A5 A9 1D 09 5A Щйт,-ОЩО [ш¬ейООZ 0x120: 76 D4 9D BC AA A0 D5 29 7E 74 76 3F 37 47 8A BC vL3-xa-)~tv?7GK- 0x130: 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 99 A9 6D B3 [фХЬик(; Щйт;) 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC -ОЩО [ш¬ейОО ZvL3- 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C xa-)~tv?7GK-[фХЬ 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C xa-)~tv?7GK-[фХЬ Cancel Swap bytes Advanced functions Continue >		0x100:	37	47	88	BC	5B	E4	95	9C	A8	6B	7B	B6	FF	FF	FF	FF	7GK-[фХьик{;
0x120: 76 D4 9D BC AA AO D5 29 7E 74 76 3F 37 47 8A BC vL3-ка-)~tv?7GK- 0x130: 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 99 A9 6D B3 [фХЬик(; Щйт;)] 0x140: DB OA 96 01 5B E9 B8 A5 A9 1D OB 5A 76 D4 9D BC -□Щ□[ш¬ей□□ZvL3- 0x150: AA AO D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ка-)~tv?7GK-[фХЬ Cancel Swap bytes Advanced functions Continue >		0x110:	99	Α9	6D	B3	DB	0A	96	01	5B	E9	B8	Α5	Α9	1D	09	5Å	Щйт¦-ОЦО (цьейООС
0x130: 5B E4 95 9C A8 6B 7B B6 FF FF FF FF 99 A9 6D B3 [фХЬик(; Щйта; 0x140: DB 0A 96 01 5B E9 B8 A5 A9 1D 0B 5A 76 D4 9D BC -□Щ□[ш¬ей□□ZvL3- 0x150: AA A0 D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ка-)~tv?7GK-[фХЬ Cancel Swap bytes Advanced functions Continue >		0x120:	76	D4	9D	BC	AA	AO	D5	29	7E	74	76	ЗF	37	47	88	BC	vL3-ra-)~tv?7GK-
Ox140: DB OA 96 O1 5B E9 B8 A5 A9 1D OB 5A 76 D4 9D BC -□Щ□[ш¬ей⊡□ZvL9- Ox150: AA AO D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ка-)~tv?7GK-[фХЬ Cancel Swap bytes Advanced functions Continue >		Ox130:	5B	Ε4	95	9C	A8	6B	7B	B6	FF	FF	FF	FF	99	Α9	6D	ВЗ	[фХьик{; Щйт;
Ox150: AA AO D5 29 7E 74 76 3F 37 47 8A BC 5B E4 95 9C ra−)~tv?7GK−[ΦXb Cancel Swap bytes Advanced functions Continue >		0x140:	DB	OA	96	01	5B	E9	B8	A5	Α9	1D	OB	5Å	76	D4	9D	BC	-ОЩО (щ-ейОО ZvL Э-
Cancel Swap bytes Advanced functions Continue >		0x150:	AA	AO	D5	29	7E	74	76	3 F	37	47	88	BC	5B	E4	95	9C	ка-)~tv?7GK-[фХЬ 👽
Cancel Swap bytes Advanced functions Continue >																			
Cancel Swap bytes Advanced functions Continue >					_														
		Ca	ncel								Swa	p by	tes		A	dvar	nced	func	tions Continue >

Purpose of the buttons in "Make key from EEPROM" window:

"Cancel" - return to previous window

"Swap bytes" - Rearrangement of bytes for definition of EEPROM configuration

"Advanced functions" - Additional options (Depending on the version used by you; reception of Login, editing of VIN-number, editing of mileage)

"Continue" - Transition to programming data in a key or transponder

6. Press [Continue >] to start key/transponder programming. You will see the following message. Insert blank key into programmer and press [OK].



- 7. Software will verify if inserted key is blank.
- 8. If key is blank, software let you to choose key number.
- 9. Device will write all necessary key data from dump to key.
- 10. After that, software suggests you to save new dump.
- 11. Write new dump back to immobilizer.

Additional options for BMW keys: "Read key info" option:

BMW keys based on PCF7942/44 type transponders contain internal memory in which is stored:

- VIN –number
- Mileage
- Last stored running time
- Mechanical key code
- Remote frequency
- Key number

This data can be read with help of "Read key info" option from option list designed for BMW keys.

BMW key info	
BMW key info	
Chassis :	
E60 -> 525xi	
VIN :	
WBANF31000CX12560	
Odometer :	
32487 km	
System time :	
13:53 09.03.2009	
Mechanical code :	
HA00011814	
Short VIN (last 6 symbols) :	
×52-60	
Remote control :	
868 MHz	
Key number :	
Key 2	
Refresh info Close	

Choose desired option;

- Refresh info Reread key data
- Close Close window

Additional options for BMW keys: Option "BMW EEPROM data":

Using this option you can read BMW key memory.

EEPROM functions		×
Menu	EEPROM Memory (eeprom.bin)	
Read EEPROM	Ox000: B1	A
Load file	0x020: F7 33 FF FF AA 55 0F F0 00 0A 05 A0 00 00 35 50 0x030: 14 61 19 16 58 52 C6 02 FF 27 1B 06 FF 00 12 F8	ў3 κU×Ё□□□a□□5₽ ¶a□□XR!□ '□□a□□°
Save file	0x040: 00 07 02 00 57 42 41 4E 46 33 31 30 30 30 =	DDDDWBANF3100
	0x060: 4C 43 53 57 30 00 00 00 00 7E E7 2A 03 57 37 35	LCSW00000~u*0upN
	0x070: 35 0D 09 03 07 D9 0D 1B 20 04 FA 02 FF FF FF FE 0x080: C2 14 10 F9 84 04 0E 02 1C 80 84 06 12 01 15 80	5000-00 0·0 ; Т90-доооддоо§д
	0x090: 84 01 12 03 24 80 84 11 24 01 23 80 84 02 4E 02 0x0A0: 60 80 88 03 22 02 45 80 84 10 0E 01 43 C0 88 20	доос\$адо\$о#адомо `амотобадоосси
		BO3 AM ! BO3 ADODOO
	0x0E0: 00 00 00 00 00 00 00 00 00 00 00 00 0	
	0x100: 04 05 A5 57 2A 82 AB CA A3 6A A3 70 FF FF 00 00 0x110: 00 00 00 00 00 00 00 00 00 00 00 00 0	00eW*Bn¦rjrp 00
	0x120: 00 00 00 00 00 00 00 00 00 00 00 00 0	
	0x140: 0B 01 FF FF FF 12 FF FF 00 00 00 00 4C 00 00 00 0x150: 19 07 06 12 86 83 47 00 09 91 17 16 28 30 00 CD	oo o ooolooo oooxrgoocoo (oo= 🗸
Close		

Choose desired option;

- **Read EEPROM** Transponder's EEPROM reading option. There's a block read status at the bottom of the screen, each one contains 32 bytes of EEPROM. *Red indicator means block is closed and cannot be written.*
- Write EEPROM Transponder's EEPROM writing option.
- Load file... Load key dump from file.
- Save file... Write key dump into file.

Additional options for BMW keys: Option "BMW Remote control":

In BMW keys unlike of other cars, data of a radio channel are in external EEPROM and can be read/written using separate function.

Remote control		×						
Remote control data —								
Key number :	00 00							
Secret Key (high) :	00 00							
Secret Key (low) :	00 00 00 00							
Synchronization :	00 00 00 00							
Configuration :	00 00 00 00							
Read Write Verify								
Close								

Note: Remote control area will be closed after programming and cannot be read anymore!

Transponder configuration option "Write CFG byte":

Warning!!! Designed for advanced users only! Unintentionally you can damage key and it cannot be used anymore!

Write config byte (Page3)
🔲 D0 - Data transfer - Manchester code
✔ D1 - Data transfer - D1,D2 HITAG 2 - Depending on bit D0
🗹 D2 - Data transfer - see bit D1
D3 - Transponder mode - Password mode
D4 - Page 6-7 - Read / Write enabled
D5 - Page 4-5 - Read / Write enabled
D6 - Page 3 - Read / Write enabled
D7 - Page 1-2 - Read / Write enabled
06 Write Cancel

Bits value explanation:

Dx	Off	On	Note
D0	Manchester	Biphase	
D1	Х	Х	not used
D2	Х	Х	not used
D3	Password mode Crypto mode		
D4	PAGE 6 and 7 read/write	PAGE 6 and 7 read only	
D5	PAGE 4 and 5 read/write	PAGE 4 and 5 read only	
D6	PAGE 3 read/write	PAGE 3 read only, CFG & Pass - fixed!	Only once programmable area!
D7	PAGE 1 and 2 read/write	PAGE 1 no read/no write PAGE 2 read only (in password mode) PAGE 2 no read/no write (in crypto mode)	Only once programmable area!