VVDI2 – Transponder Programmer User Manual

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1.Document Declaration

Please view the following declaration carefully:

- VVDI2 Transponder Programmer User Manual can help you maintenance vehicles and read/write transponder with VVDI2 device. Please DON'T used for illegal purpose, Please follow the national law
- VVDI2 Transponder Programmer User Manual is written by VVDI2, please DON'T used for commercial purposes without authorize
- VVDI2 –Transponder Programmer User Manual can help you how to use Transponder Programmer software, please view carefully
- Any illegal use VVDI2 –Transponder Programmer User Manual, illegal use VVDI2 device, The user should take all risks, the company does not assume any responsibility

2. Overview

Noun explanation 2.1.

- **Transponder**: immo transponder, the transponder inside key, sometimes we call it chip
- sub-remote-pcb: the remote PCB, used in Prepare Remote function. After write data with remote programmer, it can adapt to car for remote function
- Remote Programmer: It is not standard device, This device can connect to DB15 in VVDI2, it can prepare remote key with sub-remote-pcb
- Byte: a decimal value between 0-255, but we can't input decimal value, we input hex value, every byte between 00-FF. Note: For the byte use in transponder, every input hop.us character must belong to 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F

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2.2. Options

Detail can be found in chapter 3 Options

Choose Language

Transponder Programming 2.3.

Detail can be found in chapter 4 Transponder Programming Support auto detect transponder type, support following types:

- 1) PCF7930/PCF7931/PCF7935
- 2) HITAG2
- 3) HITAG2+ EE
- 4) HITAG2 Extended
- 5) HITAG3
- 6) HITAG Pro
- 7) HITAG (BMW)
- 8) HITAG (VAG)
- 9) MEGAMOS13
- 10) MEGAMOS48
- 11) MEGAMOS8E
- 12) TEMIC 11/TEMIC 12
- 13) TEMIC 8C
- 14) TIRIS 4C
- 15) TIRIS DST 4D/4E
- 16) TIRIS DST+
- 17) T5/TK5551

2.4. Special Transponder

Detail can be found in chapter 5 Special Transponder

This function can prepare a blank transponder to special one, just as key ordered by dealer, it can be learned to car with PIN

2.5. Immobilizer Data Tool

Detail can be found in chapter 6 Immobilizer Data Tool

This function can make a working key directly with immobox EEPROM dump. Support most of the car manufacture

2.6. Other Key Tool

Detail can be found in chapter 7 Other Key Tool

Mainly include unlock key, VAG searching 7th bytes CS, VAG prepare dealer with 7 bytes CS, Change MEGAMOS 48 ID etc

2.7. Prepare Remote

Detail can be found in chapter 8 Prepare Remote

This function use Remote Programmer write special data to sub-remote-pcb, make sub-remote-pcb become an original remote key, it can adapt to car for remote function

2.8. Remote frequency test

Just provide power to VVDI2, place remote key on CHECK area, CHECK area is on VVDI2 device, Press button "F", then press any button of your remote key, the frequency and type will display on VVDI2 LCD display

2.9. IC Chip Program

Attention: this function not support now



3.Options

3.1. Choose Language

Support following languages:

- Chinese (Simplified)
- English

Please manual set user language after first run program

3.2. Antenna Parameters

You can make the antenna more stable with change gain value (PICTURE 3. 1) For every key is different from each other, the transponder is different position in the key, Thus will cause bad answer while access transponder. You can change antenna gain to large the sensing range, make antenna access the far away transponder

Antenna gain value can be 0, 1, 2, 3

When gain value smaller, the sensing range will be small and lower. If the transponder position is higher from antenna, the access may failed

When gain value larger, the sensing range will be large and higher. If the transponder position is lower from antenna, the access may failed

Simply:

If the transponder position is far away from antenna, you need select higher gain for access, example: 2 or 3

If the transponder position is nearby or in antenna, you need select lower gain for access, example: 0 or 1

Antenna Parameters
Antenna gain Antenna gain value can be 0, 1, 2, 3 When gain value smaller, the transponder position should be lower from antenna When gain value larger, the transponder position should be higher from antenna You can find the detail in user manual
Apply Exit

(PICTURE 3.1)

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4. Transponder Programming

Support following types:

- 1) Autodetect Transponder
- 2) PCF7930/PCF7931/PCF7935
- 3) HITAG2
- 4) HITAG2+ EE
- 5) HITAG2 Extended
- 6) HITAG3
- 7) HITAG Pro
- 8) HITAG (BMW)
- 9) HITAG (VAG)
- 10) MEGAMOS13
- 11) MEGAMOS48
- 12) MEGAMOS8E
- 13) TEMIC 11/TEMIC 12
- 14) TEMIC 8C
- 15) TIRIS 4C
- 16) TIRIS DST 4D/4E
- 17) TIRIS DST+
- 18) T5/TK5551

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4.1. Autodetect Transponder



(PICTURE 4. 1)

Input transponder to VVDI2 programmer, press button "Autodetect Transponder", it will detect transponder type and simple status information. You can turn to specify type after success read (PICTURE 4.1). Autodetect Transponder function can run without software, just provide power to VVDI2, press button "T" on the device, transponder type will show in the LCD display

4.2. PCF7930/PCF7931/PCF7935

Many old cars use this transponder as immo transponder, this transponder support generate many types special transponder. It mainly contains Password, Main memory, Shadow memory etc. Note: PCF7930 and PCF7931dont have Shadow memory, only have Main memory. PCF7935 have this 2 memory both. Shadow memory only has 16 bytes

Write: You need read transponder success before write, modify the position to your expect value, the byte will change read after edit, then write to transponder (PICTURE 4. 2)



(PICTURE 4.2)

- > Read Transponder: Read Main memory don't require password
- Write: For the transponder enabled Password feature, you must place correct password in Password area before write

4.3. HITAG2

HITAG2 is very popular immo transponder <u>(PICTURE 4.3)</u>, it is compatible with PHILIPS PCF7936 transponders. It support following types:

PCF7936 PCF7941 PCF7942/44

PCF7943

PCF7945

PCF7946

PCF7947

PCF7952

PCF7953

PCF7961

(There's some other HITAG2 transponder made by small company, it don't have the above type, but also support)

Access method:

- PCF7936 support Password mode and Cipher mode
- > Other's don't have Password mode itself, only have Cipher mode
- > For Password mode: Only SK low was used for login, Default key: 4D494B52
- For Cipher mode: It use SK low and SK high for login, Default key: SK low: 4D494B52; SK high: 4F4E

Coding method:

 Support Manchester and Biphase coding (Note: Most immo transponder use Manchester coding, rarely use Biphase type)



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🗠 VVDI2 - Tansponde	er Programmer V1.0.5	Remaining Synchronizat	ion Time: 29 days 📃 🗖 🔀
Options Transponder-Chip	p-Remote		
	Type HITAG2		~
Transponder Programming	Parame	AD494RE2 Defension	
£	SK high	4D494B32 Default key	Cipher mode Manchester Original Gipher mode
Special Transponder	Read Transponder		
	Transponder infomation	Transpond	ler data
	Identifier 168B9B97	Read Page 0	D4455555 Read Write
Immobilizer Data Tool	Type PCF 7	945 Page 1	FFFFFFFF Read Write
	SK low 4D494B52	Read Write	
Other Key Tool	SK high 00004F4E	Read Write Page 2	FF19070B Read Write
- Co	Config 08AA4854	Read Write Page 3	FFFFFFF Read Write
Prepare Remote	Remote control		
	Page 0 FFFFFFFF	Read Write Page 2	FFFFFFFF Read Write
Remote Frequence	Page 1 FFFFFFFF	Read Write Page 3	FFFFFFFF Read Write
<			
Reading data success.			

(PICTURE 4.3)

Read Transponder

It will read all readable page and shown in window (**Transponder information**, **Transponder data**, **Remote control**(not all transponder have this area)), it will try password mode and cipher mode automatically, also Manchester and Biphase automatically. For the transponder with default key we can read all readable pages. If the transponder was changed SK value, we can only read ID before you input correct SK value in Parameter. Every page in HITAG2 has 4 bytes. The type is detect with identifier, so it will not strictly for many OEM keys

About the transponder manufacture configuration(TMCF)

TMCF byte is very important; usually it is the first byte in **Config** page. Example: Config page is "XXYYZZWW" (4 bytes). The first byte "XX" is TMCF, write error TMCF value can lock the transponder or damage it. The specify explanation for TMC following: Convert XX(hex) to binary, it have 8 bits, every bit can be 0 or 1, we set as: X1 X2 X3 X4 X5 X6 X7 X8

- > X1: If set to 1, the SK low and SK high was unable to read and write
- > X2: If set to 1, the Config page was unable to write, but read is always available
- X3: If set to 1, Remote control area was unable to read and write(Note: PCF7936 have none about this bit)
- X4: If set to 1, transponder data was unable to write, but read is always available X5: If set to 1, transponder is use transponder data area. If set to 0, mean use remote control area (Attention: For PCF7936, if set to 1, transponder use Cipher mode, if set to 1, transponder use Password mode)

- X6: Always 0, reserve bit (Attention: PCF7936 must set to 1, set to 0 will damage transponder)
- X7: Always 0, reserve bit (Attention: PCF7936 must set to 1, set to 0 will damage transponder)
- X8: If set to 0, transponder use Manchester coding, if set to 1, use Biphase coding (CDP)

How to change a byte to binary: With PC system Calculator ->Select Scientific->Select Hex ->input TMCF value ->Select Bin, you can see the binary values. If binary not have total 8 bits, means the front have several 0

Example: TMCF value is C8, so X1-X8 have value: 11001000 The transponder use Manchester coding The transponder use transponder data area The SK low and SK high was unable to read and write The Config page was unable to write, but support read

4.4. HITAG2+ EE

Support read EEPROM data for PCF7952, PCF7945, PCF7953 etc. (Note: Standard access method for HITAG2+ EEPROM, just like Hyundai, Kia keys. BMW key not belong to this type) (PICTURE 4. 4)





4.5. HITAG2 Extended

Support read/write EEPROM data for HITAG2 Extended transponder, mainly used n GM cars. You can read with SK values. Enable SK will read more data compared with not enable SK

Write: You need read transponder success before write, modify the position to your expect value, the byte will change read after edit, then write to transponder (PICTURE 4.5)



4.6. HITAG3

Support read EEPROM data for HITAG3 (Some new key in Nissan use this type) (PICTURE 4. 6)



(PICTURE 4. 6)

4.7. HITAG Pro

HITAG Pro transponder, now we know BMW F-Series keys, new Porsche keys belong to this type. Support read EEPROM data (PICTURE 4.7)



4.8. **HITAG (BMW)**

Support read/write EEPROM data for BMW remote (keyless) keys.

Write: You need read transponder success before write, modify the position to your expect value, the byte will change read after edit, then write to transponder (PICTURE 4.8)



(PICTURE 4.8)

4.9. **HITAG (VAG)**

HITAG (VAG) is a special transponder for VAG immo5 keys. It can read EEPROM data. As we know, A4/A5/A6/A7/A8/Q5/Touareg cars with immo5 system use this type key (PICTURE 4.9)



(PICTURE 4.9)

4.10. MEGAMOS 13

MEGAMOS 13 only have a data stream.

Support copy transponder: Just write the transponder identifier to the simulate transponder (T5 or PCF7935) (PICTURE 4.10)

Options Transponder-Chi	p-Remote			
Transponder Programming	Type MEGAMOS 13			
Special Transponder	Read Transponder Write Data stream			
Immobilizer Data Tool	FF 81 1C D1 50 7C 63 2A FF 81 1C D1 50 7C 63 2A			
Q	Write operation only support T5, PCF7935 simulate transponder.			
Other Key Tool				
	® CNV			
Prepare Remote				
Remote Frequence				
Reading data success.				
	<u>(PICTURE 4. 10)</u>			

4.11. MEGAMOS 48

MEGAMOS 48 have 16 pages (<u>PICTURE 4.11</u>), We can read Page0-Page4, Page15-Page12. Other pages only have write operation. Every page has 2 bytes

📲 VVDI2 - Tanspon	der Programmer V1.0.5 Remaining Synchronization Time: 29 days 📃 🗖 🔀
Options Transponder-Ch	ip-Remote
	Type MEGAMOS 48
Transponder Programming	Identifier Page 3/Page 2 Page 11 Write
Special Transponder	Image: D06F84F0 Image: D06F84F0 Read Page: 10 Image: Write UnLock
Immobilizer Data Tool	Read/Write page Crypto key Page 15 4C73 Read Write Page 9 Write
<u>Ö</u>	Page 14 1AB8 Read Write Page 8 Write Write
Other Key Tool	Page 13 0A51 Read Write Page 7 Write Verify crypto key
	Page 12 1218 Read Write Page 6 Write
Prepare Remote	Page 1 EE89 Read Write Page 5 Write
Remote Frequence	Page 0 876F Read Write Page 4 Write

(PICTURE 4.11)

Read Transponder

Read identifier (Page3/Page2), config page (Page1, Page0) and user page (Pager15-Page12)

If page 1 shown with red mean the transponder is locked. You can't write any data to locked transponder

About change MEGAMOS 48 identifier: see Change megamos 48 ID in chapter 7 Other Key Tool

PIN / Unlock

The PIN code is stored in Page11, Page10, this 2 pages is write only page. You can lock the transponder to blank one with button "Unlock" and correct PIN code

Attention: Electronic MEGAMOS 48 made by VAG don't support unlock operation

Crypto Key

MEGAMOS 48 have 12 bytes crypto key, stored in page9-page4

Input correct key in page9-page4 (not write, only input), Press button "Verify", you can verify the crypto key with values stored in transponder

4.12. **MEGAMOS 8E**

MEGAMOS 8E transponder (PICTURE 4.12), mainly contain identifier, Data area, Crypto key area. This transponder usually used in A6/Q7/Allroad (EZS-Kessy J518 4th immobilizer system)

🧠 VVDI2 - Tanspo	onder	Programme	r ¥1.0.5	Remaining	Synchronizat	tion Time: 29	days	
Options Transponder-	Chip-I	Remote						
(Туре МЕ	GAMOS 8E	2				~
Transponder Programming			iz I					
Special Transponder		Read Transpo	onder	I	dentifier	280C1F1E	Read	
1		Crypto key are	ea	[Weite Kenn			
Immobilizer Data Tool				[write key	UNLOCK	Che	CK Blank
Q		Data area					0	v
Other Key Tool		Page 0	038E	Read Write	Page 4	0000	Read	Write
		Page 1	7000	Read Write	Page 5	0000	Read	Write
Prepare Remote		Page 2	3333	Read Write	Page 6	0000	Read	Write
st in the second se		Page 3	0000	Read Write	Page 7	0000	Read	Write
Remote Frequence	⊻							
Reading data success.		1						

(PICTURE 4. 12)

Read Transponder: It can read identifier, and 8 pages data area. Every page has 2 bytes

- Crypto key area: This area only support write. It contain the crypto key, total 12 bytes
- > **Unlock**: You can unlock the transponder to blank with correct crypto key
- Check Blank: Check transponder locked or not, the transponder will locked immediately after write crypto key

4.13. TEMIC 11/ TEMIC 12

TEMIC 11 和 TEMIC 12 芯片非常接近,通讯方式略有不同.对于标准的芯片来说,TEMIC 11 芯片默认头部为 BEFA, TEMIC 12 芯片默认头部为 660F 或 66F0.可以使用自动搜索,也可以通过移位功能手动搜索(PICTURE 4.13). 此芯片只有一个数据流信息,支持芯片拷贝.拷贝只要把原始芯片 ID 写入到 T5 模拟芯片中

Options Transponder-Chip-Remote Transponder Type Transponder Immobilizer Data Tool Other Key Tool Data stream Other Key Tool Rotate shift data stream Prepare Remote Rotate left 1 bit Rotate left 3 bits Rotate right 8 bit Write operation only support T5 simulate transponder.	👒 VVDI2 - Tanspond	er Programmer V1.0.5 Remaining Synchronization Time: 29 days 📃 🗖 🗙
Type TEMIC 11 Tansponder Freigrammer Freigrammer Other Key Tool Other Key Tool Other Key Tool Freigramer Rotate left 8 bits Rotate right 1 bit Rotate right 1 bit Rotate right 8 bits Rotate right 1 bit Ro	Options Transponder-Chi	p-Remote
Transponder Pregramming Immobilizer Data Tool Other Key Tool Other Key Tool Prepare Remote Rotate left 1 bit Rotate left 1 bit Rotate left 1 bit Rotate right 8 bit Urite operation only support T5 simulate transponder.		Type TEMIC 11
Special Transponder Data stream Data stream Data stream Data stream Rotate shift data stream Rotate left 1 bit Rotate left 1 bit Rotate left 8 bits Rotate right 8 bit Rotate right 8 bit Rotate left 8 bits Rotate right 8 bit Rotate right 8 bit Remote Frequence Reading data success. (PI CTURE 4. 13)	Transponder Programming	Read Transponder Write
Data stream Data stream Data stream Default	Special Transponder	
Immobilizer Data Tool Other Key Tool Other Key Tool Prepare Remote Renote Frequence Reading data success. CPICTURE 4.13)		Data stream BEFA00000001234
Rotate shift data stream Cother Key Tool Cother Key Tool Rotate left 1 bit Rotate left 8 bits Rotate left 8 bits Rotate left 9 bits Rotate left 9 bits <td>Immobilizer Data Tool</td> <td></td>	Immobilizer Data Tool	
Other Key Tool Rotate left 1 bit Rotate left 1 bit Rotate left 1 bit Rotate left 8 bits Rotate right 8 bit Manual Search Write operation only support T5 simulate transponder. Reading data success. (PICTURE 4. 13)	<u>Ö</u>	Rotate shift data stream
Rotate left 8 bits Rotate right 8 bit Manual Search Write operation only support T5 simulate transponder. Reading data success. (PICTURE 4. 13)	Other Key Tool	Rotate left 1 bit Rotate right 1 bit
Prepare Remote Write operation only support T5 simulate transponder. Reading data success. (PICTURE 4. 13)		Rotate left 8 bits Rotate right 8 bit O Manual Search
Write operation only support T5 simulate transponder. Remote Frequence Reading data success. (PICTURE 4. 13)	Prepare Remote	
Reading data success.	R	Write operation only support T5 simulate transponder.
Reading data success.	Remote Frequence	
<u>(PICTURE 4.13)</u>	Reading data success.	
(PICIURE 4. 13)		(PLOTURE 4, 12)
	1	

4.14. TEMIC 8C

TEMIC 8C 芯片只有一个数据流信息(PICTURE 4.14)





4.15. TIRIS 4C

TIRIS 4C only have a Data stream (<u>PICTURE 4.15</u>) Support copy transponder: Just write the Tiris 4C data to TIRIS 4C or TPX1





4.16. TIRIS DST 4D/TIRIS DST 4E

TIRIS DST 4D is very similar with TIRIS DST 4E, they have same data area and algorithm, crypto key is 40 bit(5 bytes) stored in page 4. The only different is they have different coding method, so this 2 transponder can't instead each other (PICTURE 4. 16)

Options Transponder-Chip-Remote Transponder Transponder Programming Immobilizer Data Tool Transponder Page 1: Password Un-Lock FF
Transponder Programming Type TIRIS DST 4E Immobilizer Data Tool TIRIS crypto verify Special Transponder Transponder Page 1: Password Un-Lock Transponder Page 1: Password Un-Lock FF Write Lock
Transponder Programming IIRIS crypto verify Seed 000000000 Check TIRIS response(40 bits) Read Transponder Key 000000000 Calc TIRIS response(40 bits) Calculated Data area Page 1: Password Un-Lock FF Write Lock
immobilizer Data Tool Page 1: Password Un-Lock FF Write Lock
Data area Page 1: Password Un-Lock FF Write Lock
Page 2: User data Un-Lock 00 Write Lock
Page 3: Serial(3 bytes) +Manufacture Code(1 byte) Locked 2Å6710 16 Write Lock
Prepare Remote Page 4: Encryption key Unlock 000000000 Unlock Lock
Reading data success.

- Read Transponder: Read Page1-Page4 (default key can read for page4) and get lock status. If the page was locked, you can't write data anymore. Page3 usually use as identifier, it combined with 3 bytes Serial and 1 bytes manufacture code
- Write: Write data to unlock page. Page1 and Page2 have 1 byte, Page3 have 4 bytes, Page4 have 5 byes
- Lock: It can protect the page for write operation
- TIRIS crypto verify: This function can verify the stored crypto key (page4) right or not
- Check TIRIS response (40 bits): VVDI2 send the seed to transponder and read the crypto value (3 bytes)
- Calc TIRIS response (40 bits): VVDI2 have the algorithm for TIRIS 40 bits, we can calculate the seed and key, get right crypto value (3bytes). Compare this value with transponder response value, if they are same, the transponder have same crypto key as you input. (Attention: For some special crypto key, you need check several different seed for the verify)

⁽PICTURE 4. 16)

4.17. TIRIS DST+

TIRIS DST+ support 2 algorithm, one is same as TIRIS DST 4D (40 bits), another is 80 bits (10 bytes) algorithm (Toyota G transponder use this type). It have same coding method with TIRIS DST 4D, so if the transponder deploy to 40 bits method, it can instead TIRIS DST 4D transponder (PICTURE 4. 17)

🤏 VVDI2 - Tansponde	er Programmer V1.0.5 Remaining Synchronization Time: 29 days	X
Options Transponder-Chip	-Remote	
	Type TIRIS DST+	
Transponder Programming	TIRIS crypto verify Seed 000000000 Check TIRIS response(40 bits) Response	
Special Transponder	Read Transponder Key 0000000000 Calc TIRIS response(40 bits) Calculated	
Immobilizer Data Tool	Data area Page 1: Password Un-Lock FF Write Lock User data Un-Lock 0000000000 Write Lock]
<u>Ö</u>	Page 2: User data Un-Lock 00 Write Lock Page 9: User data Un-Lock 0000000000 Write Lock Page 3: Lock Page 10: Und ock 0000000000 Write Lock]]
Other Key Tool	Serial(3 Locked /F/794 83 Write Lock User data Britock Boods 80000 Write Lock]
Č,	Page 4: Encryption Un-Lock 000000000 Write Lock User data	
Prepare Remote	Page 6: Issuer key Write Lock Dage 30:	
	Page 7: Used appropriate and a]
Remote Frequence	Mutual Auth. Un-Lock UUUUUUUUUU Write Lock Page 30: key Config Un-Lock 4600 Write Lock	
Reading data success.		=

- (PICTURE 4.17)
- Read Transponder: Read Page1, Page2, Page3, Page4 (Default key can be read), Page8-Page12, Page29, Page30 and lock status. If the page was locked, you can't write data anymore. Page3 usually use as identifier, it combined with 3 bytes Serial and 1 bytes manufacture code
- Write: Write data to unlock page. Page1 and Page2 have 1 byte, Page3 have 4 bytes, Page30 have 2 bytes, other's page all have 5 bytes
- Lock: It can protect the page for write operation
- TIRIS crypto verify: This function only support verify 40 bits method transponder
- Ch Check TIRIS response (40 bits): VVDI2 send the seed to transponder and read the crypto value (3 bytes)
- Calc TIRIS response (40 bits): VVDI2 have the algorithm for TIRIS 40 bits, we can calculate the seed and key, get right crypto value (3bytes). Compare this value with transponder response value, if they are same, the transponder have same crypto key as you input. (Attention: For some special crypto key, you need check several different seed for the verify)

4.18. T5/TK5551

T5/TK5551 is a very useful transponder; it can simulate many other transponders. The Data area only support write. Simulate require write different config and data. Attention: This transponder is very complex, you'd better not write data manually, use function provide by VVDI2, write error data can damage transponder (PICTURE 4.18)

🗠 WVDI2 - Tansponder	r Programmer V1.0	.4 Remai	ining Synchroniza	tion Time: 30	days	
Options Transponder-Chip-	Remote					
	Type T5/TK555	l				~
Transponder Programming	<u>i</u>	Write protected p	Dages 6 5	4 3	2 1	0
Special Transponder	Read Transponder					
	Parameter Mode 15-14 O 00 with LIW	Rate 13-12	Memory 11 0 128 bits	Modulation 10	Password 9	18
Immobilizer Data Tool	00 with PMC	01 RF/40	🔿 1 64 bits	🔘 0 Manchester	() 1 ON	
	Data area	0 10 KF/32				
Other Key Tool	Page 0	Write	Page 4	<u>n</u>	Write	
	Page 1	Write	Page 5		Write	
Prepare Remote	Page 2	Write	Page 6		Write	
	Page 3	Write	Page 7		Write	
Remote Frequence	Data stream	81 1C D1 50	7C 63 2A FF 81 1C	D1 50 7C 63	2Å	
Reading data success.						
		(PICTURE	<u>4. 18)</u>			

5.Special Transponder

5.1. Mainly function

Special Transponder, it can prepare a special transponder (original manufacture key). It can be learned to car with PIN code (PICTURE 5.1)



5.2. Support Type

Support following types:

- 1) TP22 (Seat-CAN) --- Megamos Crypto 48
- 2) TP23 (Volkswagen-CAN) --- Megamos Crypto 48
- 3) TP24 (Skoda-CAN) --- Megamos Crypto 48
- 4) TP25 (Audi-CAN) --- Megamos Crypto 48
- 5) ID33 Citroen/Peugeot/Fiat/Lancia VALEO --- PCF7935
- 6) ID33 Fiat BOSCH --- PCF7935
- 7) ID33 Mazda --- PCF7935
- 8) ID33 Mitsubishi --- PCF7935
- 9) ID33 Nissan --- PCF7935
- 10) ID33 Nissan 2 --- PCF7935

- 11) ID33 Opel/Vauxhall/Cadillac/Holden --- PCF7935
- 12) ID33 Opel/Vauxhall/Cadillac/Holden 2 --- PCF7935
- 13) ID33 Volkswagen --- PCF7935
- 14) ID40(44) China Cars --- PCF7935
- 15) ID40 Opel/Vauxhall/Cadillac/Holden --- PCF7935
- 16) ID41 Nissan --- PCF7935
- 17) ID42 Volkswagen --- PCF7935
- 18) ID44 Mitsubishi --- PCF7935
- 19) ID44 Volkswagen 1 --- PCF7935
- 20) ID44 Volkswagen 2 --- PCF7935
- 21) ID45 Peugeot --- PCF7935
- 22) ID46 China Cars --- PCF7936
- 23) ID46 VAG --- PCF7936
- 24) ID46 Nissan X-Trail
- 25) ID46 Nissan Platina
- 26) ID46 Nissan Keyless --- Key Card
- 27) ID46 Infinity Keyless --- Key Card
- 28) ID46 Nissan Micra --- Remote Key
- 29) ID46 Nissan Tida --- Remote Key
- 30) ID46 Renault Master II --- Remote Key
- 31) ID46 Renault Clio II --- Remote Key
- 32) ID46 Renault Master II --- Transponder 7936
- 33) ID46 Renault Trafic II --- Remote Key
- 34) ID46 Renault Trafic II --- Transponder 7936
- 35) ID46 Nissan Primastar --- Remote Key
- 36) ID46 Nissan Primastar --- Transponder 7936
- 37) ID46 Nissan Interstar --- Remote Key
- 38) ID46 Nissan Interstar --- Transponder 7936
- 39) ID46 Opel Astra H / Zafira B --- Remote Key
- 40) ID46 Opel Corsa D --- Remote Key
- 41) ID46 Opel Vectra C --- Remote Key
- 42) ID46 Opel Vivaro --- Remote Key
- 43) ID46 Opel Vivaro --- Transponder 7936
- 44) ID46 Opel Movano --- Remote Key
- 45) ID46 Opel Movano --- Transponder 7936
- 46) ID46 Opel Movano III --- Remote Key
- 47) ID46 Renault Master III --- Remote Key
- 48) ID46 Renault Clio III --- Remote Key
- 49) ID46 Renault Modus III --- Remote Key
- 50) ID46 Renault Espace IV --- Transponder 7936
- 51) ID46 Renault Espace IV --- Key Card 2-buttons
- 52) ID46 Renault Espace IV --- Key Card 3-buttons
- 53) ID46 Renault Laguna II --- Transponder 7936
- 54) ID46 Renault Laguna II --- Key Card 2-buttons

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- 55) ID46 Renault Laguna II --- Key Card 3-buttons
- 56) ID46 Renault Laguna III --- Key Card
- 57) ID46 Renault Vel Satis --- Transponder 7936
- 58) ID46 Renault Vel Satis --- Key Card 2-buttons
- 59) ID46 Renault Vel Satis --- Key Card 3-buttons
- 60) ID46 Renault Megane II --- Key Card
- 61) ID46 Renault Scenic II --- Key Card
- 62) ID46 Renault Twingo --- Remote key
- 63) ID46 Renault Twingo --- Transponder 7936
- 64) ID46 Citroen/Fiat/Lancia/Peugeot --- PCF7936
- 65) ID46 Citroen/Peugeot --- PCF7936
- 66) ID46 Citroen/KIA/Hyundai/Peugeot --- PCF7936
- 67) ID46 Fiat/Iveco --- PCF7936
- 68) ID46 Renault/Chrysler --- PCF7936
- 69) ID46 Chrysler CAN bus (Y164,Y170) --- PCF7936
- 70) ID46 Chevrolet Circle Plus --- PCF7936
- 71) ID46 Mitsubishi --- PCF7936
- 72) ID46 Saab
- 73) ID46 Hyundai Remote key 7946
- 74) ID46 KIA Remote key 7946
- 75) ID60 Generic --- Texas 4D
- 76) ID61 Mitsubishi II --- Texas 4D
- 77) ID62 Suzuki BIKE --- Texas 4D
- 78) ID62 Kawasaki BIKE --- Texas 4D
- 79) ID62 Mitsubishi III --- Texas 4D
- 80) ID63 Ford/Mazda --- Texas 4D
- 81) ID64 Chrysler/Subaru --- Texas 4E
- 82) ID65 Suzuki/Subaru --- Texas 4D
- 83) ID66 Suzuki --- Texas 4D
- 84) ID67 Toyota --- Texas 4D
- 85) ID68 Lexus --- Texas 4D
- 86) ID69 Yamaha --- Texas 4D.(JMA TP31)
- 87) ID70 Toyota Europe --- Texas 4D
- 88) ID70E Toyota Hybrid --- Texas 4D
- 89) ID73 Mitsubishi --- PCF7935
- 90) ID8C Ford/Mazda --- Temic 8C
- 91) ID8C Proton --- Temic 8C
- 92) Mercedes Benz G- Class --- PCF 7930
- 93) Mercedes Benz C- Class/E- Class --- PCF 7930
- 94) Mercedes Benz ML --- PCF 7930
- 95) VW Jetta 2010 (China) --- Megamos Crypto 48

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5.3. Some Special Transponder Note

 ID40(44) China cars --- PCF7935: this type need select sub type: Chery, Geely, Great Wall, Haima, ChangAn (PICTURE 5.2)

🧠 VVDI2 - Tanspo	nder Programmer V1.0.4 Remaining Synchronization Time:	30 days 📃 🗖 🔀
Options Transponder-0	hip-Remote	
	Type ID40(44) China Cars PCF7935	
Transponder Programming	Models : Chery, Geely, Great Wall, Haima, ChangAn	Chery
1	Transponder : Philips PCF7930, PCF7931, PCF7935	Great Wall
Special Transponder		◯ Haima
**		🔿 ChangAn
Immobilizer Data Tool		
Q.		
Other Key Tool		11.4
Prepare Remote	.1.1	
R	© Cr	Prepare
Remote Frequence		
	(PICTURE 5. 2)	

ID46 China cars --- PCF7936: this type need select sub type: Chery, Geely, Great Wall, Haima, Zotye Auto, Maple Auto, Zhonghua 530, Zhonghua 230 (PICTURE 5.3)



ID67(Toyota)/ID68(Lexus)/ID70(Toyota-Euro)/ID70E(Toyota Hybrid) --- TIRIS 4D: this type need select key position: Master key1, Master key2, Master key3, Master Key4, Valet Key1, Valet Key2 (PICTURE 5.4)



(PICTURE 5. 4)

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6. Immobilizer Data Tool

6.1. Mainly function – Make a working key

Immobilizer Data Tool, simply name write start. It can load car immobox EEPROM dump, make a working key directly. Provide detail transponder type and EEPROM type accord selected car (PICTURE 6. 1): car original transponder, require new transponders, EEPROM chip, EEPROM size etc

How to make a working key with immobox EEPROM dump file, steps:

- 1) Load immobox EEPROM dump (BIN file) with **Load EEPROM dump...**, it will display used key ID, key number, and PIN(if it have) etc
- 2) Select a key position for new key
- 3) Input a blank key to VVDI2 programmer, Press button Make Dealer Key
- 4) After make key success, if you get save new EEPROM window, you need write new dump file to immobox to make new key working(Expect there's special note). If there's no save new EEPROM window, the made key can start engine directly



(PICTURE 6. 1)

6.2. Support Car Type

Support following types:

- Asia
 - Acura
 - Brilliance
 - Besturn
 - Chang An
 - Great Wall
 - Chery
 - Daewoo
 - Daihatsu
 - ➤ Geely
 - Haima
 - Honda
 - > Hyundai
 - > Infiniti
 - Isuzu
 - Kawasaki
 - ≻ Kia
 - > Lexus
 - Mazda
 - Mitsubishi
 - Nissan
 - Proton
 - SaicMotor
 - Saipa
 - IKCO
 - SsangYong
 - Subaru
 - Suzuki
 - Tata
 - Toyota
 - Yamaha

♦ Euro

- Alfa Romeo
- Aprilia
- Aston Martin
- Audi
- Bentley
- ➤ BMW
- > Citroen
- Dacia
- > DAF

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- Ducati
- > Ferrari
- Fiat
- > Gilera
- Iveco
- Jaguar
- Lancia
- > LDV
- > MAN
- Maserati
- Mercedes Benz
- > Opel
- Peugeot
- Piaggio
- > Polonez
- Porsche
- Renault
- > Rover
- Saab
- Scania
- Seat
- Skoda
- Smart
- ➤ TagAZ
- > UAZ
- > VAZ
- ➢ Volvo
- > VW
- USA
- Buick
- Bombardier
- > Cadillac
- > Chevrolet
- > Chrysler
- > Dodge
- Ford
- ➢ GMC
- > Jeep
- > Lincoln
- > Oldsmobile
- Pontiac

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6.3. Special Note

- You'd better use VVDI Programmer for read Immobox EEPROM dump file
- When you save new EEPROM dump, DON'T write to original dump file, save a new name
- For VAG CDC32xx type, some type need FLASH for make dealer key
- For BMW CAS3+ encrypt version, we need working key, engine EEPROM dump or ISN support (PICTURE 6.2)
- For some special immobox, VVDI2 can fix the crashed EEPROM dump to new one.
 Please load new saved EEPROM dump and make key
- Porsche support Erase key, after ease key will save new dump. Make dealer key should load new dump (PICTURE 6.3)

CAS3+	encrypt	detected.	Need	working	key o	r D HE/DDE	dump	or ISR	support
⊙ Hav	ve a wrokin	g key. Insert wor	rking key	to programm	er and co	ntinue		_	2
⊖ Hav	ve ECU dum	np file. Continue i	will load E	CU dump file	R	2	20	Y	
◯ Kno	own ISN								
◯ CAI	NCEL			5	2	P			NEXT
~					6. 2)				
Erase	Key								
Please o	choose key	/ postion which	you wan	t to erase		1			
Ke	ey 1 02ED	01133							
🗌 Ke	ey 2 E3EC	1133							
Ke	ey 3 FFFF	FFFF							
Ke	y 4 FFFF	FFFF							

Key 5 FFFFFFFF

Key 6 FFFFFFFF

Key 7 FFFFFFFF

Key 8 FFFFFFFF

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NEXT

CANCEL

(PICTURE 6.3)

7. Other Key Tool

Mainly include following types, there will be a steps after select one item

- Unlock Megamos 48 transponder: Unlock all dealer key prepared by VVDI2 (Expect electronic MEGAMOS 48) (PICTURE 7. 1)
- Unlock A6/Q7/Allroad Key (MEGAMOS 8E): Require load J518 EEPROM (PICTURE 7.2)
- Unlock PassatB6/CC 46 transponder key (need 95320 EEPROM): Require comfort module EEPROM dump(95320) (PICTURE 7.3)
- Unlock PassatB6/CC 46 transponder key (need 6 bytes CS): Require the 7 bytes CS stored in key (PICTURE 7. 4)
- Unlock 5th OEM key (PICTURE 7. 5): Now the OEM key is not support unlock, the locked OEM key can prepare new dealer key directly. Just use it as a new one
- Special VW cars find 7th CS from working key(Megamos 48): (VAG cars) Find 7th byte CS from working key, require known 6 bytes CS (<u>PICTURE 7.6</u>)
- Special VW cars prepare dealer key with 7 CS(Megamos 48): (VAG cars) Prepare a dealer key with car manufacture and 7 bytes CS (PICTURE 7.7)
- Special Change megamos 48 ID, need special 48: Change MEGAMOS 48 identifier, require special MEGAMOS 48 transponder. You can make a key support enter in dealer server by change 48 ID to original one (PICTURE 7.8)

🗠 VVDI2 - Tanspon	der Prog	rammer ¥1.0.4	Remaining Sync	hronization	Time: 30	days	
Options Transponder-Ch	hip-Remote						
	Type	Unlock-Megamo	s 48 transponder				~
Transponder Programming	1.Unloo 2.Input	ck all dealer key(48 tr loacked 48 transpon	ransponder) prepared b der to programmer and	y VVDI2 unlock.			
4							
Special Transponder							
							UnLock
Immobilizer Data Tool							
-							
Other Key Tool							
Prepare Remote							
R							
Remote Frequence							
Load file success.							

(PICTURE 7.1)

📲 VVDI2 - Tanspond	der Programmer V1.0.4 Remaining Synchronization Time: 30 days	
Options Transponder-Chi	ip-Remote	
	Type Unlock-A6,Q7,Allroad Key (MEGAMOS 8E)	~
Transponder Programming	1.First Load EZS EEPROM dump file(J518) 2.Input dealer key to programmer.Press unlock button.	
Special Transponder	Load EEPROM dump	k
Immobilizer Data Tool		
<u>Ö</u>		
Other Key Tool		
Prepare Remote		19
Remote Frequence	0.	
	1.01	
	(PICTURE 7.2)	
•••• WVDI2 - Tanspond Options Transponder-Chi	der Programmer V1.0.4 Remaining Synchronization Time: 30 days	
	lype Unlock-PassatB6/CC 46 transponder key(need 95320 EEPROM)	<u> </u>
Transponder Programming	1.Unlock Passat B6/CC dealer key(46 transponder) made by VVDI. 2.Load comfort module eeprom dump file.	
	o.input key io programmer and press uniock button.	
Special Transponder		
	Load EEPROM dump	x
Immobilizer Data Tool		
Other Key Tool		
Prepare Remote		
- Second Second		
Remote Frequence		

(PICTURE 7. 3)

🧠 VVDI2 - Tanspor	nder Programmer V1.0.4 Remaining Synchronization Time: 30 days 📃 🗖 🔀
Options Transponder-C	hip-Remote
	Type Unlock-PassatB6/CC 46 transponder key(need 6 bytes CS)
Transponder Programming	 Unlock Passat B6/CC dealer key(46 transponder) made by VVDI. Input 7 bytes CS. Input key to programmer and press unlock button.
Special Transponder	
	UnLock
Immobilizer Data Tool	
Q	
Other Key Tool	Input 7 bytes CS
Prepare Remote	
R	
Remote Frequence	
Load file success.	
	(PICTURE 7. 4)

📲 WVDI2 - Tansponde	r Programmer ¥1.0.4	Remaining Synchronization	Time: 30 days	
Options Transponder-Chip	-Remote			
(Type Unlock-5th immo C	DEM key		~
Transponder Programming	1.Input immo5 OEM key to pro	grammer, press unlock button		
Special Transponder				
				UnLock
Immobilizer Data Tool				
<u></u>				
Other Key Tool				
Prepare Remote				
Remote Frequence				
Load file success.				

(PICTURE 7.5)

📽 VVDI2 - Tanspond	er Programmer V1.0.4 Remaining Synchronization Time: 30 days 📃 🗖 🗙
Options Transponder-Chi	p-Remote
	Type Special-VW cars find 7th CS from working key(Megamos 48)
Transponder Programming	1.Choose car manufacture. 2.Input 6 bytes CS. 3.Input key to programmer and press Find 7th byte CS
Special Transponder	
	Find 7th byte CS
Immobilizer Data Tool	Step 1:Choose car manufacturer
	O TP22(Seat) O TP23(VW) O TP24(Skoda) O TP25(Audi)
Other Key Tool	Step 2:Input 6 bytes CS
Prepare Remote	
Remote Frequence	21º
Load file success.	
🗳 VVDI2 – Tanspond	er Programmer V1.0.4 Remaining Synchronization Time: 30 days 💶 💽
Uptions Iransponder-Chi	Type Special-VW cars prepare dealer key with 7 CS(Megamos 48)
Transponder Programming	1.Choose car manufacture. 2.Input 7 bytes CS. 3.Input key to programmer and press Make Dealer Key
	Make Dealer Key
Immobilizer Data Tool	Step 1:Choose car manufacturer
	○ TP22(Seat) ○ TP23(VW) ○ TP24(Skoda) ○ TP25(Audi)
Other Key Tool	Step 2:Input 7 bytes CS
Prepare Remote	
R -	
Remote Frequence	
Load file success.	

(PICTURE 7.7)

© VVDI2 - Tanspo	nder Programmer V1.0.4 Remaining Synchronization Time: 30 days 📃 🗖 🍋						
Jptions Transponder-	Jhip-Kemote						
	▲ Type Special-Change megamos 48 ID,need special 48 chip ✓						
Transponder Brogramming	1.This function need sepcial 48 transponder						
Programming 2. Input 48 transponder to programmer 3. First read 48 ID then write new ID							
4							
Special Transponder							
	Read 48 chip ID Write 48 chip ID						
<u> </u>							
mmobilizer Data Tool							
(Og							
-20 1							
Other Key Tool							
Prepare Remote							
RF							
Remote Frequence							
.oad file success.							
	(PICTURE 7.8)						

8. Prepare Remote

8.1. Prepare new remote key

This function can write special data to sub-remote-pcb via Remote Programmer (PICTURE 8.1). Make sub-remote-pcb have original remote key function (PICTURE 8.2)

- Requires connect Remote Programmer to VVDI2 DB15 Interface. Remote Programmer is not a standard device, you can connect your dealer for detail
- Have offline database, and can update database via internet automatically
- Choose specify remote type, connect Remote Programmer to VVDI2 DB15 interface, and connect another head to sub-remote-pcb. Press "Prepare Remote" and wait end
- After write success, the sub-remote-pcb have same function as original remote key, What you need to do is adapt the sub-remote-pcb to car
- About Prepare from file: If you select this option, it will ask you load a remote file when prepare remote. Attention: the file must get from VVDI2. Write other data may damage sub-remote-pcb
- Feedback: You can feedback any question in prepare remote here. Just write your question and contact method and feedback to VVDI2



(PICTURE 8.1)

VVDI2 – Transponder Programmer

🧠 VVD12 - Tanspond	er Programme	er ¥1.0.4	Remain	ing Synchronizatio	on Time: 30 da	ys 💶 🛛 🔀		
Options Transponder-Chip-Remote								
	Manufacture	大众/斯柯达				~		
Transponder Programming	Туре	1J0 959 753 BT	Г			~		
Special Transponder				Version Type Frequency Applicable models Learn remote 一、解码器匹配方法: 1、进46舒适电脑系统 2、进证匹词调整 1)在通道号码中输入01; 2)在新的数值中输入匹配 3)保存 4)每个遥控器按下25	:稳定版 :大众斯柯达 :315MH2 :大众宝来 帕萨特 : 的遥控钥匙个数			
Other Key Tool		1/2	< >	二、手工匹配方法: 1)将钥匙插入驾驶员侧车 转动;	门(车门处于关闭状	态)锁芯并逆时针		
Prepare Remote	Feedback	 Normal 	C) Not Normal		Prepare from file		
Remote Frequence	Please type yo (Click Feedbac	our question, suggestic k button) Thank you v	on and your very much fo	contact information here. r support VVDI!	Feedback	Prepare Remote		
Current remote database	version: 0000007	73				•		
		<u>(PI</u>	CTURE 8	<u>3. 2)</u>				