BMW Multi Tool User Manual



X-Horse Electronics Co., Ltd.

Table of Contents

1.	Safet	y Precautions and Warnings	3
2.	Gene	ral Information	4
3.	Hard	ware Overview	5
	3.1.	Tool Description	5
	3.2.	Specifications	6
	3.3.	System Requirements	7
4.	Softw	/are Overview	8
	4.1.	Overview	8
	4.2.	Function	9
5.	Troub	bleshooting	28
	5.1.	"Device not connected"Error	28
6.	Warra	anty and Service	29
	6.1.	Limited One Year Warranty	29
	6.2.	Service Procedures	29



1. Safety Precautions and Warnings

To prevent personal injury or damage to vehicles and/or the tool, read this instruction manual first and observe the following safety precautions at a minimum whenever working on a vehicle:

- Always perform automotive testing in a safe environment.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- Operate the vehicle in a well ventilated work area: Exhaust gases are poisonous.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Keep a fire extinguisher suitable for gasoline/chemical/electrical fires nearby.
- Don't connect or disconnect any test equipment while the ignition is on or the engine is running.
- Keep the tool dry, clean, free from oil/water or grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.



2. General Information

Thank you for choosing BMW Multi Tool.

This manual includes the use of equipment notes, please read this manual carefully before use so that you can correctly use it.

X-Horse Electronics, 2011

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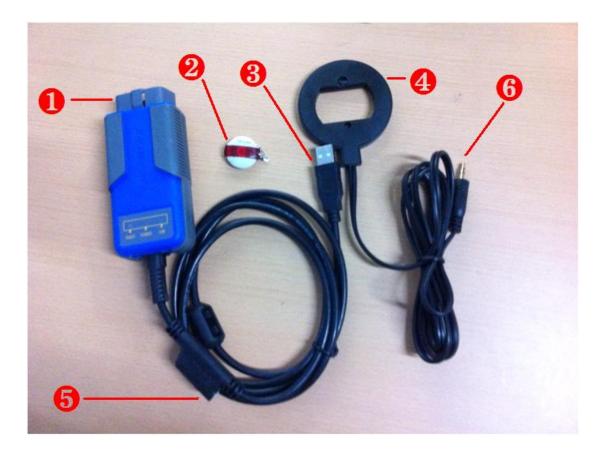
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3. Hardware Overview

3.1.Tool Description



ITEM	Description
	OBD II CONNECTOR
	Connects the tool to the vehicle's Data Link connector (DLC).
2	Dongle
	USB dongle.
3	USB CONNECTOR
Ð	Connects the tool to the PC/Laptop through USB Cable.
4	Programmer
4	Program keys.
6	Programmer Female Pin
Ð	Connects programmer to device.
6	Programmer Male Pin
	Connects programmer to device.

3.2. Specifications

ITEM	Description
Operating Temperature	-20 to 70 °C (-4 to 158 °F)
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Diagnostic Interface	16 PIN
USB Interface	USB 2.0
Power	DC 5 V - 12 V
Consumption	1 W
Dimensions	Length Width Height 95 mm(3.74") 49 mm(1.93") 28 mm(1.10")
Net Weight	85 g
Gross Weight	223 g



3.3. System Requirements

	Minimum Specification	Recommended Specification
CPU	Pentium 3/1GHz or above	Pentium 4/1.6GHz or above
Memory(RAM)	512M or above	1G or above
HDD	40G or above	60G or above
Display	800 x 600 or above	1024 x 768 or above
os	Win98/2000/XP/Vista	WinXP
Port	USB	USB

PC/Laptop Minimum Specification



4. Software Overview

4.1. Overview

BMW Multi Tool includes forth parts, hardware device, dongle, programmer, software. Before running software you must connect dongle and hardware device to computer.



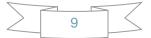
4.2. Function

Main window follows:

SEV Multi Too	ol ¥1.2	
Tool File Make Key	Help	
Protocal Type	Auto Detect 👻	Connect
CAS identification	Auto Detect	
BMW Number	OBDII KWP-E6X, E7X, E9X, E81, E82, E87, E89	
	KWP-CAN bus 100Kbps	
Addr: 0000 He: Addr	KWP-CAN bus 500Kbps	Save to File
0000	Key Lear	Read Code Write Code Synch CAS-ELV
Choose auto detect BN	MW protocal	

i. Menu

Tool: you can choose language here, support "English" and "Chinese
Simplified" Restart software to apply your settings.
File Make Key: you can prepare dealer key with EWS and CAS EEPROM dump.
Help: Device update. You can get your device and dongle id version and update it.



ii. Protocal type:

Now BMT support there type of protocol: KWP-CAN BUS 100Kbps, KWP-CAN BUS 500Kbps, KWP-2000. "Auto Detect " function can help you to choose the right protocol. After choose protocol okay, then press "Connect". If connected success. All CAS info will display in CAS Identification. Include CAS number, VIN, production date, etc. see the picture follows:

🔮 BEV Kulti Tool				
		bus 100Kbps	Ē	Connect
CAS identification BMW Number 922 Hardware C4		VIN Operating	V	Production date2010.03.16Function2.5.7
Addr: 0000 Hex Addr 0000 00	: 00 Dec: Hex	0 Bin: 0000	0000 Ascii: . Ascii	EEPROM Read EEPROM Write EEPROM KM Read KM Old KM Write KM Write KM Synchronization Codes CAS code-DME: Read Code CAS code-EGS: Write Code Synch DME-CAS Synch CAS-ELV Key Learn

- iii. EEPROM Function: Read EEPROM, Write EEPROM, Save File, Load File...
 - 1. You should backup the CAS EEPROM before prepare dealer key. After succeed read EEPROM, please save it as back file. This step is very important.
 - 2. Now can't read the whole EEPROM for cas3 system. But the main section is contained. It should be saved. When you read CAS EEPROM, it will give tips as follow(Press ok to continue):

🕲 BMV Multi Tool V1.2	×
Tool File Make Key Help Protocal Type KWP-CAN bus 100Kbps	Connect
CAS identification BMW Number 922 Hardware C4 Operating 3,3,0	Production date 2010.03.16 Function 2.5.7
Addr: 0000 Hex: 00 Dec: 0 Bin: 0000000 Ascii: Addr Addr Hex Ascii 0000 00 . . .	EEPROM Read EEPROM Save to File Write EEPROM Load From File KM Read KM Old KM KM
Tips Current EEPROM is not the whole EEPROM. Please read and save it th 确定	Nen continue with other function.
	CAS code-EGS: Write Code Synch DME-CAS Synch CAS-ELV
Try BMW protocalsuccess.	Key Learn



3. After success read it, you will get:

🔮 BHV Hul	ti	Iool	L VI	1.2											×
Tool File	lake l	Key	Help	,											
Protocal Ty	pe		K	WP	-C	AN	bu	s 1	001	(cb)	ps			Connect	
CAS identif	catior	n —													
BMW Numb	ber	921						VIN	1					Production date 2010.03.16	
Hardware		C4			-			Opt	erati			3.3.0	-	Function 2,5,7	
naiuwaie		64						Opt	siau	iy		3,3,0			
Addr: 00	00	Hes	s: 1	11	Dec	a : -	17	Bi	.n:	000	0100)01 Ascii: .		EEPROM	
Addr						ЭX						Ascii		Read EEPROM Save to File	
220202022	11	4C	38	A6	FF	FF	FF	20.202	20.20	22.22	FF	📘 . L8 ÿÿÿÿÿÿÿ	^		
000C FH 0018 FH		FF FF	FF FF	00 FF	00 FF	00 FF	00 FF	FF FF	FF FF	FF FF	FF FF	<u> </u>		Write EEPROM Load From File	
0018 FF		FF	77 77	FF	FF	FF	FF	FF	FF	FF	FF	<u> </u>			
0030 FH		FF	FF	FF	FF	FF	FF	00	00	00	00	<u>yyyyyyyyy</u>			
003C 00	FF	FF	FF	FF	09	FF	FF	FF	FF	FF	FF			Read KM Old KM KM	4
0048 FH		FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	<u> </u>			
0054 FH		FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	<u> </u>		Write KM New KM KM	4
0060 FH		FF 90	FF	03	5D FF	92 FF	00 FF	00 FF	5D FF	90 FF	00 FF	ÿÿÿÿ,]∎,,]∎, ,]∎,,ÿÿÿÿÿÿÿ			
0078 FF	1000	FF	FF	FF	FF	FF	FF	FF	61 03	BF	FF	.]∎yyyyyyyy		Synchronization Codes	
0084 00		00	00	0A	FF	FF	FF	0.0	FF	FF	FF			CAS code-DME: Read Code	
0090 FH	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	<u> </u>			1
009C 64	1.0000	AO	06	02	00	10	02	18	00	00	BF	jé		CAS code-EGS: Write Code	1
	00	00	00	00	00	00	00	00	00	00	00	1111121112111		CAS code-EGS: Write Code	
00B4 E4	FF 61	FF FF	FF FF	9C 00	AD 00	00 64	00 61	9C FF	AD FF	00 78	00 11	äÿÿÿ∥∥ daÿÿdaÿÿx.			1
	C OE	64	61	40	1F	00	00		61	9F	0E	uayyuayyx. ∎.da@da∎.		Synch DME-CAS Synch CAS-ELV	
Sec. 2010/2010 10/201	OE	05	61	6E	12	9E	0E	61	FF	6E	12	Ian.I.aÿn.			-
00E4 9E		61	FF	00	00	9E	0E	53	14	64	61	I.aÿI.S.da			1
00F0 FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	<u> </u>		Key Learn	
		1.00											×	L	1
Reading data	SUCCE	ess.													

4. Write EEPROM function is only support CAS1, CAS2 system. Doesn't support write to cas3 system.



iv. Odometer: Support read and change KM stored in CAS system. Don't support to change KM in instrument. If you want to change the KM display in instrument. You should change KM in CAS system first. Then modify the KM in instrument manually. Read KM :

Protoca	al Type			K	WP	-C.	AN	bu	s 1	001	 b	ps				V Connect
AS ide	entificat	tion	_													
MW N	lumber		921						VIN	i –					Production da	ate 2010.03.16
lardwa	are		C4						Ope	eratir	na	Ē	3.3.0		Function	2.5.7
		1	an.						100000	2400200	8765	1		_	EEPROM	
ddr:	0000)	Hex	: 1	.1	Dec		17	Bi	n :	000	0100				
ddr						He			2			71.77.	Ascii	1000	Read EEPROM	Save to File
000			4C	38	A6	29.29	FF	FF	10.10	200200	FF	FF	. L8 ÿÿÿÿÿÿÿ	^		
00C	223 2	226	FF FF	FF FF	00 FF	00 77	00 FF	00 77	FF FF	0.00	FF FF	FF FF	<u> </u>		Write EEPROM	Load From File
010	222 3	- S.	FF	22	FF	FF	<u> </u>			L						
030	2021 2	100	2.21	FF	FF	FF	FF	FF	00		00	00	<u> </u>		KM	
03C	222 2	250 - I		FF	FF	09	FF	FF	0.0		FF	FF			Read KM 0	ld KM 44444 K
048	FF H	F	FF	FF	FF	<u>yyyyyyyyyyyyy</u>										
054	FF F	F	FF	FF	FF	<u> </u>		Write KM N	ew KM							
060	22.2	177		FF	03	5D	92	00			90	00	ÿÿÿÿ.]Ⅰ]Ⅰ.			
06C	0.00		90	00	00	FF	FF	FF		5250	FF	FF	.]		-Synchronization Co	des
078	2020 3	- NO		FF	FF	FF	FF	FF			BF	FF	<u> </u>			
1084	55 5	12.5	00	00	0A EE	FF	FF	FF	0.000		FF FF	FF FF			CAS code-DME:	Read Code
1090 109C	2020 2	150 I	FF AO	FF 06	FF 02	FF 00	FF10	FF 02	FF18	10000	6 F F	BF	уууууууууууу ié		_	
IOA8	1000 3	1996 - 1	00 00	00	02	00	00	02	10		00	00	jé		CAS code-EGS:	Write Code
0B4	3.5 3	1.5	FF	FF	9C	AD	00	00	9C	0.00	00	00	äÿÿÿĮĮ			
0C0	2022 2	22	FF	FF	00	00	64	61	FF	FF	78	11	daÿÿdaÿÿx.		Synch DME-CAS	Synch CAS-ELV
OCC	9E (θE	64	61	40	1F	00	00	64	61	9F	0E	[.da@da].		SYNCH DIME-CAS	Synch CAS-ELV
0D8	100000000000000000000000000000000000000		05	61	6E	12	9E	0E	61	FF	6E	12	【an.】.aÿn.		-	
0E4	1 2022 12	10.0	5.5	FF	00	00	9E	0E	53	14	64	61	∎.aÿ∎.S.da			
OFO	FF F	F	FF	FF	FF	<u> </u>	~	Ke	y Learn							

When you try to write KM to CAS system, you will get the following tips: Press OK to continue.



otoca	al Type		KV	VP-	CAN	l bu	s 10	өкър	s				~	Conne	ct
AS ide	entificati	on –													
MW N	umber	92					VIN					Production	n date	2010.03.16	
ardwa	re	C4					Oper	ating		3.3.0		Function		2,5,7	
ddr:	00B8	He	x : 9	СІ	Dec:	156	Bin	: 100	111	00 Ascii:		EEPROM			
ddr					Hex					Ascii	-	Read EEPROM		Save to Fil	e
000 00C	11 1 FF F	_			FF FF 30 00		FF F FF F	70 70 70	FF FF	L8 ÿÿÿÿÿÿÿ	^				
018	FF F				50 00 FF FF	2020	FF F	Ro RoRo	FF	<u> </u>		Write EEPROM		Load From P	File,
024	FF F	18 - 187 8	2626	0000 7	FF FF	2020	FF F	TR TRTR	FF	<u> </u>		-KM	-		
030 03C	FF F 00 F		7979	7070 5	FF FF 39 FF	7979	00 0 FF F	18. I S.IS.	00 FF	<u> </u>		Read KM	Old KM	44444	
048	FF F.		100100	5050 I	FF FF	FF	2020 23	TO TOTO	FF	<u> </u>		Thomas Ister	Clarker		
054	FF F		0.0	3078 7	FF FF		FF F	51 BIBI	FF	<u> </u>		Write KM	New KM	1000	
060 06C	FF F		FF	03 5	5D 92		00 5	D 90 E EE	00	ŸŸŸ.] I] I .			-	ų.	_'
078	Tips													-	
084 090 09C					l only tinue?	chan	ge KM	in CAS	syte	m. You can modify the	kom i:	n instrument man	ually.	Read C	
0A8														Write C	.od
0B4 0C0							L	是(1)		(否例)					
0CC	9E 0.	8 205	2007		IF 00	10000	64 б	1 9F	UE	I.da@daI.		1		Synch CAS-El	LV
0D8	9E 0. 9E 0.		100.000		12 9E DO 9E		61 F 53 1		12	Ian.I.aÿn.	L	<u> </u>			
OE4	2E U.	2 22	FF 1		FF FF			4 04 F FF	-	I.aÿI.S.da VVVVVVVVVVVV			Key Learr		

otoca	l Type	9		K	WP	-C.	AN	bu	s 1	001	(b)	ps			Connect
	entifica		-												
4W N	umber	이 []	922	-					VIN	1			Contraction Contraction	Production o	late 2010.03.16
ardwa	re		C4						Ope	eratir	ng	-	1.3.0	Function	2.5.7
idr:	002	0	Hes	c: 1	75	Dec	o: 2	255	Bi	n :	111	1111	11 Ascii:ÿ	EEPROM	
ldr	002	0	nez	<u>.</u>		He		200	01				Ascii	Read EEPROM	Save to File
000	11	11	4C	38	A6	FF	FF	FF	FF	FF	FF	FF	L8 ÿÿÿÿÿÿÿ		Save to File
00C	FF :	FF	FF	FF	00	00	00	00	FF	FF	FF	FF	ÿÿÿÿÿÿÿÿÿ	Write EEPROM	Load From File
)18	0.0		FF	FF	FF	FF	FF	FF		0.0	FF	FF	<u> </u>	ANICE EEPKON	
124	0.00	FF	FF	FF	FF	FF	FF	FF	FF		FF	FF	<u> </u>	KM	
)30)3C	202 1	FF FF	FF FF	FF	FF	FF 09	FF	FF	00		00	00 FF	<u> </u>	Read KM C	DId KM 44444
148	2020	FF	77 77	FF FF	되 지 문 문	09 FF	국국 국국	FF FF	FF	2020	FF FF	FF	· yyyy · yyyyyy		
154	7.7.	FF	FF	FF	FF	FF	FF	FF	FF		FF	FF	<u> </u>	Write KM	Jow KM 1000
060	FF	FF	FF	FF	03	5D	92	00	00	-	90	00	ÿÿÿÿ.]I]I.		New KM 1000
06C	00	5D	90	00	00	FF	FF	FF	FF	FF	FF	FF	.]ÿÿÿÿÿÿÿÿ	- Synchronization Co	ndes
078	10.10	FF	FF	FF	FF	FF	FF	FF	FF	- T - T	BF	FF	ÿÿÿÿÿÿÿÿÿ ÿÿ . ¿ÿ		
084	1.202	00	00	00	0A	FF	FF	FF	FF		FF	FF		CAS code-DME:	Read Cod
090	E 12 1	FF	FF	FF	FF	FF	FF	FF	FF	2020	FF	FF	<u> </u>		
09C		E9 00	A0 00	06 00	02	00	10	02	18	~~	00	BF	jéi	CAS code-EGS:	Write Coo
DB4			FF	FF	90	AD	00	00	90	AD	00	00	äÿÿÿ I- I-		
DC0	20.02	61	FF	FF	00	00	64	61	FF	and the proof	78	11	daÿÿdaÿÿx.	Curch DME CAC	
DOC	9E	0E	64	61	40	1F	00	00	64	61	9F	0E	[.da@da].	Synch DME-CAS	Synch CAS-ELV
DD8	9E	0E	05	61	6E	12	9E	0E	61	FF	6E	12	I.an.I.aÿn.	-	
DE4	10050	0E	61	FF	00	00	9E	0E	53	14	64	61	.aÿ .S.da		
DFO	FF :	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	<u> </u>		ey Learn

- v. Synchronization Codes:
 - 1、CAS3 code-DME 、CAS3code-EGS: Read and write DME and EGS code stored in CAS3 system.
 - 2. Synchronize DME and CAS— this function will be useful while prepare dealer key or any other operation which cause can't start the engine.
 - 3、 Synchronize CAS and ELV this function can help clear wheel errors.

tion 9 C4 D Hex:	FF I		VIN Operating		Production date 2010.03.16
C4	FF I				Production date 2010.03.16
Test I	FF I		Operating		
D Hex:	FF I		- Provide an US	3.3.0	Function 2.5.7
D Hex:	- FF 1	0.000			
		Dec: 255	Bin: 11111		
11 AC 3	18 A6 E	Hex FFFFFFF	FF FF FF FF	Ascii	Read EEPROM Save to File
CHC 1010 15	NE 57.7 7	17: 7:7: 7:7			
					Write EEPROM Load From File.
FF FF H	F FF E	FF FF FF	00 00 00 00	<u> </u>	
FF FF B	F FF C)9 FF FF	FF FF FF FF		Read KM Old KM 44444
FF FF H		NR 261 267	: ''''''''''''''''''''''''''''''''''''	<u> </u>	
200 200 2				<u> </u>	Write KM New KM 1000
			- 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2013: 2		
	0 00 0	8 98 98	:		Synchronization Codes
관련 관련 문	2 22 3				CAS code-DME: 4C38 Read Code
		17: 7:7: 7:7:	: 전문: 전문: 전문: 전문:		
E9 A0 (6 02 0	0 10 02	18 00 00 BF	jé	1111
	CE (DSE (D				CAS code-EGS: 1111 Write Cod
5151 - 5151 - 5	17. sear 5			äÿÿÿ∣ ∣	
	17. II.I. I	AD	이 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다 다		Synch DME-CAS Synch CAS-ELV
CCC (C)/C /C		17: 77 77	- MM MM NM NM	28 State 54 Sec. 100 State 50	
		12 9E 0E 10 9E 0E	그 아파 가지? 전자 마카	∎an.∎.ayn. ∎.aÿ∎.S.da	[
OF OF I	F OO C	NO NE OE	, 22 14 04 01	I.dy. I.J.ud	
	FF FF FF FF FF FF FF FF FF FF FF FF FF F	FF FF <td< td=""><td>FF FF FF<</td><td>FF FF <td< td=""><td>FF FF <t< td=""></t<></td></td<></td></td<>	FF FF<	FF FF <td< td=""><td>FF FF <t< td=""></t<></td></td<>	FF FF <t< td=""></t<>

vi. Key Learn

Key Learn											X
General info		-		.C		1	1	Comparts los	uu in innihin	e entre la	
Key cutting c		L		S remote conti				Current ke	sy in ignicio	n switten	IS;
-Key position Number	ID	e control — Low	High	RND/FBD	Immobilizer ID	Low	High	CFG PSW	Info	CPC	Туре
O KeyID1			riigit								
OKeyID2						1			1		
OKeyID3		1									
OKeyID4]					
OKeyID5]									
OKeyID6]									
OKeyID7]									
OKeyID8]									
◯ KeyID9][
OKeyID10]									
		7 (
Get Ke	y Info		Save K	ey Info	Make Dea	ler Key		Enable Key		(Ilear DTC
Write K	ey Info	ſ	Load K	ey Info	Add K	iey	Г	Disable Key	ר	Cle	ar Shadow

Function introduction:

- 1. Get Key Info: With this function you can get the key cutting, remote frequency, and key data.
- 2. Save Key Info: Save the read key info.
- 3. Load Key Info: Load the saved key info. To see the key data and prepare for write key info.
- 4. Write Key Info: Write the loaded key info into CAS system.
- 5. Make Dealer Key: You can prepare dealer key after you get key info successfully. Also you should choose the key position.
- 6. Add key: Add the new dealer key into CAS system. Some CAS system needs this step to start the engine.
- 7. Enable Key: Insert a working key, choose the key position which you want to disable. The key position can't be same with the key in ignition.
- 8. Disable Key: Insert a working key, choose the key position which you want to enable. The key position can't be same with the key in ignition.
- 9. Clear DTC: Before prepare dealer key and after it you can use this function to clear DTC.
- 10. Clear Shadow: Before prepare dealer key and after it you can use this function to clear Shadow.

vii. File Make Key

ot	EWS1 EWS2	VP-CAN bus 100Kbps	Connect
NS 1V	EWS3 EWS4	VIN	Production date 2010.03,16
arc	CAS1 (OK5OE)	Operating 3.3.0	Function 2.5.7
Id	CAS2 (2K79X)	F Dec: 255 Bin: 1111111 Ascii: ÿ	
ld	CAS3 (OLO1Y)	Hex Ascii	Read EEPROM Save to File
0	CAS3+ (OL15Y)	A6 FF FF FF FF FF FF FF L8 ÿÿÿÿÿÿÿ 🔄	
	CAS4 (1L15Y)	DO OO OO OO FF FF FF FF ÿÿÿÿÿÿÿÿ	
18	FF FF FF FF FF FF FF FF	FF FF FF FF FF FF FF yyyyyyyyyy FF FF FF FF FF FF FF yyyyyyyyyyy	
30	FF FF FF FF	FF FF FF FF 00 00 00 00 yyyyyyyyy	KM
3C	00 FF FF FF	FF 09 FF FF FF FF FF FF .ÿÿÿÿÿÿÿÿ	Read KM Old KM 44444
48	FF FF FF FF FF FF FF FF	FF FF FF FF FF FF FF FF YYYYYYYYYYY FF FF FF FF FF FF FF FF YYYYYYYY	Write KM New KM 1000
60	FF FF FF FF	03 5D 92 00 00 5D 90 00 ÿÿÿÿ,]]]].	Write KM New KM 1000
IGC	00 5D 90 00	00 FF FF FF FF FF FF FF .]∎ÿÿÿÿÿÿÿ	Synchronization Codes
178	FF FF FF FF 00 00 00 00	FF FF<	CAS code-DME: 4C38 Read Code
90	FF FF FF FF	FF FF FF FF FF FF FF FF yyyyyyyyyy	CAS LOUE-DME: 1000 Read Code
9C	6A E9 A0 06	02 00 10 02 18 00 00 BF jé	CAS code-EGS: 1111 Write Code
A8 B4	00 00 00 00 E4 FF FF FF	00 00 00 00 00 00 00 00 00 9C AD 00 00 9C AD 00 00 äÿÿÿ↓↓	
CO	64 61 FF FF	00 00 64 61 FF FF 78 11 daÿÿdaÿÿx.	Synch DME-CAS Synch CAS-ELV
CC	9E 0E 64 61	40 1F 00 00 64 61 9F 0E .da@da .	Synch DME-CAS
D8 E4	9E 0E 05 61 9E 0E 61 FF	6E 12 9E 0E 61 FF 6E 12 Ⅰan.Ⅰ.aÿn. 00 00 9E 0E 53 14 64 61 Ⅰ.aÿⅠ.S.da	
FO	FF FF FF FF	FF FF FF FF FF FF FF FF yyyyyyyyyyy	Key Learn
	Liters Liters Liters	×	

1. Choose CAS or EWS type. It will tips you:





2. Load the choose EEPROM file you will get the make dealer key window:

Key position	Key ID	Кеу Туре	Key position	Key ID	Кеу Туре
OKeyID1	311E7396	PCF 7953 remote key	OKeyID6	FFFFFFF	Unknown
◯ KeyID2	D3237396	PCF 7953 remote key	OKeyID7	FFFFFFF	Unknown
◯ KeyID3	FFFFFFF	Unknown	OKeyID8	FFFFFFF	Unknown
KeyID4	FFFFFFF	Unknown	KeyID9	FFFFFFF	Unknown
◯ KeyID5	FFFFFFF	Unknown	OKeyID10	FFFFFFF	Unknown



3. Choose key position and press "Make Dealer Key" button. Flow the given tips to prepare dealer key. After succeed you can save the new EEPROM dump file.

For EWS1, EWS2, EWS3, EWS4, CAS1, CAS2, CAS3 type the prepared dealer key can start the engine directly.

For some CA3+ type you need to write back the new dump file into car.



4. CAS3 encrypt data, only OBDII prepare make key is support for CAS3 encrypt data.



viii. Device Update

Open this window after connect to internet. You can see the latest software version, firmware version, dongle version. You can go to our website for further information. After succeeded update device firmware, must reconnect the hardware to computer.

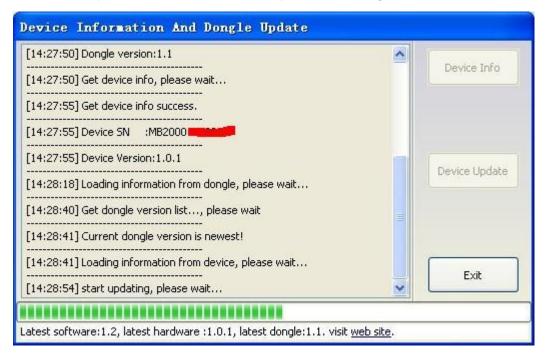
[14:57:32] BMW Multi Tool support function: 1.Read/Write CAS EEPROM 2.Change Km stored in CAS sytem 3.Make dealer key and add key to car 4.Synchronize DME and CAS 5.Synchronize CAS and ELV 6.Read DME and EGS code stored in CAS sytem	Device Info Device Update
	Exit

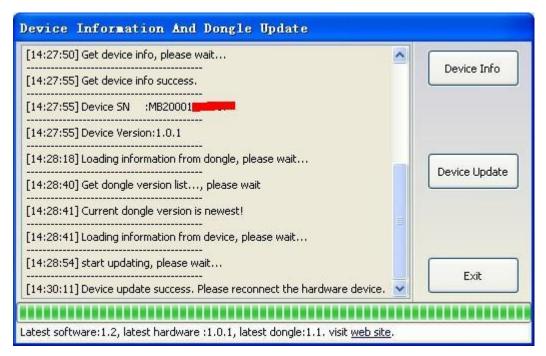
1. Device Info: Get dongle and hardware SN and version.

2.Change Km stored in CAS sytem 3.Make dealer key and add key to car 4.Synchronize DME and CAS 5.Synchronize CAS and ELV 6.Read DME and EGS code stored in CAS sytem	Device In	fo
[14:27:27] Getting dongle info, please wait		
[14:27:36] Dongle SN :DB000010000	Desire the	1
[14:27:50] Dongle version:1.1	Device Upo	late
[14:27:50] Get device info, please wait		
[14:27:55] Get device info success.		
[14:27:55] Device SN :MB200010		_
[14:27:55] Device Version:1.0.1	Exit	_



2. Device Update: This function can update the dongle and device.







Process to prepare dealer key:

- 1. On main window choose "Connect" to auto detect the current car protocol and get the CAS info.
- 2. On main window choose "Read EEPROM" to read the CAS EEPROM file and save it.
- 3. On main window choose "Key Learn" button to get key learn window.
- 4. On Key Learn window choose "Get Key Info" to get the key info stored in CAS system.(picture 2).
- 5. Choose "Save Key Info" button to save the read key info for backup.
- 6. Check the connection between programmer and device. Keep connection while make key process.
- 7. Put new blank key into the center of programmer.
- 8. Choose the position where you want to suit the key.
- 9. Press "Make Dealer Key" to prepare dealer key. After succeed you will get (picture 3)

"Key make okay and locked. Please use it start the car. If can't start engine, use "Add Key" function add the new dealer key to CAS system." Once can start the engine, go to step 13.

- 10. Put the new dealer key into programmer. Use "Add Key" function to add the key to CAS system. After that you will get (picture 4):"New dealer key success written to CAS system. You can start engine with the new key now. If can't please use the original working key first."
- 11. Please return to main widow and use function "Synch DME-CAS" to synchronize DME (ECU) with CAS.
- 12. Use "Synch CAS-ELV" to clear wheel errors.
- 13. Enter to key learn window use "Clear DTC" and "Clear Shadow" function clear all error sin CAS system.

While prepare dealer key process. Once you get the tips like picture 1, remove the key from ignition switch, if key has keyless, take the key out of car.



Picture 1:

Key cutting o	ode: 🧿		CA	S remote contr	ol frequency:	315Mhz		Current ka	ey in ignitio	n switch	is: No Key
Key position Number O KeyID1	Remote ID	control Low	High	RND/FBD	Immobilizer ID	Low	High	CFG PSW	Info	CRC	Туре
KeyID2											
○KeyID4 ○KeyID5		Tips The	dealer	key shoule l	be taken away	from ignit	tion sw:	itch.			
◯ KeyID7		If I Pres	ss "OK"	to continue.	ase move it o 确定	ut or car.					
 KeyID6 KeyID7 KeyID8 KeyID9 KeyID10 		If I Pres	ss "OK"	to continue.							
◯ KeyID7 ◯ KeyID8 ◯ KeyID9	y Info	If I Pres	ss "OK"					Enable Key			Clear DTC



Picture 2:

General info Key cutting c	ode:		CA	S remote contr	ol frequency:	315Mhz		Current key	in ignition	switch	is: No Key
Key position	Remote	control			Immobilizer						
Number	ID	Low	High	RND/FBD	ID	Low	High	CFG PSW	Info	CRC	Туре
◯ KeyID1	C979	7891304A	6EC9	2E520B31	70A5AB97	6F.	3715	C8 D25595	004B00	1E	PCF 7945 remot
◯ KeyID2	SE2A	FD6D94AF	D48C	643E1D66	036F6A97	9D1	B6FA	C8 695B7A	004B00	6B	PCF 7945 remot
⊖KeyID3	4CD0	89995983	19D3	08A8F0EF	E5A5B516	A13	D698	OE ADA836	002800	4C	PCF 7936 transp
◯KeyID4	6F10	E8122696	30CF	24602665	1FB68516	846	F8F1	08 D433AC	002800	A3	PCF 7936 transp
KeyID5	7D22	1FC3BBE9	Tips							14	PCF 7936 transp
KeyID6	SBEE	4C42D7D1	Plea	"0			202.02			E4	Unknown
	1000000000			se use Save	Key Info" to	save the	original	L Key informa	ation.		CENTION
	58BC	7E74EEEA		se use Save			original	L Key Inform:	ation.	71	Unknown
KeyID7	S8BC BF56	7E74EEEA 828D34A1		se use Save		save the 确定	origina	L Key Inform:	ation.		
KeyID7			DSEC	se use 'Save			origina DBA1	C8 C5AEF4	ation. 007608	71	Unknown
KeyID7	BF56	828D34A1				确定				71 68	Unknown Unknown
KeyID7 KeyID8 KeyID9	8F56 8055 86DA	828D34A1 6E06DAE2 35137491	DBEC	73325755 CB618D0B	FFFFFFF	确定] BE[] 4AD1	DBA1	C8 C5AEF4	007608	71 68 3C 85	Unknown Unknown Unknown



Picture 3:

General info Key cutting c	ode:		CA	S remote contro	ol frequency:	315Mhz		Current key	' in ignition	switch	is: No Key
Key position	Remote	control			Immobilizer						
Number	ID	Low	High	RND/FBD	ID	Low	High	CFG PSW	Info	CRC	Туре
KeyID1	C979	7891304A	6EC9	2E520B31	70A5A897	6F	3715	C8 D25595	004800	1E	PCF 7945 remote
◯KeyID2	SE2A	FD6D94AF	D48C	643E1D66	036F6A97	90	B6FA	C8 69587A	004B00	6B	PCF 7945 remoti
⊖KeyID3	4CD0	89995983	19D3	08A8F0EF	ESASB516	A1	D69B	OE ADA836	002800	4C	PCF 7936 transp
OKeyID4	6F10	E8122696	30CF	24602665	1FB68516	84	F8F1	08 D433AC	002800	A3	PCF 7936 transp
OKeyID5	7D22	1FC3BBE9	F721	8387FD40	E5A5B516	60	5E90	08 B12E96	002800	14	PCF 7936 transp
⊙ KeyID6	3BFF	4C42D7D1	9D8C	03BC7A77	FFFFFFF	29	705D	C8 48F534	007608	E4	Unknown
KeyID7	III)s								71	Unknown
CKeyID8					se use it sta Add Key″func					68	Unknown
⊖KeyID9		t can not s	start e	ngine. use i	kaa ney func	tion add t	ve deste	er Key to LA	o system.	3C	Unknown
OKeyID10	Ī				确定					85	Unknown
Get Ke	y Info		Save Ke	ey Info	Make Deal	er Key		Enable Key		(Ilear DTC
1		1		ey Info	Add K			Disable Key	- Y	-	ear Shadow



Picture 4:

(S remote contro	of frequency:	315Mhz		Current key	' in ignition :	switch	is: No Key
ey position	Remote control			Immobilizer						
Number	ID Low	High	RND/FBD	ID	Low	High	CFG PSW	Info	CRC	Туре
KeyID1	C979 7891304/	A 6EC9	2E520B31	70A5A897	6F	3715	C8 D25595	004800	IE	PCF 7945 remo
KeyID2	SE2A FD6D94A	F D48C	643E1D66	036F6A97	9D 1000	B6FA	C8 69587A	004800	6B	PCF 7945 remo
<u>que ma l</u>	Level loopotoos	liopa	loosocore]		1 440	Incon			4C	PCF 7936 trans
Tips								×	A3	PCF 7936 trans
	aler key succes: In start engine v						1		14	PCF 7936 trans
a lou ca	m start engrne i	i che che	nen key non.		se use che	orrenna	I WOLVING Y	iy mist.	E4	Unknown
				确定					71	Unknown
				-	1					
KeyID8	BF56 828D34A	1 B352	BF995B43	EFEEEEF	FC	E SIDE	C8 7DE830	007608	68	Unknown
	BF56 828D34A 8055 6E06DAE		BF995B43 73325755	FFFFFFFF	EC RE	E 51DE	C8 70E830	007608	68 3C	Unknown Unknown
) KeyID8) KeyID9) KeyID10		2 D8EC			FC					

Warning: Make sure connect dongle to compute before run the software.



5. Troubleshooting

5.1. "Device not connected" Error



Information: Hardware not connected to PC with USB port. **Solution:** Plug device to USB.



6. Warranty and Service

6.1. Limited One Year Warranty

X-Horse warrants to its customers that this product will be free from all defects in materials and workmanship for a period of one(1) year from the date of the original purchase, subject to the following terms and conditions:

- This warranty does not apply to damages caused by improper use, accident, flood, lightning, or if the product was altered or repaired by anyone other than the Manufacturer's Service Center.
- X-Horse shall not be liable for any incidental or consequential damages arising from the use, misuse, or mounting of the tool. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.
- All information in this manual is based on the latest information available at the time of publication and no warranty can be made for its accuracy or completeness. X-Horse reserves the right to make changes at any time without notice.

6.2. Service Procedures

If you have any questions, please post at http://www.x-horses.com/forum/

