BMW Scanner 1.3.6

First of all the list of supported units is much bigger for now. At this moment software supports almost all electronic units than could be installed on "old" chassis.

	STH	8.38	7.103 h	w: 01 st	w: 16	no errors		Inde	ependent/Au	xiliary Heating	I	
1/2 5-1	FGB		<not fo<="" td=""><td>ound></td><td></td><td></td><td></td><td>r Compartme</td><td>nt Blower</td><td></td><td></td></not>	ound>				r Compartme	nt Blower			
17.5 #80	EML					r ir			11			
EN	SEC		MID	<not< td=""><td>ound></td><td></td><td></td><td>ł</td><td>Multi-Informat</td><td>ion Display</td><td></td></not<>		ound>			ł	Multi-Informat	ion Display	
2/3 6+	CCM		FID		<not found=""></not>					Multi-Informat	ion Display, Rear	
27.5 #80	CVM		FMBT		DME	7.785.540	hw: 53 sv	v: 86	no errors		Digital Motor Electronic	:\$
	SHD	3.86	MFL	0.00	EGS	1.423.953	hw: 2B sv	v: 09	no errors	i -	Electronic Gearbox Cor	itrol
2/2 5-1	SVT		VIG		EWS	8.387.448	hw: 03 sv	v: 06	no errors	1	Electronic Car Immobili	sation System
373 HSC	URS		VTC1		ABS	6.750.345	hw: 51 sv	v: 03	no errors	1	Anti-lock Braking Syste	m with ASC/DSC
	EKP		VTC2		LEW	<nc< td=""><td>t found></td><td></td><td></td><td></td><td>Steering-Angle Sensor</td><td></td></nc<>	t found>				Steering-Angle Sensor	
Find units	RIP		RDC		A/C	6.903.201	hw: 20 sv	v: 16	no errors	1	Heater and Automatic (Conditioner Contro
	TOENS		DSP	SRS SRS	6.900.727	hw: 38 sv	v: 25	1 error	no errors	Supplemental Restraint	System	
	ELV FBZV		SES	6.90	IKE	6.914.879	hw: 19 sv	v: 15	1 error	no errors	Instrument Cluster Electronics Light Check Module Central Body Electronic	
~ ~			EHC		LCM		hw: 00 sv	v: 41	no errors			
Clear errors	SBE		HKM 8	8.38	ZKE	8.381.492	hw: 16 sv	v: 21	1 error	no errors		
-	SBBF		LRA	8.37	GR2	<nc< td=""><td>t found></td><td></td><td></td><td></td><td>Cruise Control</td><td></td></nc<>	t found>				Cruise Control	
	RCC	6.90	AHL		PDC	6 900 412	hw: 01 sv	v: 12	5 errors	1 error	Park Distance Control	
Settings	EDC		XENL		AIC	8 382 468	hw: 04 su	v: 13			Automatic Interval Con	trol
~	NAJ		XENR		RAD	6 904 537	hw: 09 sv	v: 90	no errors		Badio	
Ø Stop	JBIT		SPMFT		TEL	6 907 846	hwr 10 su	r 12			Car Telephone	
, daubla alfak an i	nd to ensure	د بالاب	SPMBT		SZM	8 373 725	hur 11 es	- F8			Switching Center Cent	re Console
: double-click on t	nit to operate	WHEN IK	SMF		VID	6 902 015	hur fut su				Video Module	Contoic
			SMB		NAV	8 385 439	hw: 20	. 00	no enors		Navigation System	
		_			NAV2	8 385 429	hur 20	. 70	no enors		Navigation System feer	(finu bao
					DUDT	0.303.433	1. 54		no enois		Carband Masilan Carb	

In main menu you can see new [CLEAR ERRORS] function. It was cutted from [FIND UNITS] procedure. The reason

of doing this was a lot of customers asks because in previous versions [FIND UNITS]

procedure contained also automatically malfunctions codes reset that was making

malfunctions analysis more difficult.

A little changes was done also in settings menu. You can see it on next screenshot :



For standart COM port selection in [COM Number] field now

you can see list of all available COM ports. This list was read from windows registry, so that's no more necessary to select working COM port by checking all of them. All you need to do is only select necessary for you COM port and use it. Its also making virtual COM port detection more easy. Virtual

COM using when adapter works with USB to COM converter, that making possible using adapter on computers that have no COM port (for example it can be modern laptops). A little changes you can see also in log file structure:

BNW S	can	er v1.3.6 ((27.12.20	05) -	P.A.Soft,	2005			т	ime: 14:33:58 28.12.	2005	
Clea	r er	rore start										
		TOLD SCALC										
DME *	~>	7.785.540	hw: 53	3V:	86	ODO:	-		VIN:	WBAGE61080DN44432	ADFG:	0000000
EGS	->	1.423.953	hw: 2B	30:	09	ODO:	165010	km	VIN:	WBAGE61080DN44432	ADFG:	0000000
EWS	->	8.387.448	hw: 03	SV:	06	ODO:	165022	km	VIN:	WBAGE61080DN44432	ADFG:	FFFFFF
ABS	->	6.750.345	hw: 51	SW:	03	ODO:	_		VIN:	_	ADFG:	-
A/C	->	6.903.201	hw: 20	នម:	16	ODO:	-		VIN:	-	ADFG:	004432
SRS	->	6.900,727	hw: 38	sw:	25	ODO:	-		VIN;	DN44432	ADFG:	000000
IKE	->	6.914.879	hu: 19	3W:	15	ODO:	165026	3cm	VIN:	DN44432	ADFG:	FFFFFF
LCM	->	8.386.208	hw: 00	sw:	41	ODO:	165000	km	VIN:	DN44432	ADFG:	-
ZKE	->	8.381.492	hw: 16	sw:	21	ODO:	-		VIN:	-	ADFG:	FF4432
PDC	->	6.900.412	hu: 01	3W:	12	ODO:	-		VIN:	-	ADFG:	014432
AIC	->	8.382.468	hu: 04	sw:	13	ODO:	-		VIN:	-	ADFG:	210799
RAD	->	6.904.537	hw: 09	sw:	90	ODO:	-		VIN:	-	ADFG:	-
TEL	->	6.907.046	he: 10	sw:	12	ODO:	-		VIN:	-	ADFG:	-
SZM	->	8.373.725	hu: 11	SW:	FC	ODO:	-		VIN:	-	ADFG:	000000
VID	->	6.902.015	hw: 04	sw:	08	ODO:	-		VIN:	-	ADFG:	FF4432
NAV	->	8.385.439	hw: 20	SW:	70	ODO:	-		VIN:	-	ADFG:	-
NAV2	->	8.385.439	hu: 20	sw:	70	ODO:	-		VIN:	DN44432	ADFG:	004432
BMBT	->	8.372,759	hw: 51	sw:	50	ODO:	-		VIN;	-	ADFG:	FFFFFF
HFL	->	0.000.000	hw: 01	SV:	08	ODO:	-		VIN:	-	ADFG:	-
SES	->	6.903.886	hw: 05	sw:	31	ODO:	-		VIN:	-	ADFG:	-
нки	->	8.381.988	hw: 01	sw:	02	ODO:	-		VIN:	-	ADFG:	FFF928
LRA	->	8.375.964	hw: C6	SU:	05	ODO:	-		VIN:	-	ADFG:	OSFFFF
STH	->	8.387.103	hw: 01	sw:	16	ODO:	-		VIN:	-	ADFG:	004432
SHD	->	3.861.949	hw: 05	sv:	31	ODO:	-		VIN;	-	ADFG:	264432
RCC	->	6.903.660	hw: 20	SV:	02	ODO:	-		VIN:	-	ADFG:	-

-	_				
ÅBS	->	6.750.345	hw: 51	sv: 03	no errors
1.∕C	->	6.903.201	hw: 20	sw: 16	no errors
SRS	->	6.900.727	hw: 38	sw: 25	1 error <- Clear -> no errors
IKE	->	6.914.879	hw: 19	sw: 15	1 error <- Clear -> no errors
LCM	->	8.386.208	hw: 00	sv: 41	no errors
ZKE	->	8.381.492	hw: 16	sw: 21	1 error <- Clear -> no errors
PDC	->	6.900.412	hw: 01	នឃ: 12	5 errors <- Clear -> 1 error
AIC	->	8.382.468	hw: 04	sw: 13	no errors
RAD	->	6.904.537	hw: 09	sw: 90	no errors
TEL	->	6.907.046	hu: 10	sv: 12	no errors
27M	->	8.373.725	hw: 11	sw: F8	no

Err	ors de	etails (dec)
SRS	->	26/160
		Errors after clear:
		no errors
IKE	->	191/72
		Errors after clear:
		no errors
ZKE	->	194/2
		frrors after clear:
		no errors

Except standart data about installed units mileage and VIN in log file you also can see detail information about found malfunctions codes and ADFG data. More information about it you can read in "ADFG - "present" from BMW ?"

In new version you can also read log file from main program window using [Scanner]/[View log-file] option or [F5] key.

There is also different way to save log files. In previous

versions log file has fixed name (bmwscan.log) and all the time when program was run more and more times all previously saved data in file was erased. In new version log file name contains also date and time when program was started, that makes impossible to lost previous data and more easy to find necessary file in

Program functions

Brief list of functions:

Γ	FIND UNITS	1 - scanning installed units with reading identification data and malfunction codes $-$
۵	CLEAR ERRORS] - reset fault codes in all of found units
۵	ERRORS DETAILS] - detail info about malfunction codes
C	READ MEMORY] - reading unit software memory
C	READ EEPROM] - reading EEPROM in units: IKE, LCM, ZKE, SRS, LEW, A/C, VID, BMBT, STH, AIC
C	WRITE EEPROM] - writing EEPROM in same units
C	ERRORS] - reading detail info and reset malfunction codes in selected unit
C	RESET UNIT] - unit software reset
C	WRITE FGSTNR] - identification number writing
C	WRITE ADFG] - more identification data writing
C	ODOMETER CORRECT] - writing new mileage value to IKE & LCM units
C	SAVED ODOMETER] - reading more detail info about mileage from IKE & EGS units
C	SERVICE RESET] - IKE service reset
۵	CHANGE LANGUAGE] - changing language of main computer messages GE/EN/FR/IT
۵	FACTORY DEFAULTS] - factory defaults reset of IKE & LCM (for cars till 1999 year)
۵	COPY CODING] - base coding copying IKE to EWS or EWS to IKE units
۵	TV FUNCTIONS] - "video on when driving" setting in VID unit
۵	READ KEY] - reading ignition keys data from EWS unit
Ε	ADAPTATION LEW] - steering wheel sensor (LEW) adaptation
Γ	REGISTER HANDSET] - new handset register to TEL (BIT2) unit

In BMW Scanner V1.3.6 you can see the same windows structure, there are a few changes only in functions menu and program database.



There is different dashboard classification also, using memory access method. For old variant with numbers only (1,2...13) now you can see new classification like: EEPROM memory type + comment (for example 93S56-3, 93S66-Tacho, M35080-E46, etc).

It gives to user more so important information if manual

algorithm select using when works with unknown for user dashboard- see "List of supported IKE units".



LCM window is still same with old functions, added only new SW versions of unit. At this moment program can work with all known SW versions of LCM units till 09.2005, including SW76,SW77 - see. "List of tested LCM units".



A lot of new functions are available now when work with video module (VID). Added functions like read/write EEPROM memory of unit, software memory reading, and also video when driving settings. This function will help you to set one of 3 possible video settings: show when driving / hide when driving / disable constantly.



On this screenshot you can see example of work with

malfunction codes. Sure that is not enough for good diagnostic – you also have to know all malfunction codes decrypting. But its still better that nothing.

Using [ERRORS DETAILS] function is possible also from

program main window (double click on mistake count output field).

Unit into																				
Init info Unit name	Description	n									BMV	/TNF	e.						FGST	NB
A/C	Heat	er a	nd Auto	matic	: Cor	nditio	oner	Con	trol		6	.903	3.201	h	w: 20) sw	r: 16			(a))
Odometer	Date		Algo	rithm			AD	FG			Error	\$							Errors	after clear
-	27	/99		N.	D	2		004	432		_			no ei	rors	į				Press "Errors"
Readin	nemory	П	0x040	:00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
Read El	EPROM		0x050 0x060 0x070	:00 :78 :01	00 0F	00 00 44	00 37 32	00 FF 9C	00 86 21	00 90 08	00 32 2D	00 01 FF	00 20 14	00 04 C2	00 02 14	00 07 C2	00 27 10	00 99 EA	00 13 00	х¤.7 ЖР2'Щ.
Write EB	PROM		0x080 0x090	FF FF	5Å 00	FF 32	00 34	00 32	00 41	00 25	00 56	FF 18	FF 6D	FF 10	FF 7D	00 10	00 96	FF 1B	00 AA	Z .242Å%V.m.}.Ц.к
Load	d file		0x0A0 0x0B0	28 4D	C8 Find	28 d	FF	28	FF	FF	00	4D	24	1Å	28	00	73	00	87	(L((.H\$.(.s.3
Save	e file		0x0C0 0x0D0 0x0E0	FF		ASCI	II;													.w.xL3
Eno	18	1	0x0F0 0x100	:73	1.000	Hex:	2													B3\$e.+ U.¶A:3
Write	ADFG		0x110 0x120	:37	1	00	44	32		_	_	_	_	_	_	_	_	_	_	q. FQ¶
WiteR	GETNR:		0x130 0x140	:03 :1E	108.950	e s e s	iearc iearc	h fron h fron	n the n the	file b curs	eginr or pos	ing ation					01	(Cancel
Rese	t unit	Y	0x150 0x160	:00 :0E	-	10	0.5	10	0.7		15		DO		PE			10	0.77	
File in editor			02170	:48	87	42 2A	A5	42 1E	87 D8	00	A5 FF	1A 00	00	00	00	00	09	48 0C	10	НЗ«е.+нч
A-C_v	wr.bin	-	0x190 0x1A0	:07	07 16	07 16	07 16	07 C0	0D 90	0D 0C	0D 0F	0D 69	0D 78	11 50	11 46	11 00	11 00	11 0A	16 00	LP.¤ixPF
Browse	M H		0x1B0 0x1C0	:0B :66	00	14 8A	00 0D	EB AE	D2 OF	F5 FF	D2 0F	F6 00	D2 00	FF 0F	D2 00	00 2A	00 0B	30 5D	00 14	¶.ыТІТЭТ ТО. f.K.o¤ ¤¤.*.]¶
E	kit .		0x1D0	:B4	14	FF	14	9B	AF	73	87	B4	A5	28	28	20	FF	FF	28	+Mns3+e(((

One more interesting and good function was added to the program, it was done on customers demand – searching on file in editor window. It can be not only data that was read by program from unit, but any bin file that was loaded with [LOAD FILE] or [BROWSE] function.

List of supported IKE & LCM modules

IKE

BMWTNR	Н٧	V S'	w	EEPROM-IDNR
3.413.124	04	07	M	35080 - 2
3.413.132	04	07		35080 - 2

BMWTNR	HW	' S'	V EEPRC	M-IDNR
6.948.237	23	20	M35080	- 1
8.352.207	06	08	93S56 -	1

3.414.370	05	08	M35080 - 2	8.364.005
6.901.921	05	15	93S66 - E46	8.369.051
6.901.922	05	15	93S66 - E46	8.372.354
6.901.923	05	15	93S66 - E46	8.372.354
6.902.362	07	16	93S66 - E46	8.372.354
6.902.362	09	16	93S66 - E46	8.372.357
6.902.363	07	16	93566 - F46	8.372.359
6.902.374	07	16	93566 - F46	8.372.359
6 902 375	09	16	93566 - E46	8.372.359
6 903 748	08	12	93566 - Tacho	8.372.359
6 903 794	12	16	93566 - 1	8.372.359
6 903 804	12	16	93566 - 1	8.372.359
6 906 110	09	13	93566 - sw13	8.372.359
6 906 110	12	13	93566 - sw13	8.372.361
6 906 110	14	13	93566 - sw13	8.374.336
6 906 118	12	13	93566 - sw13	8.375.669
6 906 119	12	13	93566 - sw13	8.375.675
6 906 120	12	13	93566 - sw13	8.375.895
6 906 122	12	13	93566 - sw13	8.375.898
6 906 124	12	13	93566 - sw13	8.375.900
6 906 124	1/	13	93566 - SW13	8.375.902
6 006 126	17	12	93300 - SW13	8 376 192
6 906 148	12	13	93500 - SW13 93566 - SW13	8 376 701
6 906 154	12	13	93566 - SW13	8.376.707
6 006 880	10	20	93300 - SW13	8 376 708
6 906 890	10	20	M35080 - E46	8 378 983
6 006 807	10	20	M35080 - L40	8 380 144
6.006.001	10	20	M35080 - L40	8 380 145
6.906.901	10	20	M35060 - E40	8 380 146
6.906.991	10	14	M2E000 1	8 381 195
6.006.002	16	14	M35080 - 1 M25080 - 1	8 381 195
6 006 008	15	14	M35080 - 1 M25080 - 1	8 381 788
6.906.996	15	14	M2E000 1	8 381 790
6.006.000	16	14	M35080 - 1 M25080 - 1	8 381 806
6.906.999	10	14	M35060 - 1	8 381 808
6.907.015	16	17	M2E000 1	8 381 810
6.007.010	14	17	M35080 - 1 M25080 - 1	8 381 812
6.907.021	14	1/	M35060 - 1 M35080 - 546	8 386 092
6.911.287	12	23	M35080 - E40	8 386 110
6.911.313	10	15	M35060 - E40	8 387 044
6.914.873	19	15	M35060 - 1	8 387 044
6.914.874	19	15	M35080 - 1 M35080 - 1	8 387 044
6.914.879	19	15	M35060 - 1	8 387 045
6.914.884	10	15	M35080 - 1	8 387 045
6.914.885	10	15	M35080 - 1 M35080 - 1	8 387 045
6.914.885	19	15	M35080 - 1	8 387 047
6.914.905	19	10	M35080 - 1	8 387 047
6.914.908	19	18	M35080 - 1	8 387 063
6.914.913	19	10	M35080 - 1	8 387 065
0.914.930	19	15	M32000 - 1	0.307.003 27076
6.915.23/	21	31	M35080 - 2	0.307.075
0.931.244	22	32 25	M35080 - 2	0.307.075
6.932.907	2/	35	M35080 - 2	0.307.004
6.940.589	21	1/	M35080 - 1	0.307.005
6.942.546	24	21	M35080 - 1	

3.364.005 06 09 93556 - 1 3.364.005 07 12 93556 - 3 3.372.354 11 09 93556 - 3 3.372.354 13 09 93556 - 3 3.372.357 13 09 93556 - 3 3.372.359 09 09 93556 - 3 3.372.359 10 09 93556 - 3 3.372.359 12 09 93556 - 3 3.372.359 13 09 93556 - 3 3.372.359 14 09 93556 - 3 3.372.359 14 09 93556 - 3 3.372.359 14 09 93556 - 3 3.372.359 14 09 93556 - 3 3.372.361 11 93556 - 4 3.375.669 04 11 93556 - 3 3.375.898 16 10 93556 - 3 3.375.900 16 10 93556 - 5 3.375.902 16 10 93556 - 5 3.376.701 04 05 93556 - 7achta 3.376.703 04
--

LCM

HW SW MCU-IDNR HW SW MCU-IDNR

00	11	HC11P2-1	08	11	HC11P2-4
00	31	HC11P2-2	08	13	HC11P2-4
00	41	HC11PH8-1	08	36	HC912-4
00	42	HC11PH8-1	08	40	HC11PH8-2
00	43	HC11PH8-1	08	76	HC912-11
01	11	HC11P2-1	09	13	HC11P2-4
01	20	HC11P2-1	09	36	HC912-4
01	21	HC11P2-1	09	40	HC11PH8-2
01	31	HC11P2-2	09	76	HC912-11
01	41	HC11PH8-1	10	20	HC11P2-3
02	42	HC11PH8-1	10	31	HC11P2-2
02	43	HC11PH8-1	10	32	HC11P2-2
04	11	HC11P2-4	10	41	HC11PH8-1
04	51	HC912-2	11	41	HC11PH8-1
05	11	HC11P2-4	15	30	HC912-5
05	51	HC912-2	16	31	HC912-7
06	11	HC11P2-4	22	35	HC912-6
06	52	HC912-8	24	36	HC912-4
06	53	HC912-3	25	36	HC912-4
07	11	HC11P2-4	C1	40	HC11PH8-2
07	20	HC912-9	C1	41	HC11PH8-1
07	65	HC912-1	C1	43	HC11PH8-1
07	70	HC912-10	D1	41	HC11PH8-1
07	76	HC912-11	D1	42	HC11PH8-1
07	77	HC912-11			

About less known mileage copies in BMW of 1999-2005 year cars

There is same information on almost all of the people about where mileage data in BMW is situated. Well known standard list of units contains IKE, LCM, EWS and malfunction codes parameters also. But, as usually, real situation is a little bit harder and some part of units contains hidden data also that helps us to know is digits on dashboards LCD true or false. Calling this data as mileage copies is not absolutely correct

because its not current mileage but saved when some of diagnostic procedures was done value. Good thing here is that reading of such data from units gives us very important information when car condition analyze has to be done.

Lets try to explain this all on examples.

First example is SW14-SW21 (M35080, E38/E39/E53 of 2000-2005

year) and SW13 (93S66 of 1999-2000 year) IKE units.

All necessary and interesting information about it you can see on next screenshot:



It looks like service data saving method in MB dashboards: serial cycle contains five write procedures + writing counter on #01FC area.

Most interesting here is that next writing procedure can be started when dashboard software reset will be done only. Sure that reason of such restart can be not only some diagnostic procedures using (like coding, service reset, etc). Next data writing will be done also if car battery or dashboard power fuse removed, and then installed back sure.

It means that data saving depends from random things, for example it can be service worker knowledge, some kind of malfunction or something else. Its hard to say for sure is this bad or good thing. Anyway, as result of such processes we have useful information that helps us to know not only about real mileage but also even about previous car using. So lets talk a little about interesting and useful ways to

work with this data.

First way is very short and easy, software reset of necessary units could be done using [RESET ALL] program function. This function contains five serial commands of software reset. As result of them previous mileage writing to 5 areas and counter value is +5. So when next status reading will be done, all necessary data is correct.

Second way is much more interesting. All necessary thing to do is write 5 different mileage values less than current to their areas using [WRITE EEPROM] function. For example mileage difference between each of 5 values can be 15000km (like service resets). Most important thing here is to make biggest mileage value truly with writing counter.

Writing process is same serial cycle, starting from #01C4 memory area, continuing into #01D0,#01DC,#01E8,#01F4 and then to #01C4 again. If counter value is 9, then correct position of last writing is #01E8. Else we can see that mileage was corrected.

One more example of hidden mileage data is in automatic transmission (EGS) memory.

But I'm talking not about malfunction codes parameters because it's well known to everybody and solution of this is very simple – malfunction codes reset. After this procedure previously saved data is erased and new malfunction codes getting parameters that already contains new mileage value.

But not all of people know that most part of EGS units ($\rm HW23/28/29/2B/2C/2F/2H$) as answer to standard diagnostic procedure except malfunction codes also sending two mileage values. First is current mileage, second is mileage value when last unit reset was done. Data output format is $\rm N/10(hex).$

Unit into												
nit info Unit name	Description					BMW	NB:			FGST	NB	
EGS		Electronic Gea	rbox Co	ntrol		1.4	23.953	hw: 2B	sw: 09	V	BAGE61080DN44	432
Odometer	Date	Algorithm		ADFG		Errors	1			Errors	after clear	
165010 km	27/9	9 0		000	000		n	o errors			Press "Errors	
Read Flash	memory	0x0000:FF	FF 82	8E 00	00 0	4 00	00 00	37 C2	00 00	37 C2	B07	Г7'
Read me	mory	0x0010:00 0x0020:00 0x0030:00	00 37	C2 00 C2 00 C2 00	00 3	17 C2 17 C2	00 00 00 00 00 00	37 C2 37 C2 37 C2	00 00	37 C2 37 C2 37 C2	7T7T7 7T7T7 7T7T7	Г. 7' Г. 7' Г. 7'
Load f	ile	0x0040:FF 0x0050:EF	FF FF	FF FF	FF F	F FF	FF FF	FF FF	FF FF	FF FF		
Save	ile	0x0069.0 0x9070:0	laved o	dometer			_	_		× 2		Г7 [°] Г7 [°]
Saved odd	ometer	0x0080:0 0x0090:0	Ach	al odomet	er		Odomete	er at the la	st clearing	22	7T7T7 7T7T7	Г7" Г7"
Errors		0x00A0:0		1650	UKM			1648UU K	m	222		Г. 7°
Write AL	DFG	0x00D0:0		Clear	errors			Close)	22		Г. 7' Г
Write FG6	et n fe	0x00F0 F	00 37	- CZ 100	-00-3	17 LZ		37.17		F	7T 7T 7	, F. 7 [,]
		0x0110:00 0x0120:00	00 37	C2 00	00 3	7 C2	00 00	37 C2 37 C2	00 00	37 C2 37 C2		Г. 7° Г. 7°
ile in editor		0x0130:00 0x0140:00	00 37 00 0E	C2 00	00 3	7 C2	00 00	37 C2 37 44	00 00	37 C2 37 C2		r7" D7"
EGS_00000-0	DFFFF.bin	0x0150:00 0x0160:00	00 37	C2 00	00 3	7 C2	00 00	37 C2	00 00	37 C2		Г7 [*] Г. 7 [*]
Browse	A #	0x0170:00 0x0180:00	00 37	C2 00	00 3	17 C2	00 00	37 C2 37 C2	00 00	37 C2 37 C2		Г. 7° Г. 7°
Exit	1	0x0190:00	00 37	C2 00	00 3	7 C2	00 00	37 C2	00 00	37 C2		Γ7

All diagnostic software as usually works with malfunction codes only and all other data is ignored. This situation making possible one bad mistake. After mileage correction in case when no malfunction codes wasn't found by diagnostic software malfunctions memory is not resetting and old mileage is saved there.

That's why working on car process must be done step by step. First step is full scanning of all units but without malfunction codes reset (you can use [FIND UNITS] function of main menu). It's making possible saving of all necessary data into log-file, including original mileage value.

Sure that last step is scanning of all units with malfunction codes resetting (using [CLEAR ERRORS] function of main menu). Manual malfunction codes reset could be done also from program main window, using [ERRORS DETAILS] function (see also "Program functions")

Some features of EEPROM M35080 read & write process

Well known thing that in all dashboards that was

manufacted till 2000 year (with 93S56, 93S66 chip inside) EEPROM memory could be read via car diagnostic socket fully same as when using programmer.

A little different situation in new dashboards (manufacted

after 2000) in E38/E39/E53 of 2000-2005 year $\$ (SW14-SW21, EEPROM M35080). When compare two dumps that was read via diagnose and using programmer we can see next picture:

DIAG.	=	PROG.
#0000-#0057	=	#0020-#0077
#0058-#01FF	=	#0200-#03A7
#0200-#021F	=	#0000-#001F
#0220-#03FF	=	#0220-#03FF

Well seen that full memory dump contains #0220-#03A7

data twice in #0078-#01FF and off course in #0220-#03A7 M35080 memory areas. In first part of dump (that was read by programmer) we can see

that developers tried to make special M35080 data format compatible with 93S56/93S66. Maybe it was done to make possible work with new cars using old software versions of diagnostic devices (to data was written into necessary memory fields correct).

But situation in second part of memory dump is not very good. You can get it from next example: some data in same (when read via diagnose) areas have different properties.

Lets look on this example more detail. Data writing into #0084-#0089 fields is denied by software protection for good known reasons. But data writing into #022C-#0231 area using standart commands of BMW protocol works perfect that is not have to be possible because its same areas in real (read by programmer) memory dump. So here we have one more mistake of BMW developers that continuing with more and more new SW units versions...

This situation also bad for BMW scanner users, because they getting a lot of problems with necessary memory fields writing.

We cant forget also that data in bought areas of dump read via diagnose is same area in M35080. That's why before data writing you have to change bought areas in working window of BMW scanner.

If data corrected in #0078-#01FF area only then it not will be written to chip. Actually it will be written twice. First data will be written to #0078-#01FF and then old one will be restored from #0220-#03A7 area.

If data will be written to #0220-#03A7 only - writing will be done, but program will finish writing procedure with mistakes error message (verification from #0078-#01FF area cant be done). The count of mistakes in error message has to be same as changed bytes count.

There is no so big deal here if user know about all processes that starts when write function used. But if not people usually think that program works bad =)

Also I want to tell that in more new dashboards SW versions (E83/SW07-SW08, E46/SW31-SW35) BMW developers fixed their bug. That's why all IKE units memory that was detected like [M35080 - 2] could be read via diagnose absolutely same like when using programmer.