

# ABRITES DIAGNOSTICS FOR PORSCHE





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- Key programming;
- Module replacement,
- ECU programming;
- Configuration and coding.

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## List of revisions

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	3.3 Standard diagnostic requests	Chapters Added	
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## List of revisions

Date	Chapter	Description	Revision
30.11.2017	3.6	Added Immo V adaptation	3.0
20.01.2018	3.6	Added Special Function "Read/Update ConfigData"	3.1

### 1. Introduction

"ABRITES Diagnostics for Porsche" is a Windows PC based diagnostic software for the Porsche vehicles. With this tool you're able to learn new keys to the car. The "ABRITES Diagnostics for Porsche" also provides basic diagnostic capabilities for Porsche vehicles.

### 2. Installation

#### 2.1 Installing USB Interface drivers

The drivers are installed automatically when installing the software. In case of some problem with the drivers you might download latest drivers from <u>www.ftdichip.com</u>

#### 2.2 Installing "ABRITES Diagnostics for Porsche"

The "ABRITES Diagnostics for Porsche" is contained into the installation package, so please run the setup program. It will create a program group in the start menu and optionally a desktop icon.

Now you are ready to start the "ABRITES Diagnostics for Porsche" When starting the software, there is a splash screen appeared, where the connection with the hardware is examined. If no problem appear, then a message "Connection OK" should appear!

ABRI	TES Diagnostics for Porsche 5.1 www.abrit	us72.com			_ 🗆 🗡	
🏎 Vehicle Selection						
Po	rsche Boxster 987 (2005-2010)			•	]	
#	Unit name	Protocol	DTC	Part num.		
01	Digital Engine Electronics(DME)				Previous	
02	Tiptronic					
03	Porsche Stability Management(PSM)					
04	Porsche Access System(PAS)					
05	Porsche Supplement Impact Protection(POSIP)				Upen	
06	Advanced Weight System(AWS)					
07	Air Conditioning				]   🦊	
08	Instrument Cluster	CAN: UDS		98764111620	Next	
09	GATEWAY					
10	Vehicle Electronic System					
11	Steering Column Switch					
12	Seat Memory				_	
•					]	
Ĩ	Special Functions Broadcast		<u>}</u>	Options	×	
Ses	sion closed.				Exit	

#### ATTENTION:

Make sure you are running the "ABRITES Diagnostics for Porsche" from its folder. If you are using a shortcut to the "ABRITES Diagnostics for Porsche", please be sure that the "working folder" parameter is set to the folder where the executable is placed! If the "working folder" of the shortcut is not set the K-Line may function incorrectly.

## 3. DIAGNOSTIC WITH "ABRITES DIAGNOSTICS FOR PORSCHE"

The "ABRITES Diagnostics for Porsche" consists basically of three parts:

- Standard diagnostic functions like reading/clearing trouble codes, device identification, coding, actual values, etc.
- Key-learning
- Special functions like reading login (PIN), reading EEPROM, etc.

All devices, which can be installed into the selected vehicle model are listed in the main screen of the "ABRITES Diagnostics for Porsche". If you want to connect to some device please double click on it. The "ABRITES Diagnostics for Porsche" will try to connect to the device using some of the following protocols:

- KWP2000 over TP2.0 with baud 5000KB/s (CAN)
- KWP2000 over TP1.6 with baud 5000KB/s (CAN)
- ISO protocol (CAN)
- KWP2000 over K-Line with fast init
- KWP2000 over K-Line with slow init.

You can choose which of these protocols to try when attempting to connect as described in the "Configuration" section.

#### **3.1 Configuration**

The "ABRITES Diagnostics for Porsche" can be configured by pressing the "Options" button from the main screen. The following dialog is displayed:



NOTE: changes regarding interface detection and timing parameters which you made in this dialog will be applied after restarting the application.

#### 3.1.1 Used protocols

The meaning of the check-boxes is as follows:

- CAN ISO TP when trying to connect to the device the Diagnostics will try to connect to it using "ISO protocol (CAN)".
- CAN UDS TP when trying to connect to the device the Diagnostics will try to connect to it using "UDS protocol (CAN)".
- CAN TP2.0 when trying to connect to the device the Diagnostics will try to connect to it using "KWP2000 over TP2.0 with baud 500KB/s".
- CAN TP1.6 when trying to connect to the device the Diagnostics will try to connect to it using "KWP2000 over TP1.6 with baud 500KB/s".
- K-Line KWP2000 (Fast Init) when trying to connect to the device the Diagnostics will try to connect to it using over K-Line with fast init.
- K-Line KWP2000 (Slow Init) when trying to connect to the device the Diagnostics will try to connect to it using over K-Line with slow init.
- K-Line KW1281 when trying to connect to the device the Diagnostics will try to connect to it using over K-Line with slow init.

**NOTE:** These check-boxes are used for configuring only the used protocols when trying to connect to the device in order to perform standard diagnostic requests, they are not applied when auto-scanning devices.

#### 3.1.2 Interface detection

Normally the "ABRITES Diagnostics for Porsche" USB Interface is recognized automatically.

#### 3.1.3 K-Line baud rate settings

When trying to connect to the device over K-Line the Diagnostics will try to connect to it using one baud rate and if it doesn't succeed it will switch to another baud rate and try again. There are two baud rate values currently used – 10427 and 9600. Using the "10472 \ 9600" and "9600 \ 10247" radio-buttons within the options dialog one can set the order in which these two baud rate values will be used.

If "10472  $\9600$ " is selected, then first the Diagnostics will try to connect to the device over K-Line using baud rate 10472 and if it doesn't succeed, it will switch to 9600 and try again with it. If "9600  $\10472$ " is selected, then first the Diagnostics will try to connect to the device using baud rate 9600 and if it doesn't succeed it will switch to 10472 and try again with it.

**ATTENTION:** Some device working on baud 9600 cannot be waked up if they are first tried on baud 10472, so if you cannot connect to device through the K-Line, try to change the options so first to try on 9600.

#### 3.1.4 Timing parameters

The protocols running under K-Line require very precise byte timing. Since Windows is not a real-time operating system, these times are not always respected, so it is possible that the communication with some devices is unstable, or it is not possible to connect. In such cases you can try to change some of the times timing parameters from the "Advanced" button.

The timing parameters have the following meaning:

- Wakeup echo delay time after slow init between receiving "55 xx yy" and sending the inverted value of "yy" (according the K-Line wakeup procedure)
- Communication echo delay time between reception of a byte under KWP1281 and sending it inverted back to the device
- Inter byte time time between sending two bytes under KWP2000
- Time between messages time delay between reception of response from device and sending new request to it.

#### 3.1.5 K-Line PINs

Normally the K-Line is output on PIN7 of the OBDII connector. But some models (e.g. Porsche Cayenne 2004) the K-Line with some units might be on PIN3 or PIN15. For that reason there is a option on which PINs to try to connect to the units.

**ATTENTION:** If you check all PINs to be examined (i.e. PIN3, PIN7, PIN15) then when scanning for units the time will will be significantly increased. For that reason by default only PIN7 is selected.

#### 3.1.6 CAN resistance

According the CAN specification there should be a resistance between CAN-Low and CANHigh. Normally the gateway has this resistance, but if you want to connect on some device on the table then you should use that resistance. For that reason there is a option what resistance to use – None, 75 Ohme, 100 Ohm, 120 Ohm, or 10 Kiloohme. By default 120 Ohm is used. Normally you should don't have any problems, but if some problem appear you can try to change the CAN resistance.

#### 3.2 Scanning units

On the main screen of the "ABRITES Diagnostics for Porsche" the user is able to select a certain vehicle model configuration from the "Vehicle selection:" combo-box. A list of the devices which can be installed into this car type is displayed below.

For to connect to a certain device the user have to double-click on it or to select it and press "Open".

Pressing the "Scan all" button from the "Broadcast" panel will attempt to connect to each device currently displayed in the list. Depending on the configuration options only the selected protocols will be used when scanning for the devices.

For all devices, which the "ABRITES Diagnostics for Porsche" finds, a detailed information is displayed in the main screen. For each device the following information is shown:

- Unit name
- Protocol using which protocol (CAN ISO TP, CAN TP2.0, etc) the diagnostic connection is established
- DTC number of DTCs stored in the unit

Since clearing of the DTCs for all existing devices is one of the main diagnostic operations, and broadcast requests for clearing DTCs are not accepted from all units, there is a possibility to scan all devices and if connection to the device is possible, then its DTCs are cleared. This is made by pressing the "Clear all DTCs" button from the "Broadcast" panel. Once again, the protocols used to connect to the devices are specified in the configuration options.

#### 3.3 Standard diagnostic requests

When double-clicking on the desired device in the main "ABRITES Diagnostics for Porsche" window, you connect to the device to proceed standard diagnostic requests. The following dialog is opened (example with Instrument cluster Porsche Boxster (987)):

Instrument Cluster					
			CAN: UDS		
Establishing diagnostid	session with selecte	d unit c control unit identifica	tion ====================================		<b>∱</b> Up
Diagnosis software nu Porsche Part Number: Diagnostic channel is	mber: 820A 987 641 116 20 open.				🥜 Clear log
					Save log
					Down
Diagnostic requests					Custom
Extended Identification	Actual Values	Input signals	Security Access	A·B·R·I·T automptive s	E E S
Read DTCs	Clear DTCs	Actuator tests	Coding	Exit	

This dialog provides you the possibility to execute the following diagnostic functions:

#### 3.3.1 Extended Identification

"Extended Identification" will provide you the device identification and VIN number if present.

#### 3.3.2 Actual values

This dialog will provide you information for the actual values of some of the main characteristics of the corresponding electronic control module.

Here is an example for the actual values read for the Instrument Cluster of Boxster 987 (2005 - 2010).

Select category:				
Parameter	Value			
Supply voltage terminal 30	14.4 V			
ParkAssist frequency	0 Hz			
Resistor fuel level sensor	0.0 Ohm			
Velocity	0 km/h			
Photo transistor brightness	7.45 %			
Time in instr. clus. when oil level measured	16777215 s			
Oil temperature when measured	143.25 *C			
Non-compensated oil level	0 mm			
Oil Ivi 1st comp. stage Zoil IviKomp1	0			
Oil IvI 1st comp. stage Zoil IvIKomp2	0			
Oil Ivl 1st comp. stage Zoil IvlKomp3				
compensated displayed oil level	ff			
Clutch early switch	actuated			
Total distance	20432 km			
Short distance	0.00 km			
4				
,				
	×			

#### 3.3.3 Coding

There are several coding functions available depending on vehicle model:

- Coding Settings
- Coding Automatic coding
- Coding Manual coding
- Coding Automatic coding from file

The "Automatic coding", "Manual coding" and Automatic coding from file" functions are only available for units communicating with UDS CAN TP.

#### 3.3.3.1 Coding - Settings

This dialog will provide you information for the coding characteristics of the corresponding Electronic Control Module and also the opportunity to modify these characteristics.

Here is an example for the coding information of the vehicle model Boxster 987 (2005-2010) Porsche Access System (PAS) unit:

ABRITES Diagnostics for Porsche 6.5	www.abrites.com	×
Coding		×
You can code only one item at a time. Status: Reading		
Central locking system Comfort functions Key 1 Key 2 Key 3 Keys 4 to 5		
Reaction time, key buttons 2 and 3	short (471 milliseconds)	
	Code	Evit

In the example above, you can select from several coding option categories: "Central locking system", "Comfort functions", "Key 1", "Key 2", "Key 3", "Key 4 to 6". When you select certain category the options belonging to this category are listed below. Here is an example with "Comfort functions" category selected:

BRITES Diagnostics for Porsche 6.5 www.abrites.com		
PAS		
Coding		×
Status: Reading		
Comfort functions		
Parameter	Init	Value
Vehicle coding: Comfort via radio remote control	JIII	active
Vehicle coding:Comfort function window		active
Vehicle coding:Convertible top comfort function		not active
Vehicle coding:Door and window comfort function		not active
	-	
Code		Exit
		Exit
connected.		Exit

You can modify only one item at a time.

Click on the desired item into column "Value" and you will be able ether to select from a list of possible values or to write down a certain input.

By pressing button "Code" the selected item value will be modified.

#### 3.3.3.2 Coding – Automatic coding

Use this function when unit is not coded or coding is faulty (there is usually DTC indicating this). This function will calculate unit's default coding according to vehicle configuration read from vehicle and write it into the unit.

You can use "Coding - Settings" after that to change user specific settings.

After you select "Automatic coding" and press "Next" the program will read vehicle configuration, calculate unit's default coding (have in mind that you will need internet connection for that) and if everything is OK, guide you to the page where you can select to execute the coding or not by pressing "Next" or "Exit" ("Next" will do the coding).





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#### 3.3.3.3 Coding – Manual coding

Use this function when unit is not coded or coding is faulty (there is usually DTC indicating this). This function will calculate unit's default coding according to vehicle configuration set from user and write it into the unit.

You can use "Coding - Settings" after that to change user specific settings.

After you select "Manual coding" and press "Next" the program will give you the options to select vehicle configuration, calculate unit's default coding (have in mind that you will need internet connection for that) and if everything is OK, guide you to the page where you can select to execute the coding or not by pressing "Next" or "Exit" ("Next" will do the coding).

**ATTENTION!** Use "Manual coding" carefully. You have to be sure that you choose the correct vehicle configuration options otherwise the calculated coding might not be correct and brake the unit.









## Abrites Diagnostics for Porsche User Manual

5.

ABRITES Diagnostics for Porsche		_ [] ;
Production code	Value	
Product keys	F73CA - PANAMERA TURBO	
	F71CA - PANAMERA	
	F72CA - PANAMERA S	
	F73CA - PANAMERA TURBO	
	F74CA - 970 PANAMERA HYBRID	
•		
Select Production Code. Press "Next" to proceed.		
	< Bady Next >	Exit
-		Exit

6.

Option	Installed	
521 - TILT SENSOR	YES	
536 - ALARM SIREN	NO	
537 - SEAT POS. CONTROL, LEFT (MEMORY)	YES	
538 - SEAT POS. CONTROL, RIGHT (MEMORY)	YES	
560 - ADVANCED AIRBAG	NO	
505 - LED DAYTIME DRIVING LIGHTS	YES	
530 - INTERIOR LIGHT PACKAGE	NO	
719 - QATAR VEHICLE PANAMERA 4S	NO	
862 - ROLLER BLIND, ELECTRIC AT REAR WINDOW	NO	
867 - POWERLIFT FOR REAR LID (POWERLIFTGATE)	YES	
899 - ISOFIX ON PASSENGER'S SIDE	NO	
i		
ress "Next" to proceed.		
< 8a%	Next >	Exit

7.

RITES Diagnostics for Porsche 6.5	www.abrites.com	
ABRITES Diagnostics for Porsche	-	Ш,
Group	Value	-
EXHAUST SYSTEMS	176 - SPORTS EXHAUST SYSTEM	•
AEROKIT	175 - PMSC - EXHAUST SYSTEM, CUP VEH.	
DOOR MIRROR ADJUSTMENT	176 - SPORTS EXHAUST SYSTEM	٦
ANTI-THEFT PROTECTION	177 - EXHAUST SYSTEM WITH FRONT SILENCER	C
PARKING AID	179 - EXHAUST SYSTEM SUPER SILENCER CUP V	E۲
GARAGE DOOR OPENER		٦
TRANSMISSION	250 - PDK TRANSMISSION (DOUBLE CLUTCH)	
REAR WINDOW WIPER	425 - REAR WINDOW WIPER	
INTERIOR REAR-VIEW MIRROR	276 - INTERIOR MIRROR, AUTO. ANTI-DAZZLE	
WINDOW TYPE	864 - HEAT INSULATING GLASS (LAMINATED), P	R.
SLIDING ROOFS	652 - WITHOUT SLIDE/TILT ROOF	
FRONT SEATS, LEFT	390 - ADAPTIVE SPORTS SEAT, LEFT (G1) 18-WA	Y
•		•
Select Installed Items.		
Press "Next" to proceed.		
	CRAV Next S Evit	
	- COST PROCE	_
20110000		Eď





#### 3.3.3.4 Coding – Automatic coding from file

After "Automatic coding" or "Manual coding" has been performed, each time the coding information before the coding is done is saved into a file into the log files directory so in case of wrong coding result the previous coding could be turned back into the unit by using this function.

After you select "Automatic coding from file" and press "Next" the program will read vehicle configuration, download unit's coding information (have in mind that you will need internet connection for that) and if everything is OK, guide you to the page where you can select the file which should be used for coding (file's name contain VIN number, unit name, date and time of creation). Pressing "Next" will show the page where you can select to execute the coding or not by pressing "Next" or "Exit" ("Next" will do the coding).









ABRITES Diagnostics for Porsche 6.5	www.abrites.com	×
ABRITES Diagnostics for Porsche		
		1
		J
		ļ
		1
		ľ
Coding success		
coung success.		
	Next >	Exit
earimettea.		Exit

Actuator tests

This function will provide you the opportunity to perform some test of certain unit's functionality.

When button "Actuator tests" is pressed a new dialog appears where are listed the categories of tests which can be performed.

Here is an example with "Instrument Cluster" of Porsche Boxster (987):

BRITES Diagnostics for Porsche 6.5	www.abrites.com		
ABRITES Diagnostics for Porsche			
Paset op-board computer values			
Loudspeaker test			h
Bulh test			
Tank content			
Transf. of corr.val. to el.svs. c. unit			
Adop. of CAN control unit tank corr.val.			1
Indicator test			
Transfer Price State State			h
			1
			4
<u></u>			
		1	
		Next >	Exit
COTTOUCO			Exit

After "Loudspeaker test" is selected and "Next" button is pressed the following window appears:

APRITES Disgnastics for Devecto	
ABRITES Diagnostics for Porsche	
Loudspeaker test	
Execute	Stop
Parameter Value	Unit
No parameters	
•	
Result Value	Unit
	A Park

Press "Execute" to start the test.

BRITES Diagnostics for Porsch	e 6.5 www.ab	rites.com	
Loudspeaker test	ische		<u> </u>
	Execute	Stop	
Parameter	Value	Unit	
No parameters			
1			
Result	Value	Unit	
Result	Function runni	ng	
		< Back	Next > Exit
			Exit

Press "Stop" to stop the test.

#### 3.3.5 Change ID

This function allows you to change the Vehicle Identification Number value of the selected unit. When you press button "Change ID" the following window appears:

Please enter a new V	ehicle Identification Numbe
WP0ZZZ98Z6U7720	70
	×

In the field is displayed VIN number read from Gateway unit (if connected to vehicle, otherwise the field will remain empty).

You can set there any VIN number you like.

Press "OK" to change VIN number of the selected unit.

Press "Cancel" to leave it unchanged.

If "OK" is pressed the result will be displayed in the main window:

trument Cluster						
				CAN: UDS		
stablishing diagnostic sess iagnostic software No.: orsche part number: 96 iagnostic channel is open.	ion with selected unit ========= electronic 820a 7764111620	control unit identification ==			*	<b>∲</b> Up
	===== Changing VIN =					~
IN changed!						<b>7</b>
						Clear log
						Save log
						Down
Diagnostic requests —						_
Extended Identification	Read DTCs	Actual Values	Actuator tests	Custom requests	A · B · R · I · T · E automotive solutio	S XIIS
		Carlies				

#### 3.3.6 Read Diagnostic Trouble Codes

"Read DTCs" read the diagnostic trouble codes currently stored into the device The total number of DTCs being set is also reported.

ABR	ITES Diagnostics for I	Porsche 6.5	www.abrit	es.com			
G	ATEWAY						
Г					CAN: UDS		
	DTC Count: 2 c122 - Communication drive - DTC; c122 - Fault symptom: - DTC Fault symptom: - Fault status: - Fault status: - Fault sounter: - Battery voltage - CPU load: - DTC; 8007 - Fault symptom: - DTC; 8007 - Fault symptom: - DTC; 8007 - Fault symptom: - Fault sy	er's door control unit (comf no signal otom extended: Fault sto resent 50 : 14.5 V % oding Signal implausible otom extended: Fault sto present 50 : 14.5 V %	Fault codes read =====				Lear log Clear log Save log
	Diagnostic requests					A B R I T F	s
	Extended Identification	Read DTCs	Actual Values	Actuator tests	Custom requests	automotive solut	ions
	Control Unit Replacement	Clear DTCs	Coding	Change ID		7	<pre></pre>
							Exit

#### 3.3.7 Clear Diagnostic Trouble Codes

"Clear DTCs" button will clear all stored DTCs inside of the unit.

#### 3.3.8 Control Unit Replacement

This function allows you to read unit's configuration data and then write it into another unit so that the new unit can be easily installed into the vehicle.

When button "Control Unit Replacement" is pressed the following window appears:

RITES Diagnostics for Porsche 6.5	www.abrites.com	
ABRITES Diagnostics for Porsche		_ 🗆 🗙
Pead Data		
Write Data		
		1 1 1
	< Back Nex	t > Exit
J. 100000.		Evit

When you choose "Read data" and press "Next" the software will read the configuration data of the unit to which diagnostic session is established currently and save it to file into the log files directory.



SRITES Diagnostics for Porsche 6.5		
ABRITES Diagnostics for Porsche		
Data read.		
	< Park Ne	vt > Evit

When you choose "Write data" and press "Next" the software will read the configuration data from the saved file into the log files directory and writes it to the unit to which diagnostic session is established.

ABRITES Diagnostics for Porsche 6.5	www.abuites.ause	- X
ABRITES Diagnostics for Porsche		X
Writing		
		-
	Next >	Exit



#### **3.4 Special Functions**

Special functions are some specific for electronic control units application, which will allow you to learn keys, read security access codes, read/program unit's configuration data / flash content and so on. Special functions are available from the main dialog of the application.

	🔓 Special	Functions	T Broad	icast 🛛 🔞	Options			
	Key Learning	Engine Control Unit	K-Line Instrument Cluster K-Line	CAN Instrument Cluster CAN	Kessy/Immo functions	Guided Functions	Dump tool	Dpen
Ī								

The appropriate special function is opened by selecting it in the list box and double-clicking on it, or by pressing the "Open" button.

#### 3.4.1 Special functions with "Instrument Cluster CAN"

When this function is opened, the following dialog appears:

🗠 ABRITES Diagnostics for Porsche		_ 🗆 🗙
Select vehicle model:	Select function:	
911 997 (2005-2010) Boxster/Cayman 987 (2005-2010) Panamera 970 (2010-2012) Cayenne (2011+) Macan 918 Spyder 911 991 Boxster/Cayman 981	Read/Update ConfData Read Mileage/Cluster Calibration Reset Reset service interval Oil level measurement Events Erase event memory	
	< Back Next > Ex	kit

The user can select vehicle model from the "Select vehicle model" list.

The user can select certain function available for the selected vehicle model from the "Select function" list.

The following vehicle models can be selected for special function "Instrument cluster CAN":

911 997 (2005-2010) Boxster 987 (2005-2010) Panamera (2010-2012) Cayenne (2011+) Macan 918 Spyder 911 991 Boxster/Cayman 981

#### 3.4.1.1. 911 997, Boxster 987 and Cayman

For vehicle models 911 997, Boxster 987 and Cayman the available functions are: Read/Write ConfData Read mileage value Reset cluster Reset service interval Oil level measurement Events Erase event memory

#### 3.4.1.1.1 "Reset service interval"

When "Reset service interval" is selected, by pressing button "Next" the "Abrites Diagnostics for Porsche" connects to the instrument cluster and guides the user to select some specifics of the vehicle model after which resets the service interval.

A Instrument Cluster CAN		A Instrument Cluster CAN
Please select model year, Next to continue		Select UOM for the milage, Next to continue.
MY <= 07 MY = 08 MY => 09		<mark>km</mark> miles
< Dist. Net >	Exit	

\_ 🗆 🗙

Next >

Exit

A Instrument Cluster CAN		A Instrument Cluster CAN	
Model year: "MY = 08" UOM for milage: "km" Country: "Austria" Next to confirm selection. Back to return for new selection.		Service interval written. Press Next to continue	э.
Abu Dhabi Algeria Andorra Angola Argentina Aruba Aruba Australia <b>Austria</b> <b>Austria</b> Bahamas Bahrain	4 1		
< Back Next	L> Exit		<back next=""> Exit</back>

#### 3.4.1.1.2 "Oil level measurement"

When function "Oil level measurement" is selected, by pressing button "Open" the "Abrites Diagnostics for Porsche" connects to the instrument cluster and after some specifics are clarified gives information about the oil level.

A Inst	A Instrument Cluster CAN		_ 🗆 🗙
Oi	Value displayed for last oil level meas.		
Ne	1st segment flashing		
	< Back. Next >	Exit	
	< Back 1	vext>	Exit

#### 3.4.1.1.3 "Read/Write ConfData, Read mileage value, Reset cluster "

If functions "Read/Write ConfData, Read mileage value, Reset cluster " is selected when pressing button "Open", the "Abrites Diagnostics for Porsche" opens diagnostic session to the instrument cluster and the following dialog appears:

Instrument cluster CAN	×
	r.
00000000 07 50 30 5A 5A 5A 39 38 5A 36 55 37 37 32 30 37 WP0ZZZ98Z6U77207	
00000010 30 09 09 13 FF FF FF 00 00 39 38 37 36 34 31 31 09876411	1 🝯 1 😥 1
00000020 31 36 32 30 00 60 82 00 00 00 00 00 05 26 33 14 1620&3.	
	Read ConfData ConfData
00000040 C4 04 01 54 21 02 80 01 88 15 C0 02 00 00 00 004:	
00000080 9F FF F7 7F F7 C7 90 01 03 00 96 00 1F 00 C8 00	
000000090 03 00 ED E5 05 78 28 5B 05 05 00 FE FE FE FE FE	Save to file Load from file
000000A0 C4 3F 0B 28 00 00 C4 A2 34 80 DB 03 00 08 23 00 .2.(4#.	
000000B0 3C 25 04 FF 3A 01 6A 01 1E A2 5B A2 58 1E 58 BD <%	- Mileage
00000000 BC 78 F0 B7 87 39 06 42 00 00 00 00 00 00 00 09.B	
000000D0 01 49 5D 00 00 00 00 00 82 20 20 00 00 02 F4 01 .11	
000000E0 06 27 00 0F 78 64 64 1B 03 09 0A 1E FF FF FF FF .'xdd	,
000000F0 FF FF 80 00 80 00 80 00 20 01 00 00 00 05 8F 02	
00000100 80 FD 01 FB 03 F6 07 EC 0F D8 1F B0 3F 60 7E C0?`~.	Read
00000110 FD 81 FB 03 F6 07 EC 0F D8 1F B0 3F 60 7F C0 FE	
00000120 FF FF FF FF FF 25 B8 FB A0 80 66 5B 7C AB A2 9C	
00000130 80 05 0B 14 1C 9D 90 8A 80 20 2C 4D 6E 90 20 E0	
00000140 40 EF FF FF 1E 00 05 1C 87 3C 05 20 08 06 B1 90 @	Peret
00000150 5A 32 0A 1E 3C 05 A4 32 0A 06 89 05 0A B1 90 FF Z2<	11636(
00000160 FF 5C 5C FF FF 25 5B 90 C5 FB 0F 26 3D 54 6B 1C .\\\$[6=Tk.	
00000170 25 26 25 03 4F 54 59 58 47 7F 83 88 88 7C AD B1 %&%.OTYXG	
00000180 B5 B9 B4 E1 E6 E8 F6 FD FF FF FF FF FF FF FF FF	
Memory reading completed	$\wedge$
	Exit

- Button "Read ConfData" reads cluster's configuration data.
- Button "Write ConfData" updates cluster's configuration data with the loaded into the hexadecimal window data.
- Press button "Load from file..." to load a binary file's data into the hexadecimal display.
- Press button "Save to file..." to save the content of the hexadecimal display to binary file.
- Button "Read" into the mileage section reads current mileage value.
- Button "Reset" performs diagnostic reset of the instrument cluster.

#### 3.4.1.1.4 "Events", "Erase event memory"

If functions "Events" or "Erase event memory" is selected when pressing button "Open", the "Abrites Diagnostics for Porsche" opens diagnostic session to the instrument cluster and the reads the event memory and display it. If "Erase event memory" is selected also a button "Erase" is available. The following dialog appears:

A Instrument	t Cluster CAN		
Event [ A003 0 A005 0 A007 F A008 A A009 E A011 0 A013 A A016 F A017 F	Description Dil pressure Check Engine (exhaust-related problem) PSM failure ABS failure Brake pad Coolant level Airbag Front lid open (while driving) Rear lid open (while driving)	Value not present not present not present present present present not present not present not present	
	Erase		
	_	< Back Next >	Exit

Use button "Erase" to erase the event memory.

#### 3.4.1.2 Panamera (2010-2012) and Cayenne (2011+)

For vehicle model Panamera (2010-2012) and Cayenne (2011+) the available functions are:

- "Reset service interval (Oil Change)"
- "Reset service interval (Interim Service)"
- "Reset service interval (Main and Interim Service)"
- "Write maintenance interval"
- Change maintenance interval"

For vehicle model Macan,918 Spyder, 911 991, Boxster/Cayman 918 the available functions are:

- "Reset service interval (Oil Change)"
- "Reset service interval (Interim Service)"
- "Reset service interval (Main and Interim Service)"

🕾 ABRITES Diagnostics for Porsche	
Select vehicle model:	Select function:
911 997 (2005-2010) Boxster/Cayman 987 (2005-2010) Panamera 970 (2010-2012) Cayenne (2011+) Macan 918 Spyder 911 991 Boxster/Cayman 981	Read/Update ConfData Read Mileage/Cluster Calibration Reset Reset maintenance interval (Oil Change) Reset maintenance interval (Intermediate service Reset maintenance interval (Main service) Write maintenance interval Change maintenance interval
	< Back Next > Exit

The wizard will guide you through the steps related to these functions.

#### 3.4.1.2.1 "Reset service interval"

If "Reset service interval (Oil Change)", "Reset service interval (Interim Service)" or "Reset service interval (Main and Interim Service)" is selected:

A Instrument Cluster CAN		<u>_   X</u>
Current date:		
7.10.2013 г.		•
Please, enter current date		
	< Back Next >	Exit

By pressing "Next" service interval is reset.



#### 3.4.1.2.2 "Write maintenance interval"

If "Write maintenance interval" is selected:

First window requires the user to select the country where vehicle is maintained.

A Instrument Cluster CAN		_ [] ×
Select country Next to continue		
Select country, Next to continue.		
Aruba		-
Australia		
Austria		
Azerbaijan		
Bahamas		
Bahrain		
Bangladesh		
Barbados		
Belarus		
Belgium		
Boshia and Herzegovina		
Brazil		
Didnei Didaada		•
	< Back Next >	Exit

Next window requires the user to select the unit of measurement (UOM) for the mileage value.


Next window displays the current values of "mileage" and "date" of last "main", "intermediate" and "oil change" service performed.

A Instrument Cluster CAN		_ 🗆 🗙
Main maintenance: Mileage at last service: Date of last service:	51 22. 2 .2011 r.	km •
Intermediate maintenance: Mileage at last service: Date of last service:	51 22. 2 .2011 r.	km •
Oil change service: Mileage at last service: Date of last service:	20457 12. 6 .2012 г.	km •
	< Back Next >	Exit

User can modify these values as desired.

Next window require the user to select the type of service for which the "Abrites diagnostics for Porsche" to write new mileage and date values into instrument cluster.



By pressing "Next" selected maintenance interval values are written into instrument cluster.

## 3.4.1.2.3 "Change maintenance interval"

If "Change maintenance interval" is selected:

First window displays the current set values of mileage and days between "main", "intermediate" and "oil change" service performed.

A Instrument Cluster CAN		
Main maintenance:		
Service interval mileage:	60000	km
Service interval days:	1460	days
Intermediate maintenance: Service interval mileage:	30000	km
Service interval days:	730	days
Oil change service:		
Service interval mileage:	15000	km
Service interval days:	365	days
	< Back	Next > Exit

User can modify these values as desired.

Next window require the user to select the type of service for which the "Abrites diagnostics for Porsche" to write new mileage and date values into instrument cluster.



By pressing "Next" selected maintenance interval values are written into instrument cluster.



### 3.4.2 Special functions with "Instrument Cluster K-Line"

When this function is opened, the following dialog appears:

Choose IPC to	vpe:	6	Cay	enr	ne	-	-	-		-	-		-	-	-			-	4	
		1																	- <b>&gt;</b>	
00000000	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		-	Read	Load from file
00000010	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00000020	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00000030	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	•••••			
00000040	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00000050	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Write	Save to file.
00000060	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00000070	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			-	
08000000	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00000090	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			U U	
0A00000	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Reset ECU	Service
000000B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
000000000	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Login 0	
00000000	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			- 1	
000000E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Milenae	
00000F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Mileage.	
00000100	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			0	
00000110	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Ľ	
00000120	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00000130	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Read	
00000140	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00000150	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00000160	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Skip neg, re	sponses
00000170	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00000180	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
00000190	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				
000001A0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		-		
•															-					
																	-			
																				X

The user is able to select through the following vehicle models: Cayenne

911 (996), GT2 (996), GT3(996), Boxter(986) - 1998-07/2001 [C56] 911 (996), GT2 (996), GT3(996), Boxter(986) - 08/2001-2005 [C86]

If vehicle model "Cayenne" is selected the following functions are available:

- Read ConfData by pressing button "Read", the Diagnostics connects to the instrument cluster and reads cluster's configuration data. The read data is put into the hexadecimal display and can be saved to a file by pressing button "Save to file...".
- Write ConfData the loaded into the hexadecimal display data is written to the instrument cluster.
- Reset ECU by pressing button "Reset ECU" the Diagnostics connects to the instrument cluster and performs diagnostic reset of the control unit.
- Service by pressing button "Service" the user can reset "Service interval display" or "Maintenance interval".



If function "Reset service interval display" is selected the Diagnostics connects to the instrument cluster and resets the service interval display.

If function "Maintenance interval" is selected the Diagnostics connects to the instrument cluster and after some details are specified (engine type, production year, mileage unit, country) the maintenance interval is reset.

Read Mileage – by pressing button "Read" into the "Mileage" section the Diagnostics connects to the instrument cluster and reads current mileage value (in km).

Mileage:	
0	
Read	

If vehicle model "911 (996), GT2 (996), GT3(996), Boxter(986) - 1998-07/2001 [C56]" is selected the following functions are available:

- Read cluster's configuration data by pressing button "Read", the Diagnostics connects to the instrument cluster and reads cluster's configuration data. The read data is put into the hexadecimal display and can be saved to a file by pressing button "Save to file...". If the instrument cluster's security access code is found it is displayed into the edit filed next to the "Login" label. The mileage value is displayed into the edit filed next to the "Login" label. The mileage value is displayed into the edit filed next to the "Login" label.
- Write cluster's configuration data the loaded into the hexadecimal display data is written to the instrument cluster.
- Reset ECU by pressing button "Reset ECU" the Diagnostics connects to the instrument cluster and performs diagnostic reset of the control unit.
- Read Mileage by pressing button "Read" into the "Mileage" section the Diagnostics connects to the instrument cluster and reads current mileage value (in km).

#### 3.4.3 Special functions with "Engine Control Unit"

When "Engine control unit" is opened the following dialog appears:

⊁oose ECU ype:		ME	7.1	.1/7	7.57	7.8	wa	keu	P P	atte	rn	01					-	ECU Type	e help
0000000	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	·····	a	a
0000010	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	•••••	- <u> </u>	- <u> </u>
0000020	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	•••••		
0000030	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	•••••	Read ConfData	Read Flash
0000040	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	•••••		
0000050	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	•••••		-
0000060	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			1 - A - A -
0000070	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		Lindate	
0000080	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		ConfData	Write Flash
0000090	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
00000A0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
00000B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
00000C0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
00000D0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Load from file
00000E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Loga nomine
00000F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
0000100	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
0000110	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			1 1
0000120	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
0000130	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Save to file.
0000140	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
0000150	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
0000160	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
0000170	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		63	
0000180	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			
0000190	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		FOUL	
00001A0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		ELU data	
•																		(	
																		X	

Special functions with ECU can be:

- Read of flash memory
- Read/Write ECU's configuration data
- Read/Write ECU data
- Change Immobilizer code in ECU

You need to clarify the type of Engine Control Unit in the car before proceeding!

You can choose ECU type – ME7.x (wakeup id 0x01), MED9.1, ME7.x(wakeup id 0x11), ME7.2, ME5.2, ME7.8 (9x6), ME7.8 (9x7)

Example is : Read ConfData of "Bosch ME7.8":

Engine Control Unit	×
Choose ECU Prosche 9x7 Bosch ME 7.8	ECU Type help
00000000         <	Read ContData Read ContData ContDa
pota reau.	Exit

After ECU type is chosen the following functions are available:

#### 3.4.3.1 Read ConfData

By pressing button "Read ConfData", the Diagnostics connects to the engine control unit and reads engine control unit's configuration data. The read data is put into the hexadecimal display and can be saved to a file by pressing button "Save to file...".

Before reading is started the Diagnostics will ask you to select whether to auto-detect engine control unit's configuration data start address and length or you can specify certain memory area to be read.

#### 3.4.3.2 Write ConfData

The loaded into the hexadecimal display data is written to the ECU.

Before writing is started the Diagnostics will ask you to select whether to auto-detect engine control unit's configuration data start address and length or you can specify certain memory area to be written.

#### 3.4.3.3 Read flash

By pressing button "Read flash", the Diagnostics connects to the engine control unit and reads flash data. The read data is put into the hexadecimal display and can be saved to a file by pressing button "Save to file...".

#### 3.4.3.4 Write flash

The loaded into the hexadecimal display data (if flash was read and modified or flash data is loaded by pressing button "Load from file...") is written to the ECU.

Press button "Load from file..." to load a binary file's data into the hexadecimal display. Press button "Save to file..." to save the content of the hexadecimal display to binary file.

#### Read ECU data

By pressing button "ECU data" the "Abrites Diagnostics for Porsche" connects to the ECU and reads some specific ECU's characteristics like "VIN", "Operating hours counter", "Total distance", etc.

The following window appears:

Name	Value	
Overspeed events		
Operating hours counter [h]	2775.6	
otal distance	20430	
ehicle Identification Number	WP0ZZZ98Z6U702292	
Type ID DME control unit	0987EU400	
Production key	52KA	
Order type	987310	
Country code	8	
Ingine type	9625	
Ingine number	61604545	
ransmission type	G8720	
ransmission number	12143	
Radio/PCM code	0000	
3ody color/convertible top color	C9Z000	
nterior equipment	AM0	
Potentiometer 1 voltage - lower limit	44.5	
Potentiometer 2 voltage - lower limit	365.0	
Setpoint, throttle plate angle from adaption	0000	
Navigation system	0000	
lumbor of programming operations	1	

To read overspeed events information select "Overspeed events" row and press "Next"

🍲 ABR	ITES Diagnostics for Porsche				_ 🗆 ×
Range	Number of ignitions at overspeed	Operating hours counter	read at overspeed [h]		
1	400	1000.0			
2	800	2000.0			
3	1200	2100.0			
4	1400	2600.0			
5	2000	2855.0			
U	2000	3000.0			
-					
-					
-					
			2 Park	Nissee N	Evit
			< D80K	INEXE >	Exit

To change certain range, enter new values, select row and press "Next".

#### 3.4.3.6 Change Immobilizer code in ECU

Programming and immobilizer c Old programming and immobilizer © Enter old programming and im	ode code mobilizer code manually	Old programming	Old immobilizer code:
O Load old programming and im	nobilizer code from dump	000000	000000000
O Read old programming and imi	mobilizer code from ECU		1
New programming and immobilize Program programming code Program immobilizer code Program both	r code New programming 000000 Program	New immobilizer	Load from dump
Load old programming and immobi - enter old programming and immob - find old programming and immob - reading old programming and imm Follow the instructions.	lizer code by choosing one c bilizer code manually ilizer code from ECU's dump nobilizer code from ECU	f the three options:	<b>X</b> Exit

## Attention! When modifying a value please make sure you keep it's format the same as read i.e. do not delete measurement units (if any), do not delete spaces and so on.

HINTS when reading/writing flash memories of ECUs:

If you experience problems with reading ME7.x memory better remove fuse 11 and fuse 15 to prevent disturbing of communication from the instrument cluster and try again.

When flashing the device please always read and save first the original flash!

Please, stop all screen savers/power saving options and unused application during the flashing! Please do not do anything else on your PC while flashing.

Please, take into account that the reading/writing of the flash will take a long time (especially when CAN connection is used) – as result the battery may become flat.

HINTS when reading/writing ConfData memory of ECUs:

If you experience problems with reading ME7.x ConfData better remove fuse 11 and fuse 15 to prevent disturbing of communication from the instrument cluster and try again.



## 3.4.4. Special function "Dump Tool"

Using this application you can calculate security access codes, calculate mileage and so on.

Dump Tool	×
Туре:	
IMMO - KESSY - Porsche Cayenne [ 93C86   ECU ME 7.x Set component protection data [9P08/95080] ECU ME 7.x Security Code / Checksum calculator [9P08/95080] ECU ME 7.x Immo Bypass [9P08/95080]	Load
Mileage calculator ECU ME9 [95320] - Porsche 997 Mileage calculator 95P08 - Porsche Carrera 4S 996 Mileage calculator 95P08 - Porsche Carrera 997ECM Porsche (9×6) - enable Alarm module access by OBDII	Save
	Swap Bytes L/H
	Exit

This application needs the configuration data dump from the corresponding unit.

After the dump is loaded some modification will be made and you need to store the dump as a new file, which you can program into the device.

## 3.4.4. Special function "Dump Tool"

Using this application you can calculate security access codes, calculate mileage and so on.

Dump Tool	×
Туре:	
Type: MMO - KESSY - Porsche Cayenne [ 93C86   ECU ME 7.x Set component protection data [9P08/95080] ECU ME 7.x Security Code / Checksum calculator [9P08/95080] ECU ME 7.x Immo Bypass [9P08/95080] Mileage calculator ECU ME9 [95320] - Porsche 997 Mileage calculator 95P08 - Porsche Carrera 45 996 Mileage calculator 95P08 - Porsche Carrera 45 996 Mileage calculator 95P08 - Porsche Carrera 997ECM Porsche (9x6) - enable Alarm module access by OBDII	Load Save

This application needs the configuration data dump from the corresponding unit. After the dump is loaded some modification will be made and you need to store the dump as a new file, which you can program into the device.

### 3.4.5. Special function "Key learning"

After a procedure is selected, press button "Open" for to open the function.

🍄 ABRITES Diagnostics for Porsche		] ×
Select vehicle model:	Select function:	
Panamera 970 (2010+) Cayenne 9PA(-2010) Porsche Cayenne 92A (2010+) 911 997 (2005-2010) Boxster/Cayman 987 (2005-2011) Boxster/Cayman 981 (2012+) Macan 95B (2014+) Carrera GT 980 (2002-2006) Porsche Carrera 991 (2011+) 911 996 (1998-2005) GT2 996 (2001-2005) GT3 996 (2000-2005) Boxster 986 (1997-2004)	Teach keys Help	
	< Back Next > Exit	

### 3.4.5.1 Teach keys - GT2 996, GT3 996, 911 996, Boxster 986, Carrera GT

When "Next" is pressed the following window appears:

Key Learnin	g		×
Current trar	nsponder:		
Position	Data	<b>2</b> .	Start
		Learn	
			Stop
		Erase	
		Erase All	
			×
			Exit

When button "Start" is pressed the "Abrites Diagnostics for Porsche" connects to the "Alarm" module and reads the keys which are currently accepted from the car. There can be up to four keys learned at positions correspondingly 1,2,3 and 4.

Key learning			×
Current tran	9d838a51 sponder:		
Position	Data		
Position 1 Position 2 Position 3 Position 4	70ecfbd6 Not used Not used Not used Select position key and press	at which you would like	to learn current
		Erase	Stop
		Erase All	
Data read.			× Exit

During reading the Diagnostics will ask you to specify the 3 bytes "Key learning code" of the alarm module. You will have the opportunity either to write down the code if it is available for you or to extract it by loading the alarm's configuration data dump.



If you want to learn the key currently in the ignition lock, then you need to select a certain position (1 to 4) at which you like the key to be written. This is done by clicking over the corresponding position. By pressing button "Learn" the Diagnostics writes key's ID at the corresponding position into the alarm module. Key is learned.

Key learning			×
Current tran	sponder:		
Position	Data		
Position I	70ecfbd5		Start
Position 2	9d838a51		
Position 3	Not used	Learn	
Position 4	Not used		
		-	0
			Stop
		Erase	
		Frase All	
T	1		X 1
Iransponde	r learned!		
			Exit

For to erase all the learned keys, press button "Erase all".

For to disconnect from the alarm module press button "Stop".

#### 3.4.5.2 Teach remote control - GT2 996, GT3 996, 911 996, Boxster 986, Carrera GT

By selecting "Teach remote control - GT2 996, GT3 996, 911 996, Boxster 986, Carrera GT" the user can learn remote control for vehicle models GT2 996, GT3 996, 911 996, Boxster 986 and Carrera GT. When "Open" is pressed the following window appears:



When button "Start" is pressed the "Abrites Diagnostics for Porsche" connects to the "Alarm" module and reads the remote controls which are currently accepted from the car. There can be up to four remote controls learned at positions correspondingly 1,2,3 and 4.

Remote con	trol learning		×
Current radi Position Position 1 Position 2 Position 3	o key: Data 4001d39a 4001d39e Select position at which yo	u would like to learn current re	Start
		Erase	Stop
Data read		Erase All	×
			Exit

During reading the Diagnostics will ask you to specify the 3 bytes "Key learning code" of the alarm module. You will have the opportunity either to write down the code if it is available for you or to extract it by loading the alarm's configuration data dump.

Please, enter key learning c	ode			×
Key learning code:	000000 hex value	Load from dump	ОК	X Cancel

If you want to learn the remote control currently in the ignition lock, then you need to select a certain position (1 to 4) at which you like the remote control to be written. This is done by clicking over the corresponding position. By pressing button "Learn" the Diagnostics writes the remote control's ID at the corresponding position into the alarm module. During writing the Diagnostics will ask you to specify the 12 bytes transmitter code of the remote (you can find it written over it).

Please, enter transmitter ke	y number		×
Transmitter key number:	00000000000000000000000000000000000000	ОК	X Cancel

Remote control is learned.

For to erase a remote control at certain position, first select the position by clicking over it and then press button "Erase".

For to erase all the learned remote controls, press button "Erase all".

For to disconnect from the alarm module press button "Stop".

#### 3.4.5.3 Teach keys – Cayenne (-2010)

By selecting function "Teach keys" for vehicle model Cayenne (-2010) the user can learn transponder key for vehicle model Porsche Cayenne.

When "Next" is pressed the following window appears requiring from user to input the 4 digit immobilizer (Login) code.

A Key Learning			<u>_     ×</u>
Input immobilizer code.			
0000			
Enter immobilizer code. Continue with Next			
	< Back	Next >	Exit

The immobilizer (Login) code can be read from ECU by OBDII (for Bosch Gasoline EUCs) or from configuration data dump of the Kessy module using special function "Dump tool".

Next screen requires the key count that will be taught (a number 1 to 4).

A Key Learning			<u>_   ×</u>
Number of keys to be taught			
1			
Enter number of keys. Continue with Next			
		1.1	
	< Back	Next >	Exit

By pressing "Next" key learning procedure begins.

## 3.4.5.4 Program dealer key – Cayenne (-2010)

For vehicles with HITAG2 key/transponder year model 2004-2007 you must use virgin transponder PCF7936 or virgin key.

If you use a Transponder - you need to switch it in Cipher ("Crypto") mode.

You can use your Key programmer HiTag2 programmer for that purpose if you have one. This is done by replacing 0x06 with 0x0E in the first byte of the configuration page (Configuration page is page 3 where page 0 is the transponder ID, and pages 1 and 2 are the secret key).

If this value is already 0x0E then the transponder is already in cipher mode.

For vehicles with HITAG2 key/transponder year model 2007+ you need to prepare the HITAG2 key/transponder for to use it.

This can be done using function "Program dealer key".

After this function is selected and "Next" button is pressed the following window appears:

Dealer key with Hitag2		×
Load component protection data from Kessy/ECU dump     Program from Kessy/ECU dump		-
Load dump	Program	Autodetect from ECU
O All 7 bytes of the component protection data (component security) are know		
Program transponder from 7 bytes Component protection bytes: 0 0 0 0 0 0 0	Program	
O Find the 7th byte of the component protection data		
		Find 7th byte
Component protection bytes: 0 0 0 0 0 0	Program	from working
Login 0		
		Exit

There are following possibilities:

Making the key without disassembling the Kessy (completely by OBDII)

The "Autodetect from ECU" button will try automatically to read the component security bytes from the ECU, and will select for you automatically whether you need to search for the 7th byte or not.

**IMPORTANT:** If you don't have a working key from the car, you will need to short the fuses as described in the appendix to get communication with the ECU.

After the component security is read, if you've all 7 bytes, then you can program the key directly. If you have only the 6 bytes, you have to choose:

a) if you have working key from this car, you can put it into the programmer, and press the "Find 7th byte from working key" - the 7th byte will be found in several seconds;

**NOTE:** If you use the Tango programmer this function will not work, the function work only on Hitag2 or Abrites key programmer.

b) if you don't have a working key, you've to search manually for the 7th byte. The procedure takes approximately about 20-25 min, but can rise to 45min in the worst case. You've to connect the interface to the OBDII, and the programmer should be connected too. Then after pressing the "Program" button you will receive notification when to put the key into the ignition, and when to put it into the programmer. **IMPORTANT:** You need only to put the key inside , please **DO NOT ROTATE THE KEY**.

**IMPORTANT:** You may hold the programmer near the ignition lock so you can proceed faster when you remove the key. But please pay attention that the programmer is at least 15cm from the ignition lock so

the reading of the key from the car is not disturbed.

**NOTE:** It is always better to use a plastic key or an empty transponder when you search for the 7th byte, at least when you prepare such keys for the first time. If by some reason the key becomes locked (e.g. battery goes down, computer is hang-up, etc.), you can find the encryption-key with the "Find 7th byte from working key" button, and then you can restore the key with the Hitag2 key tool.

Making the key by disassembling the Kessy or the ECU

You can load a dump of the Kessy or ECU using the "Load component protection from Kessy/ECU dump" radio-button. After pressing the "Load dump" button you've to select the respective dump file, after that the "Program" button will be active.

Dealer key with Hitag2  Coad component protection data from Kessy/ECU dump  Program from Kessy/ECU dump  Load dump	Program	Autodetect from
O All 7 bytes of the component protection data (component security) are know		
Program transponder from 7 bytes Component protection bytes:	Program	
O Find the 7th byte of the component protection data		
Find 7th byte and program transponder Component protection bytes: Login: U	Program	Find 7th byte from working key
Dump successfully decoded. You can program now the transponder/key		Exit

**NOTE:** Please pay attention that in the ECU dump sometimes there are only 6 of the component security bytes. In this case you will need to search for the 7th byte.

**NOTE:** Please pay attention that if you have the Kessy dump, then you will have all the 7 bytes. But there are a lot of Kessy devices with different software versions, so it is possible that the configuration data is incorrect decrypted, respectively the component security bytes will be wrong. In this case the key will not work and you will need to restore the key using the Hitag2 programmer.

Making the key in the case when the Autodetect button is not functioning

It is possible that by some reason the Autodetect button is not functioning, e.g. missing license, you don't make the short with the fuses properly, ECU is missing or is broken, and so on.

If you've already read the component security bytes previously (e.g. by dissoldering the ECU EEPROM and decoding it by dump tool), then you can put the component security bytes manually and proceed as described in step 2.1

After you have a key/transponder ready for learning you have to specify how many keys you would like to learn and the security access code of the kessy module into the "Key learning Porsche Cayenne" window. Press button "Learn" for to start the learning procedure.

#### 3.4.5.5 Teach keys - 911 997, Boxster 987, Cayman

Function "Teach keys" function for vehicle models "911 997 (2005-2010)", "Boxster 987 (2005-2010)", "Cayman (2005-2010)" offers the opportunity to learn one to six keys to the vehicle.

First window requires the user to input the three bytes teach enable code of the PAS module:

A Key Learning			
Teach Enable Code			
000000			
Enter Teach Enable Code. Continue with Next			
P	< Back	Next >	Exit

Next window requires the user to input the key count (a number 1 to 6) that will be taught:



Next window requires the user to input the 6 digit (3 bytes) transponder password:



Next window requires the user to input the 12 digit (6 bytes) transponder secret key:



By pressing "Next" button the procedure is started.

A Key Learning					_ [] ×
0	lease Wait Learning procedure	in progress, p	lease wait	×	I
Enter Tra		Teach keys Key No. 1 insert. Press "OK" when ready.	<b>X</b>		
_		OK		Cancel	
			< Back	Next >	Exit

### 3.4.5.6 Program dealer key on 911 997, Boxster/Cayman 987

If you don't have key ordered from a dealer for vehicle "911 997, Boxster/Cayman 987" you can prepare a virgin HITAG2 key/transponder.

Connect your Abrites programmer to the PC.

Open the "Key learning" special function. Select vehicle model "911 997" or "Boxster 987" or "Cayman 987".

Select the function "Program dealer key" and Press "Next".

A BRITES Diagnostics for Porsche		<u>_   ×</u>
Select vehicle model:	Select function:	
Cayenne (-2010) 911 997 (2005-2010) Boxster 987 (2005-2010) Cayman 987 (2005-2010) Carrera GT 980 (2002-2006) 911 996 (1998-2005) GT2 996 (2001-2005) GT3 996 (2000-2005) Boxster 986 (1997-2004)	Teach keys Program dealer key All keys lost	
	< Back Next > E	xit

Next window requires to input the 6 digit (3 bytes) transponder password:



Next window requires the user to input the 12 digit (6 bytes) transponder secret key:



Put new HITAG key/transponder into Tag programmer.

By pressing "Next" button key/transponder will be written and ready to be learned.

#### 3.4.5.7 "All keys lost" function for 911 997, Boxster/Cayman 987

You can learn keys to vehicle model 991 997, Boxster/Cayman 987 with no need to provide as input "teach enable code", "transponder password", "transponder secret key" using function "All keys lost".

A ABRITES Diagnostics for Porsche		IX
Select vehicle model:	Select function:	
Cayenne (-2010) 911 997 (2005-2010)	Teach keys Program dealer key	
Boxster 987 (2005-2010)	All kevs lost	
Cayman 987 (2005-2010) Carrera GT 980 (2002-2006) 911 996 (1998-2005) GT2 996 (2001-2005) GT3 996 (2000-2005) Boxster 986 (1997-2004)		
	< Back Next > Exit	

Please pay attention that after you execute this function all old/existing keys will no longer work. For to use this function you need Tag programmer and ABPROG.

During the procedure you have to first disconnect from vehicle PAS module and ESL modules, desolder PAS module 24c08 ConfigData chip and ESL module 24c04 ConfigData chip, then solder them back and connect both modules to vehicle (see Appendix 5.2 Removing ESL Porsche 911 997, Boxster/Cayman 987).

The procedure consists of six steps. These steps have to be executed in the given order (1 to 6). You can start from any step if the precedent are already executed (i.e. when you open the function in the Porsche commander you don't have to start from scratch if you have already successfully performed some of the steps before).

#### Step 1:

- Disconnect PAS module from vehicle, open it and desolder the 24c08 ConfigData chip.
- Connect ABPROG to AVDI.
- Connect the 24c08 chip to ABPROG.
- Press "Next" to execute the step.

ABRITES Diagr	nostics for Porsche	_ 🗆
You hav You can	e to execute all steps from 1-6 in this order. start from any step if the precedent are already executed.	
Step 1:	• Prepare PAS ConfigData with ABPROG	
Step 2:	<ul> <li>Prepare ESL ConfigData with ABPROG</li> </ul>	
Step 3:	<ul> <li>Update PAS by OBDII</li> </ul>	
Step 4:	<ul> <li>Update ESL by OBDII</li> </ul>	
Step 5:	<ul> <li>Prepare transponder(s) with TagProg</li> </ul>	
Step 6:	<ul> <li>Learn key(s)</li> </ul>	
Step 1		
Open BA	5 modulo and decolder 24009 ConfigData chin	
Put the 2	24c08 ConfigData chin over the ABPROG programmer	
Connect	ABPROG programmer to AVDI.	
Press "N	ext" to execute the step.	
	< Back Next >	Exit

Step 2:

- Disconnect ESL module from vehicle, open it and desolder the 24c04 ConfigData chip.
- Connect ABPROG to AVDI.
- Connect the 24c04 chip to ABPROG.
- Press "Next" to execute the step.

Step 1:	© Prepare PAS ConfigData with ABPROG	
Step 2:	<ul> <li>Prepare ESL ConfigData with ABPROG</li> </ul>	
Step 3:	<ul> <li>Update PAS by OBDII</li> </ul>	
Step 4:	O Update ESL by OBDII	
Step 5:	<ul> <li>Prepare transponder(s) with TagProg</li> </ul>	
Step 6:	⊂ Learn key(s)	
Step 2:		
Open ES Put the Connect Press "N	3L module and desolder 24c04 ConfigData chip. 24c04 ConfigData chip over the ABPROG programmer. ABPROG programmer to AVDI. ext" to execute the step.	

#### Step 3:

- Solder 24c08 chip to PAS module, close it and connect the module back to the vehicle.
- Solder 24c04 chip to ESL module, close it and connect the module back to the vehicle.
- Connect AVDI to vehicle's OBDII
- Press "Next" to execute the step.

ABRITES Diag	nostics for Porsche	
You hav You car	re to execute all steps from 1-6 in this order. I start from any step if the precedent are already executed.	
Step 1:	O Prepare PAS ConfigData with ABPROG	
Step 2:	<ul> <li>Prepare ESL ConfigData with ABPROG</li> </ul>	
Step 3:	<ul> <li>Update PAS by OBDII</li> </ul>	
Step 4:	<ul> <li>Update ESL by OBDII</li> </ul>	
Step 5:	Prepare transponder(s) with TagProg	
Step 6:	○ Learn key(s)	
Step 3:		
Solder t Solder t Connect Connect Press "N	he 24c08 ConfigData chip to PAS module. he 24c04 ConfigData chip to ESL module. t PAS and ESL modules back to the vehicle. t AVDI to vehicle's OBDII. Next" to execute the step.	
	<back next=""></back>	Exit

Step 4:

- Make sure Step 3 is executed.
- Press "Next" to execute the step.

ABRITES Diag	iostics for Porsche	_ 🗆 🗙
You hav You can	e to execute all steps from 1-6 in this order. start from any step if the precedent are already executed.	
Step 1:	Prepare PAS ConfigData with ABPROG	
Step 2:	<ul> <li>Prepare ESL ConfigData with ABPROG</li> </ul>	
Step 3:	<ul> <li>Update PAS by OBDII</li> </ul>	
Step 4:	<ul> <li>Update ESL by OBDII</li> </ul>	
Step 5:	<ul> <li>Prepare transponder(s) with TagProg</li> </ul>	
Step 6:	C Learn key(s)	
Step 4:-		
Solder th Solder th Connect Connect Press "N	ne 24c08 ConfigData chip to PAS module. ne 24c04 ConfigData chip to ESL module. PAS and ESL modules back to the vehicle. AVDI to vehicle's OBDII. ext" to execute the step.	
	< Back Next >	Exit

Step 5:

- Connect Tag programmer to AVDI.
- Put new transponder chip to Tag programmer.
- Press "Next" to execute the step.

ABRITES Diag	nostics for Porsche	
You hav You can	e to execute all steps from 1-6 in this order. start from any step if the precedent are already executed.	
Step 1:	Prepare PAS ConfigData with ABPROG	
Step 2:	<ul> <li>Prepare ESL ConfigData with ABPROG</li> </ul>	
Step 3:	<ul> <li>Update PAS by OBDII</li> </ul>	
Step 4:	<ul> <li>Update ESL by OBDII</li> </ul>	
Step 5:	<ul> <li>Prepare transponder(s) with TagProg</li> </ul>	
Step 6:	C Learn key(s)	
Step 5:		
Connect	TAG key programmer to AVDI.	
Put new	transponder chip into programmer.	
Press "N	lext" to execute the step.	
	< Back Next >	Exit
	ABRITES Diag You hav You can Step 1: Step 2: Step 3: Step 4: Step 5: Step 5: Connect Put new Press "N	ABRITES Diagnostics for Porsche         You have to execute all steps from 1-6 in this order.         You can start from any step if the precedent are already executed.         Step 1:          • Prepare PAS ConfigData with ABPROG         Step 2:          • Prepare ESL ConfigData with ABPROG         Step 3:          • Update PAS by OBDII         Step 4:          • Update ESL by OBDII         Step 5:          • Prepare transponder(s) with TagProg         Step 5:          • Learn key(s)          Step 5:          Connect TAG key programmer to AVDI.          Put new transponder chip into programmer.          Press "Next" to execute the step.

Step 6:

- Connect AVDI to vehicle's OBDII
- Press "Next" to execute the step.
- Follow the instructions.

Step 1:	Prepare PAS ConfigData with ABPROG	
Step 2:	• Prepare ESL ConfigData with ABPROG	
Step 3:	© Update PAS by OBDII	
Step 4:	• Update ESL by OBDII	
Step 5:	<ul> <li>Prepare transponder(s) with TagProg</li> </ul>	
Step 6:	⊙ Learn key(s)	
Step 6:		
Connect	AVDI to vehicle's OBDII	
Press "N	lext" to execute the step.	

# 3.4.5.8 Read Transponder/Immo data from a working key for 911 997, Boxster/Cayman 987 when adding a spare key

When you have a working key to the Porsche, you now can use the TA26 Extractor to read the data from the working key and add a spare one. You need to make sure to have a ProTag connected to the PC, internet connection and no more than 3 minutes time.

To do this, open the "Key Learning" special function and follow the on-screen instructions.

1. Select the vehicle model you're working on and click on "Read transponder data from work-ing key".

ABRITES Diagnostics for Porsche	
Select vehicle model:	Select function:
Porsche Panamera 970 Porsche Cayenne 97A up to MY 2010 Porsche Cayenne 92A from MY 2011 Porsche 911 997 (2005-2012) <b>Porsche Boxster/Cayman 987 (2005-2011)</b> Porsche Boxster/Cayman 987 (2005-2011) Porsche Garrera GT 980 (2002-2006) Porsche 911 996 (1998-2005) Porsche 9196 (1998-2005) Porsche 996 GT2 (2001-2005) Porsche 96 GT3 (2000-2005) Porsche 96 GT3 (2000-2005) Porsche 986 (1997-2004)	Teach keys Program dealer key Read transponder data from working key All keys lost
	<back next=""> Exit</back>

2. Give Ignition ON with the original key



#### 3.Put the original key into the programmer



#### 4. Put the TA26 into the programmer



5. Give ignition ON 32 times together with working key and TA26



#### 6. Put TA26 into the programmer

ABRITES Diagnostics for Porsche			X
Please give junition ON 32 times together	with working ke	ev and TA26 then pr	ess
"Next".		,, and name and p	

#### 7. Calculating...

## 8. Transponder data read successfully

ABRITES Diagnostics for Porsche		ABRITES Diagnostics for Porsche	
Calculating		Transponder data read successfuly.	
< Back	Next >. Edt	< Be	dk Next > Exit

Once the transponder data is extracted, it will remain cached on the computer. However, you need to proceed with preparing the new key as dealer and re-learning the original key together with learning the new key to the car, choosing the desired option. In this case, we need to select the 2nd option (Use transponder data read from working key):

🗠 Key Learning		
🕫 Enter transponder data manually		
C Use transponder data read from working	g key	
	< Back Next > Exit	

Note: Protag, active AMS, internet connection and preparing the keys as dealer is needed for making the procedure.

## 3.4.5.9 Teach key Panamera, Cayenne (2011+), Boxster 981, 911 991, Macan

First you need to read the immobilizer (BCM\_Front) with a programmer. You need the DFlash (EEPROM) from this module.

Then you should load this dump in the software and put the new key into the programmer antenna, so the key is prepared as a dealer key.

Once the key is prepared as a dealer key with the programmer, you should give the number of keys, which you want to learn, i.e. the existing keys + the new key count - so all these keys should be available during the procedure. Keys, which are not present, will be deleted and will not work anymore, until they are relearned again. The software will attempt to connect to the car by OBDII

If you cannot connect to the car, make the lights ON/OFF several times, try to operate the windows, etc. (to wake up the car) .

After connected to the car by OBDII, you will need to put each of the keys (i.e. any existing keys and the new key) into the ignition lock. You will see in the software indication when to put the next key, how many keys are actually learned, and how many keys have to be learned. Such information is displayed also on the dashboard.

When the procedure is completed the remote should work. To make the keyless working, make ignition ON with the plastic key (the dummy key) and press any remote control button.

#### 3.4.6 Special function "Kessy/immobilizer functions"

When this function is opened, the following dialog appears:



#### 3.4.6.1 Teach Kessy/immobilizer – Cayenne (-2010)

Function "Teach Kessy/immobilizer" for vehicle "Cayenne (-2010)" offers the opportunity to learn a new Kessy/immobilizer module to a vehicle.

The wizard will guide you through the following windows:

First window requires the user to input the model year of the new Kessy/immobilizer module:

Kessy/Immobilizer functions			_ O ×
Model year			
MJ08 or higher			1
MJ06 or lower			
1			
Please select model year, Next to continue			
	< Back	Next >	Exit

Next window requires the user to input the vehicle type (left-hand or right-hand vehicle) of the new Kessy module:

A Kessy/Immobilizer functions			
Vehicle type			
LHD vehicle			
RHD vehicle			
Specify vehicle type with the Next key.			
	< Back	Next >	Exit

Next window requires the user to put a new key into the ignition lock:

A Kessy/Ir	Please Walk Connecting to device Please wait Pres Vor when ready. OK Cancel	×
-	< Back Next > Exit	ī

Next window requires the user to input the number of keys to be taught for the new Kessy/immobilizer module. When "Next" is pressed new Kessy module is adapted to the vehicle.

	_ 🗆 ×

Next window requires the user to input the immobilizer (Login) code of the new Kessy module:

A Kessy/Immobilizer functions		×
Input immobilizer code.		
0000		
Enter immobilizer code. Continue with Next		
	< Back Next > Exit	

Next window requires the user to input coding configuration of the new Kessy module:

A	Kessy/Immobilize	r functio	ns		_ D X
	Parameter	Unit	Value 3-button - Kessy - Tintronic - RoW//USA		
	Coung		S-bullon - Kessy - Tiplionic - Kowiosk		
	Continue wit	h the	Next key		
-			< Back	Next >	Exit

When "Next" is pressed the input coding is written to the new Kessy and all required keys are learned to the vehicle.

The "Teach Kessy/immobilizer" function is completed.

### 3.4.6.2 Teach ELV – Cayenne (-2010)

Function "Teach Kessy/immobilizer" for vehicle "Cayenne (-2010)" offers the opportunity to learn a new electronic steering column lock module to a vehicle.

First window requires the user to input the immobilizer (Login) code of the new Kessy module:

A Kessy/Immobilizer functions			
Input immobilizer code.			
0000			
Enter immobilizer code. Continue with Next			
	< Back	Next >	Exit

By pressing "Next" teaching procedure is started.

#### 3.4.6.3 Teach control unit - Boxster 987, 911 997, Cayman (-2010)

Function "Teach control unit" for vehicles "Boxster 987, 911 997, Cayman (-2010)" offers the opportunity to learn a new PAS (immobilizer) module to a vehicle.

First window requires the user to input the teach enable code of the new Kessy module:

A Kessy/Immobilizer functions	
Teach Enable Code	
000000	
1	
Enter Teach Enable Code. Continue with Next	
< Back Next>	Exit

Next window requires the user to input the Vehicle Identification Number:

A Kessy/Immobilizer functions			
VIN			
WP00000000000000			
Enter VIN. Continue with Next			
	< Back	Next >	Exit

Next window requires the user to input the 5 bytes ELV secret key of the new Kessy module:

A Kessy/Immobilizer functions	
ELV Secret key (5 bytes hex)	
Enter ELV Secret Key. Continue with Next	
< Baok	Next> Exit

Next window requires the user to input the transponder password of the new Kessy module:

A Kessy/Immobilizer functions	_ 🗆 🗙
Immo Transponder Password	
000000	
Enter transponder password. Continue with Next	
< Back Next >	Exit

Next window requires the user to input the immobilizer code of the new Kessy module:

A Kessy/Immobilizer functions		_ 🗆 🗙
Immobilizer code		
000000000		
Enter immobilizer code. Continue with Next		
	<back next=""></back>	Exit

Next window requires the user to input the transponder secret key of the new Kessy module: When

Kessy/Immobilizer functions			
Immo Transponder Secret Key			
0000000000			
Enter Transponder Secret Key. Continue with	Next.		
	< Back	Next>	Exit

When "Next" is pressed new Kessy module is adapted to vehicle and all required keys are learned to the vehicle.
## 3.4.6.4 Teach electronic steering column lock – Boxster 987, 911 997, Cayman (-2010)

Function "Teach electronic steering column lock" for vehicles "Boxster 987, 911 997, Cayman (-2010)" offers the opportunity to learn a new electronic steering column lock module to the vehicle.

First window requires the user to input the teach enable code of the new module:

A Kessy/Immobilizer functions			
Teach Enable Code			
000000			
Enter Teach Enable Code. Continue with Next	0 19		
	< Back	Next >	Exit

By pressing "Next" teaching procedure is started.

### 3.4.6.5 Teach control unit – Boxster 986, 911 996, Carrera GT

Function "Teach control unit" for vehicles "Boxster 986, 911 996, Carrera GT" offers the opportunity to learn a new or used Alarm module to a vehicle.

The wizard will guide you through the following windows:

First window requires the user to input the 8 bytes immobilizer code of the Alarm module:

A Kessy/Immobilizer functions		_ 🗆 🗙
Immobilizer code		
0000000000000		
Enter immobilizer code. Continue with Next		
	<back next=""></back>	Exit

When "Next" is pressed Alarm module is adapted to vehicle.

If Alarm module is not new (i.e. is used) you can use the Dump tool special function "Porsche (9x6) - enable Alarm module immobilizer code programming [93C6x)" for to modify alarm's dump to be ready to be taught. After dump is modified, upload it to the alarm module and start "Teach control unit" function from beginning.

## 3.4.6.6 Activation state memory – Boxster 986, 911 996, Carrera GT

This function reads the activation state memory of the alarm module.

1	Kessy/Im Activat	mobilizer functions				<u> </u>
	Event 1 2 3 4 5 6 7 8 9 10	Description Cabriolet roof Cabriolet roof Cabriolet roof Cabriolet roof Cabriolet roof Cabriolet roof Oddments tray Oddments tray Oddments tray Locked contact, driver side	Value Activation: Activation: Activation: Activation: Activation: Activation: Activation: Activation:	secured via secured via secured via secured via secured via secured via secured via after battery	radio radio radio radio radio radio radio radio connect.	
				< Back	Next >	Exit

## 3.4.6.7 Erase activation state memory – Boxster 986, 911 996, Carrera GT

This function reads the activation state memory of the alarm module and gives the opportunity to delete it.

A Kessy/Im	imobilizer functions		
Event	Description	Value	
1	Cabriolet roof	Activation: secured via radio	
2	Cabriolet roof	Activation: secured via radio	
3	Cabriolet roof	Activation: secured via radio	
4	Cabriolet roof	Activation: secured via radio	
5	Cabriolet roof	Activation: secured via radio	
6	Cabriolet roof	Activation: secured via radio	
7	Oddments tray	Activation: secured via radio	
8	Oddments tray	Activation: secured via radio	
9	Oddments tray	Activation: secured via radio	
10	Locked contact, driver side	Activation: after battery connect.	
		Erase	
		< Back. Next >	Exit

## 3.4.6.8 Events - Boxster 986, 911 996, Carrera GT

This function reads the events memory of the alarm module.

A	Kessy/In	mobilizer functions		<u> </u>
	Events	i		
12				
	Event	Description	Value	
	1	Alarm actuation by driver's door	Activation: s	secure
	2	Alarm actuation by "locked" contact on passenger's side	Activation: s	secure
	3	Alarm actuation by "locked" contact on driver's side	Activation: s	secure
	4	Alarm actuated by expiry of entry delay		
	5	Alarm actuation by driver's door	Activation: s	secure
	6	Alarm actuation by "locked" contact on passenger's side	Activation: s	secure
	7	Alarm actuation by "locked" contact on driver's side	Activation: a	after b
	8	Alarm actuation by "locked" contact on passenger's side	Activation: s	secure
	9	Alarm actuation by "locked" contact on driver's side	Activation: s	secure
	10	Alarm actuated by expiry of entry delay		
l	•			•
		K Back, Net	kt > Ex	it

## 3.4.6.9 Erase Events memory – Boxster 986, 911 996, Carrera GT

This function reads the events memory of the alarm module and gives the opportunity to delete it.

A Kessy/Im	mobilizer functions	
Events		
Event	Description	Value
1	Alarm actuation by driver's door	Activation: secure
2	Alarm actuation by "locked" contact on passenger's side	Activation: secure
3	Alarm actuation by "locked" contact on driver's side	Activation: secure
4	Alarm actuated by expiry of entry delay	
5	Alarm actuation by driver's door	Activation: secure
6	Alarm actuation by "locked" contact on passenger's side	Activation: secure
7	Alarm actuation by "locked" contact on driver's side	Activation: after b
8	Alarm actuation by "locked" contact on passenger's side	Activation: secure
9	Alarm actuation by "locked" contact on driver's side	Activation: secure
10	Alarm actuated by expiry of entry delay	
•		
	Erase	
_	< Back Net	st > Exit

## 3.4.7 Special function "Guided functions"

The purpose of this function is to give the opportunity to do some specific vehicle maintenance procedures.



Select vehicle model, then select a unit and press "Next".

Next window will show you all the available functions for the selected unit.

For some vehicle models, before the list of functions is displayed the tester will examine and identify unit's type automatically by OBDII.

For example if vehicle model "Porsche Boxster 986 (1997-2004) is selected and unit "Alarm" the following list of functions will be displayed:

A Guided Functions			_ 🗆 🗵
System check			
Input signals			
Interior contact			
Teach			
Activation state memory			
Erase activation state memory			
Events			
Erase event memory			
Modify coding			
	< Back	Next >	Exit

Note: Some of the functions require internet access.

Select the desired function, press "Next" and the procedure will be performed.

Here is an example with function "Short tests" for unit DME ME78 of Boxster 987:



Dyn	amic test of ox. sen. in front of cat. c. (LSU)
Sen	sor-exchange diagn. behind cat. conv.
0×y	gen sensor heater behind catalytic converter
0×y	sensor readiness behind cat. converter
02 9	Sensor Circuit Slow Response Sensor 2
0×y	gen sensor plausibility
Bas	ic mixture adaption
Sec	ondary-air system
Cat.	conv. efficiency
Fue	evaporative valve
Сал	shaft position actuator diagnosis

scription	Value	Unit
① Thresholds		
□→ Engine speed (2200 rpm)	not OK	
Ø No error flag		
➡ Knock sensor 1 circuit input intermittent bank 1 or single sensor	ОК	
- 🗘 Knock sensor 2 circuit low bank 2	ОК	
① Cycle flag		
-🗘 Knock sensor 1 circuit input intermittent bank 1 or single sensor	not OK	
Anock sensor 2 circuit low bank 2	not OK	

Here is an example with function "Short tests" for unit DME SDI6 of Panamera:

A ABRITES Diagnostics for Porsche		
Short tests/preconditions		
Please note precondition	s! Continue with Next. Back with Back.	
Description	Value	Unit
Temperature	28.50	°C
PRECONDITIONS No faults stored in fault Engine running Engine (coolant) temper Exhaust temperature de Ambient temperature > Transmission range P or Vehicle speed = 0 km/h	memory ature 60115 °C (140239 °F) < 130 °C (266 °F) winstream of catalytic converter < 800 10 °C (50 °F) N, or clutch switch NOT actuated (0 mph)	°C (1,472 °F)
	< Back	Next > Exit

Loock control	
ensor dynamics upstream of catalytic converter, bank 1	
ensor dynamics upstream of catalytic converter, bank 2	
0xygen-sensor heater behind catalytic converter, bank 1/2	
Oxygen sensors interchanged upstream of catalytic converter	
exygen sensors interchanged downstream of catalytic converter	
ank vent valve (TEV)	
uel supply part lead	
ivel supply idling	
atalytic converter conversion, bank 1	
Catalytic converter conversion, bank 2	
econdary air	
ntake camshaft	
alve lift by bank	
and laak toot	

Description Value Short test status running hort test running lease press the brake pedal and accelerator pedal at the same time	Unit
nonning hort test running lease press the brake pedal and accelerator pedal at the same time	
hort test running ease press the brake pedal and accelerator pedal at the same time	
ort test running ease press the brake pedal and accelerator pedal at the same time	

ABRITES Diagnostics for Porsche		_0)>
hort tests \ Knock control		
Description	Value	Unit
Engine speed	0	1/min
A055_Engine load (SAEJ1979)	1.2	%
Temperature	42.00	°C
Short test status	running	
	< Back	Nex t> Exit

Panamera 970, Cayenne 2011+, Boxster 981, 911 991, Macan Head lights start-up

This function allows you to adapt new or used headlight units to the vehicle.

When headlight is selected (left or right) and "Next" is pressed the software will examine the vehicle's configuration and decide which steps are needed to be executed for to headlight units start-up.

These steps might include: "reprogramming of the headlight control unit (left and/or right), "writing Vehicle Identification Number (read from vehicle) into the headlight control unit, automatic coding of the headlight control unit (default coding calculated on the basis of the vehicle configuration), Head Beam Adjustment calibration.

After vehicle configuration is read, the next window appears to inform the user about the preconditions which has to be met for the procedure to proceed normally.

ABRITES Diagnostics for Porsche 6.5 www.abrite	es.com		_ 🗆 ×
ABRITES Diagnostics for Porsche			
Headlight start-up Preconditions: Vehicle identification numbers match Vehicle on level surface Chassis "settled" Loading state "empty" Wheels in "straight ahead" position Engine "OFF"			
Press Next to continue, Back to go back.			
	< Back	Next >	Exit
Session closed.			Exit

Press "Next" to go to the page where steps to be performed are listed.

In some cases no action will be needed to start the headlights units.

In some cases there will be needed only Head Beam Adjustment calibration.

In some cases there will be needed coding, writing VIN and Head Beam Adjustment calibration.

In some cases there will be needed coding and writing VIN.

In some cases there will be needed to go through reprogramming, coding, writing VIN and Head Beam Adjustment calibration.

The sequence needs to be followed as given from up to bottom. Upper steps can be skipped if they have already been performed.

In the example below all reprogramming, coding, writing VIN and Head Beam Adjustment calibration are given.

ABRITES Diagnostics for Porsche 6.5 www.abr	ites.com		_ 🗆 🗙
🕾 ABRITES Diagnostics for Porsche			
Headlight start-up			
The procedure goes through the steps list If some of them are already performed, p step.	ed below. lease select and	continue with the sec	quential
<ul> <li>Programming of Left and Right headligh</li> <li>Writing VIN to Left and Right headlight</li> <li>Automatic coding of Left and Right hea</li> <li>HBA Calibration</li> </ul>	nts control units dlight control un	its	
Press Next to continue, Back to go back.			
Session closed.	< Back	Next >	Exit

Select a step and press "Next" to execute it.

The program will inform you for the progress of the execution.

BRITES Diagnostics for Porsche 6.5 wv	ww.abrites.com	×
🕾 ABRITES Diagnostics for Porsche		
Headlight start-up		
Programming of Left headlight		
		1
		J
Programming of Left and Right heat	adlights	1
C Writing VIN to Left and Right head	light control units	
C Automatic coding of Left and Right	headlight control units	J
C HBA Calibration		
Writing block 2		
	< Back N	ext > Exit
Connected.		Exit









## 3.5 Component protection

In some Porsche models there are modules which have the so called "Component Protection" security implemented.

Such modules placed in another vehicle activates the "component protection active" DTC and have restricted functionality.

Into Cayenne 9PA such modules are the Gateway (the master) and the Airbag (the slave).

This special function allows to remove the "component protection active" trouble code and allows the module to work with its full functionality as adapting the "slave" modules to the "master" module.

When the special function "Component protection" is started the system is examined and the state ("Virgin" or "Not virgin") of the modules with component protection is displayed.

In case the state of the module is "Virgin" it can be directly adapted using the ConfigData dump of the "master" Gateway read with programmer.

Or if the state is "Not Virgin" then the "slave" module must firstly be set to "Virgin" state (by OBDII) and then adapted using the ConfigData dump of the "master" Gateway.

Below you can find a couple of screenshots of the procedure:

1. Gateway and Airl	pag Status	2. Resetting the Airbag to a vir	gin state
A ABRITES Diagnostics for Porsche	- 🗆 🗙	ABRITES Diagnostics for Porsche	- 🗆 ×
Comp	ponent protection - Airbag	Component protection - Air	bag
Control unit Gateway Airbag	Status Not virgin Not virgin		
Reading vehicle status OK The procedure goes through the for - reset the Airbag module to virgin - adapt the Airbag module to the ve programmer)	llowing steps: state (by OBDII) shicle (requires Gateway ConfigData dump read with	Disabling security OK Reading	
Press "Next" to reset Airbag to virgi	in state.	Reseting to virgin state	
	< Back Next > Exit	< Back	Next > Exit

### 2 Resetting the Airbag to a virgin state

#### 3. The unit is now virgin

			from the car		
ABRITES Diagnostics for Porsche	- )	□ ×	ABRITES Diagnostics for Porsche		×
Component protection - Airbag			Component protection - Airbag		
Disabling security OK ReadingOK Reseting to virgin state OK			To learn the specified module to the vehicle, you need the EEPROM dump of the GATEWAY module from the car where you want to build the module. Press "Next" to load the dump or "Back" to exit.		
Continue with "Next".					
< Back Next >		Exit	< Back Next >	Exit	

4. To learn the unit, load the Gateway dump

5. The unit is now successfully adapted to the car

A ABRITES Diagnostics for Porsche			1000		×
Component prot	ection - Airbag				
Trying to set the component protection OK OK					
Module learned to vehicle with SUCCESS					
Adapting to vehicle					
	< Back	Next >		Exit	

## 3.6 Immo V adaptation

Into the Porsche models Panamera, Cayenne 9PA, 911 991, Boxster 981, Macan, Spyder there are several modules part of the so called immo V system.

In all of these models these modules are "BCM Front", "BCM Rear", "ELV", "DME" and in Macan also the "Transmission" module.

If you take one of these modules from one vehicle and put it into another vehicle they will not function properly till they are "learned" to the vehicle (or to the master module "BCM Front").

For example new engine ECU will not start the car, new ELV will not unlock the steering, new BCM Rear will not perform it's functions and new BCM Front will stop all of these functions and more untill all the rest of the (slave) modules are adapted to it.

The "Immo V adaptation" special function allows you to exchange each of these modules in a vehicle, i.e. learn/adapt it to the master module BCM Front. That is why for all of the modules you have to provide the DFlash dump of the BCM Front module of the vehicle into which the module will be installed.

You need also the ConfigData dump of the new module or DFlash dump of the BCM Front module of the vehicle from which the module is taken (called donor vehicle).

### **BCM Unit adaptation:**

1. Load the necessary dumps

				-		×
	BCM From	nt adaptation				
Load dump						
ou need to read with a pro ront modules - the one of	ogrammer the DFlash o the vehicle in which the	f both BCM e module will				
be installed and the one that Then you should load these	at will be installed. e dumps in the sequenc	e prompted				
by the software. After that the new BCM Fro	nt will be adapted to the	e vehicle by				
IT N TI I						
JDD11.						
Please load DFlash dump o	f the BCM Front module	e of the vehicle in w	which the module w	ill be i	nstalle	d.

#### 2. Enter the VIN of the car

A Immo V adaptation	-		×
BCM Front adaptati	on		
Load dump			
	Vehicle Identification Nur	nber:	
	WP1ZZZ92ZBLA30022		
You need to read with a programmer the DFlash of both BCM Front modules - the one of the vehicle in which the module will be installed and the one that will be installed. Then you should load these dumps in the sequence prompted by the software. After that the new BCM Front will be adapted to the vehicle by OBDII. Checking Immobilizer dumpOK Reading vehicle identification numberOK			
Please check displayed VIN and correct if necessary. Press "New	t" to continue.		
< Back	Next >	Exit	

#### 4. The procedure has successfully finished

BCM Front	adaptation
Starting key learning procedureOK Waiting key 1 from 1 OK (ID: 96267A22) Learning key OK Finishing key-learning procedure OK Finished with SUCCESS	Vehicle Identification Numbe WP1ZZZ92ZBLA® Keys to learn: 1

3. Enter the number of keys to be learned (leave"0" if there is no need to learn new keys)



### ECU Adaptation:

1. You can choose one of the 3 options to make the adaptation



# 2. Loading the dump from the front BCM of the car



#### 3. Loading ECU flash dump

ABRITES Diagnostics for Porsche		-	×
Load dump	Engine Control Unit adaptation		
You need to read with a progr Front module of the vehicle in You also need to read the ECL dumps (you can do this using nit" and "EDC17/MED17 Boo Then you should load these d no the software	ammer the DFlash of the BCM which the ECU will be installed. I ConfigData and flash data Special function "Engline control imode"). amps in the sequence prompted the lask to school for		
Please load new ECU flash du	mp.		

#### 5. Make sure the VIN corresponds



#### 4. Loading ECU EEPROM dump

	Engine Control L	Unit adaptation	1		
Load dump					
You need to read with a	programmer the DFlash of the	e BCM			
You need to read with a Front module of the veh	programmer the DFlash of the cle in which the ECU will be in	e BCM nstalled.			
You need to read with a Front module of the veh You also need to read th dumps (you can do this	programmer the DFlash of the cle in which the ECU will be in e ECU ConfigData and flash d using Special function "Engine	e BCM nstalled. ata e control			
You need to read with a Front module of the veh You also need to read the dumps (you can do this unit" and "EDC17/MED1	programmer the DFlash of the cle in which the ECU will be in e ECU ConfigData and flash d using Special function "Engine 7 Boot mode").	e BCM nstalled. ata e control			
You need to read with a Front module of the veh You also need to read th dumps (you can do this unit" and "EDC17/MED1 Then you should load th by the software.	programmer the DFlash of the de in which the ECU will be in e ECU ConfigData and flash d using Special function "Engine 7 Boot mode"). ese dumps in the sequence pr	e BCM nstalled. ata e control rompted			
You need to read with a Front module of the veh You also need to read th dumps (you can do this unit" and "EDC17/MED1 Then you should load th by the software. After that the ECU will the After that the After the After After the After	programmer the DFlash of the de in which the ECU will be in ECU ConfigData and flash d using Special function "Engine 7 Boot mode"). ese dumps in the sequence pr e adapted to the vehicle by	e BCM nstalled. ata e control rompted			
You need to read with a Front module of the veh You also need to read ti dumps (you can do this unit" and "EDC17/MED1 Then you should load ti by the software. After that the ECU will I OBDII.Checking immob Loading ECU flash dum	programmer the DFlash of the de in which the ECU will be in e ECU ConfigData and flash d using Special function "Engine P Boot mode"). ese dumps in the sequence pr e adapted to the vehicle by izer dumpOK OK	e BCM nstalled. ata e control rompted			
You need to read with a Front module of the veh You also need to read th dumps (you can do this unit" and "EDC17/MED1 Then you should load th by the software. After that the ECU will L OBDII.Checking immob Loading ECU flash dump	programmer the DFlash of th de in which the ECU will be in e ECU configData and flash d using Special function "Engine" 8 bot mode"). ese dumps in the sequence pr e adapted to the vehicle by izer dumpOK OK	e BCM nstalled. ata e control rompted			

# 6. The procedure has successfully finished adapting the ECU

A ABRITES Diagnostics for Porsche	- 🗆 ×
Engine Con Load dump Connecting to BCM FrontOK Reading immobilizer dataOK Connecting to ECUOK Synchronizing with BCM FrontOK Finished with SUCCESS	rol Unit adaptation Vehicle Identification Number: WP1ZZZ92ZBLA( ర్రంగ్రం
	< Back Next > Exit

### **ELV Adaptation:**

1. You can choose one of the two options to make the adaptation

ABRITES Diagnostics for Porsche	-		×
ELV adaptation			
<sup>c</sup> Load immo data from ELV ConfigData dump		?	
$^{\rm C}$ Load immo data from BCM Front dump of donor vehicle		?	]
< Back Next >	1	Exit	

# 2. Load the dump from the Front BCM module of the car



4. Make sure the VIN corresponds to the one of

#### 3. You can now load the ELV EEPROM dump

			the car	
ABRITES Diagnostics for Porsche	- 0	×	A ABRITES Diagnostics for Porsche	- 🗆 ×
ELV adaptation			ELV adaptation	
				Vehicle Identification Number:
You need to read with a programmer the ConfigData of the ELV module. You also need to read the DFlash of the BCM Front module of the vehicle in which the ELV will be installed. Then you should load these dumps in the sequence prompted by the software. After that the ELV will be adapted to the vehicle by OBDII. Checking immobilizer dumpOK			You need to read with a programmer the ConfigData of the ELV module. You also need to read the DFlash of the BCM Front module of the vehicle in which the ELV will be installed. Then you should load these dumps in the sequence prompted by the software. After that the ELV will be adapted to the vehicle by OBDII. Checking immobilizer dumpOK Loading ELV dump OK Reading vehicle identification numberOK	
Please load ELV dump.			Please check displayed VIN and correct if necessary. Press "Nex	xt" to continue.
< Back Hent >	Exit		< Back	Next > Exit

#### 5. The ELV is now successfully adapted

ABRITES Diagnostics for Porsche			-		$\times$
Load dump Connecting to BCM FrontOK Reading Immobilizer dataOK Trying to set ELV dataOK Synchronizing with BCM FrontOK Finished with SUCCESS	ELV adaptation	Vehicle Identificatic	n Nun	nber:	
	< Back	Next >		Exit	1

## 3.7 Special Function "Read/Update ConfigData"

The Read/Update ConfigData function allows read/update by OBDII the ConfigData [95640] of "Airbag" unit for vehicle model "Cayenne 29A from MY 2011". Also supports clear crash data by OBDII of "Airbag" unit for vehicle model "Cayenne 29A from MY 2011" with ConfigData type [95640]:

RITES Diag	nos	stics	for	Pors	che	7.1												www.abrites.co	om —		>
ustom Men	nor	y Do	own	load	1/0	plo	ad														×
pe: Cayer	nne	92	2A 7	lir	bag	[9	564	0]										-	I		
0000000	0	00	0.0	00	00	0.0	0.0	00	00	00	00	00	00	00	00	00			ļ		Read
	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		~			
0000020 0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00					
0000030 0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				1	Nrite
000040	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00					
000050 0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00					
000060 0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00					
000070 0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00					1
000080 0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				Save	to file
000090 0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00					~
0000A0 0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				l í	-
0000B0 0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				Load	from file
0000000	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				LUGU	nom nie
0000000	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				1	
0000E0 0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00				Clear (	Crash Dat
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	-	_	_	-	_	_	_	_	_	_	-	-	-	-	_	_			-	8	Exit
										CALCO .											

# **4. TROUBLESHOOTING**

Below you can find a list of typical problems and how to solve them:

**Problem:** When starting the "ABRITES Diagnostics for Porsche" on the splash screen "Interface NOT found" is displayed

#### Solution:

- Please be sure that the USB interface drivers are installed properly. You can look at the device manager, the USB interface should appear as "USB Serial Port (COMxx)" where "xx" is the number of the port
- If the interface is recognized OK, then please try to unplug and plug it again into the USB slot and restart the "ABRITES Diagnostics for Porsche".
- If the interface is not recognized (the USB interface appear with yellow exclamation mark in the device manager), then you can try to solve the problem by uninstalling and reinstalling the USB interface drivers (see sections "Installing USB interface drivers" and "Uninstalling USB interface drivers").
- If there are some bluetooth device try to disable them

**Problem:** When starting the "ABRITES Diagnostics for Porsche" "Interface not calibrated" is displayed. **Solution:** Send all logs to a distributor

**Problem:** The device connects sometimes to the device under K-Line, and sometimes not. **Solution:** Try to increase/decrease the "Wakeup echo delay" timing parameter.

Problem: The connection with the device under K-Line is unstable.Solution: Try to increase/decrease the "Inter byte time", "Time between messages" and "Communication echo delay" parameters.

**Problem:** It is not possible to connect to a device through the K-Line, since it is possible to connect to it with other diagnostic tools.

Solution: Try to change the baud sequence to 9600/10472 from the options dialog.

**Problem:** Some device cannot be read or unexpected behavior was found **Solution:** Send logs from the communication to a distributor with short description of the problem.

# 5. APPENDIX

## 5.1 Porsche Cayenne gasoline engines – ECU wakeup fuses

Porsche Cayenne – fusebox



## 5.2 Removing ESL Porsche 911 977, Boxster/Cayman 987



Insert the allen wrench and rotate it to the right (clockwise) in order to release the ESL module from the steering column.



## 5.3 PORSCHE KEY LEARNING BY DUMP

When learning keys to a Panamera 970, 991, Boxter/ Cayman 981, Cayenne 92A, Macan 95B vehicles the first thing that needs to be done is to ensure that the Front BCM is located and that the Dflash (EEPROM) from this module is read with a programmer. Once you read the Dflash (EEPROM) you need to save it locally on your computer in a folder so that you know where it is located.

Once you have done that the next step is to connect your AVDI to the vehicle and your TAG programmer or PROTAG to the AVDI.

Having completed this step you can continue.





You should take out the plastic key. When you are done you should end up with this:

Having completed this step the software can be started. Please select key learning.

Select vehicle model:	Select function:
Panamera 970 (2010+) Cayenne 9PA(-2010) Porsche Cayenne 92A (2010+ 911 997 (2005-2010) Boxster 987 (2005-2011) Boxster 981 (2012+) Cayman 987 (2005-2010) Cayman 981 (2012+) Macan 95B (2014+) Carrera GT 980 (2002-2006) Porsche Carrera 991 (2011+) 911 996 (1998-2005) GT2 996 (2001-2005) GT3 996 (2000-2005) Bowster 906 (2002-2004)	Teach keys Help

When you open the key learning menu you can select Panamera 970 (2010+). This will open a menu with two options: **Teach keys** and **Help**. The help option will give you an overview of the steps you need to take. Please read them. When you are finished you can go to **Teach keys**.

The Abrites diagnostics for Porsche will ask for the dump you have saved in the beginning of the process.

A BRITES Diagnostics for Porsche			
Load immobilizer dump			
	< Back	Next >	Exit

Click on the load dump button and select the dump you have saved. It is at this time that you should put the key in the TAG programmer or PROTAG. Otherwise you will see this message:



The process is automated and requires minimal input.

Once the key is detected in the programmer its preparation as a "Dealer key" begins. When this is done you should select the number of keys you want to learn:

Load immobilizer	Used.	ID: D4E2A932	
dump	Used.	ID: 69FDA932	
•	Not used.		
	Key count		
	Select number of k learned:	eys tobe 2 Cancel	
Checking immobilize Searching for progr Checking for key in Preparing dealer ke	ammer OK programmer y OK	ОК	

The key learning starts. In case it does not – turn the light switch ON and OFF, lock and unlock the car, etc.:



Place one of the keys in the vehicle's key fob which you have previously prepared as per the instructions above and set the car to the "Ignition ON" position:





Repeat the same procedure for the second key.



The procedure will finish with success and the car will have two working keys. So will the remote controls. They sometimes require you to lock and unlock the vehicle several times.

In order for the key less function to work please reassemble the plastic key (reverse of disassembly) and turn it on while pressing the buttons for locking and unlocking on the remote controls.

#### NOTE: This is the processor you need to read:

