

# ABRITES DIAGNOSTICS FOR RENAULT/ DACIA





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# Important notes

The Abrites software and hardware products are developed, designed and manufactured by Abrites Ltd. During the production process we comply to all safety and quality regulations and standards, aiming at highest production quality. The Abrites hardware and software products are designed to build a coherent ecosystem, which effectively solves a wide range of vehicle-related tasks, such as:

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

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Each warranty claim is inspected individually by our team and the decision is based upon thorough case consideration.

Read the full hardware warranty terms on our website.

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# Safety information

The Abrites products are to be used by trained and experienced users in diagnostics and reprogramming of vehicles and equipment. The user is assumed to have a good understanding of vehicle electronic systems, as well as potential hazards while working around vehicles. There are numerous safety situations that cannot be foreseen, thus we recommend that the user read and follow all safety messages in the available manual, on all equipment they use, including vehicle manuals, as well as internal shop documents and operating procedures.

#### Some important points:

Block all wheels of the vehicle when testing. Be cautious when working around electricity.

- Do not ignore the risk of shock from vehicle and building-level voltages.
- Do not smoke, or allow sparks/flame near any part of the vehicle fuel system or batteries.
- Always work in an adequately ventilated area, vehicle exhaust fumes should be directed towards the exit of the shop.
- Do not use this product where fuel, fuel vapours, or other combustibles could ignite.

In case any technical difficulties occur, please contact the **Abrites Support Team by email at <u>support@abrites.com</u>.** 

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# List of revisions

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21.06.2019		Updated mileage calibration proce- dure - re-enabling sync info added	2.7

# 1. Introduction

The "Abrites Diagnostics for Renault/Dacia" is a personal electronic device and online server based diagnostic software for Renault/Dacia vehicles. With the help of this software you can perform complete diagnostic operations of all vehicles produced by the brand. For proper operation of your diagnostic software you will need a corresponding interface for connection between your PC and vehicle named "AVDI". The usage of the software requires the device it is installed on (i.e. personal computer) to be connected to the Internet. AVDI is an interface produced by Abrites Ltd. intended to act as an interface between the PC and the electronic control units within the vehicles.

Your AVDI should be used with ABRITES software produced by Abrites Ltd. ABRITES is a trade mark of Abrites Ltd.

# 2. Getting Started

The Abrites diagnostics for Renault/Dacia is installed together with the software applications as a part of the installation provided to the user with the e-mails sent.

You can start the Abrites diagnostics for Renault/Dacia from the Quick start icon, installed on your desktop upon installation of the Abrites diagnostic suite. You will be able to start it by clicking on the brand logo. When the software opens the user will see the following screen:



In this main screen the user can select the model of the vehicle and proceed to diagnostics or click the "Detect" button in order for the Abrites diagnostics for Renault/Dacia to automatically detect the vehicle.

# **3. Standard Diagnostics**

The Abrites diagnostics for Renault/Dacia provides a multitude of options in terms of standard diagnostics. It can assist the user to read and clear diagnostic trouble codes (DTC), perform identification on the electronic control modules installed in the vehicles produced by Renault and Dacia, show the actual values of the vehicles in real time in a list form as well as a graph and also perform actuator testing in order to determine the cause of issues within the vehicles.

#### 3.1 Module Identification

Once the software identifies the vehicle make and model the user will see the list of modules installed in the particular vehicle. When they choose a module and click on it the following screen will be displayed:



Using the "Identification" button the user will have all the available information for the module. This includes part number, supplier, programming number, VIN, as well as many other details. This will help in the cases where a replacement unit is needed.

### 3.2 Reading and clearing Diagnostic Trouble Codes (DTC)

Diagnostic Trouble Codes are one of the first signs of issues with a vehicle. Abrites diagnostics for Renault/Dacia provides reading and clearing of these codes as well as full information about the codes themselves. Once the module that is diagnosed is found (after scanning for trouble codes from the main screen the DTCs are displayed in a list next to the electronic modules) the user can enter the module and select the "Read DTCs" button.



A description of the trouble code is provided. It contains the description of the DTC (one or more), the car's code for it as well as the total amount of the discovered trouble codes. Once the user is done with the analysis of the present codes and the repair of the fault itself they can proceed to clicking the "Clear DTCs" button which will remove the code from the electronic unit's memory.

#### **3.3 Actual Values**

Actual values are an inseparable part of the detailed diagnostics of a vehicle. They are used to monitor and observe the details of operation of the vehicles's components in real time and can allow the user to make adjustments to the vehicle and immediately see their effect. The actual values can be viewed using the "Data display button". They can be monitored as a list or in graph form:

Current Data		
DATASET		
Data	Value	
DRIVER'S DOOR	CLOSED	Previous
INJECTION IMMOBILISER CODE	INACTIVE	
STARTER SWITCH POSITION	+APC	
BRAKE PEDAL POSITION	RELEASED	Vext
CLUTCH START OF TRAVEL SWITCH	RELEASED	
RF KEY VALID	NO	
RF RECEPTION COUNTER KEY	0.00	
BATTERY VOLTAGE	12.49 V	
FRONT WASHER REQUEST	MISSING	
REAR WASHER REQUEST	MISSING	
PASSENGER'S DOOR	CLOSED	Pause
REAR DOORS OR BOOT	CLOSED	-
REAR RIGHT DOOR	CLOSED	Graph
LEFT HAND REAR DOOR	CLOSED	
TAILGATE/BOOT OPEN BUTTON	RELEASED	×
REAR SCREEN WIPER PARKED POSITION	INACTIVE	

In the list view the options are stacked and their status value is displayed on the right hand side of the screen.

Using this view many separate sources can be viewed simultaneously. The user can choose to freeze the live data reading in order to observe and analyze them at a particular point.

The live values can also be displayed in a graph. This graph can be opened by selecting the "Graph" button. It can be recorded, saved and played for further analysis. The user can zoom the graph for aditional details or to see it in a larger scale so that the vehicle's behaviour can be thoroughly analyzed:



## 3.4 Actuator Tests

When looking for the soursce of a fault in a vehicle it is very important to be able to test separate components within a system in order to determine the exact part of a system that is faulty. This is applicable particularly in the cases where the system is more complex which is very common in modern vehicles.

Some vehicles have many actuators that enable and disable one or more functionalities of the vehicle's operation as well. These may be used to determine a cause of a fault but also to apply changes to a vehicle.

Current Data	and the first sector of the se	×
DATASET	-	
Data	Value	
FAULT FINDING ON ACCESS AERIALS		Previous
STARTER AERIALS TEST		
HFM> TRANSPONDER RING CONNECTION TEST		-
REMOTE LOCKING BUZZER	IN PROGRESS	Next
ABRI		Pause
		× Exit

# 4. Advanced Diagnostics

Abrites diagnostics for Renault/Dacia provides the user with advanced diagnostic functions in the form of special functions. These functions can be used in the cases where a vehicle is in need of special operations such as key learning and PIN code reading ( used mostly by automotive locksmiths, but applicable in repair shops too), module ID repalcement (valid in the cases where an electronic module requires replacement), reading mileage and calibration (once again – extremely valuable when replacing a module), Airbag memory manager (used often in the field of damage repair workshops).

#### 4.1 PIN code reading and key learning

In order to open the key learning functions of the Abrites diagnostics for Renault/Dacia the application should be started. On the main screen the user should select the "Special functions" menu:



Once in the main screen the user will see the special functions list. Please note that not all special functions may be included in the basic software and they must be purchased in order to be used.

### 4.1.1 Common procedure

There is function for auto-detection of the vehichle model. Nevertheless if you don't succeed to learn the key using the auto-detection, please try to make it by selection the model manually from the drop down list of supported models:

Clio II Ph2/3	X65	2002-2006	•
Master Ph2	x70	2002-2006	
Master Ph3	<b>X70</b>	2007+	
Master III	X62	2010+	
Megane II	X84	2003-2006	
agMegane II Ph2	X84	2007+	
Megane III	X95	2009+	
Megane III RS	X95	2009+	
Modus	x77	2004+	

When this function is opened, the "ABRITES Diagnostics for Renault/Dacia" opens the following dialog:

Key Learning	×
Key ID         Key type           B2476E86         Key/Card with RF - PCF7961           66466E86         Key/Card with RF - PCF7961	Start Stop Stop
	Leam
PIN Code: Read PIN Code	Preapare PCF7936 transponder
Done.	<b>X</b> Exit

When you press the "Start" button then application connects to the immobilizer and reads the keys which are currently accepted from the car. If you want to learn a key/card, then you need to press the "Learn" button and you've to specify how many keys/cards you want to learn.

After that you should follow the instructions.

Normally the procedure goes in that way:

1. When pressing the start button the application is connecting to the immobilizer and displaying the present keys/cards. In most cases it is not required that the car is on ignition, for some cars the immobilizer is awake directly from the diagnostic. But on some cars it may happened that the ignition is given when connecting to the device.

2. After pressing the "Learn" button and specifying the number of keys you will be invited to remove the key/card from the ignition. Please be sure that the key/cards is really removed after this. Otherwise immobilizer will reject the key-learning procedure.

3. After that you will be invited to insert each next key/card and give the ignition ON. For each key there are several seconds required until the immobilizer recognize the key/card.

**NOTE:** For some models there are two ways to learn keys/cards – regular procedure or using direct writing to the EEPROM memory. For Clio III Direct, Modus Direct and Traffic III Direct the keys are put into the programmer, not into the ignition. When putting the key into the programmer please be sure that it is correct placed as shown in the pictures below:



4. Step "3" is repeated for each key you want to learn.

5. After inserting all keys which have to be learned you will be asked whether you want to store the result or to reject the whole procedure (useful if you made a mistake during the key-learning procedure like forgot to put a key).

If you do not have an original key for the model, you can use PCF7936 transponder to make a key for the car. Please note that PCF7936 might be used only on cars with key, not on cars with cards! Also if you learn PCF7936 transponder there will be no remote control for that key! So if you want to use such PCF7936 transponder, you should connect your programmer, put a factory new transponder inside and press the "Prepare PCF7936 transponder".

### 4.1.2 X95 based cars

For X95 based cars (Megane III/ScennicIII/Fluence, etc) there is a difference in step "2" from the common procedure. The rule is that if you will learn a new (virgin) key/card, put the card in the ignition lock (without giving IGNITION ON), if you will learn an already pre-coded or working keys/cards - there should be no key/card in the ignition lock. Here are some examples:

- if you will learn a virgin card, put this card in the ignition lock. For example if car has two working cards, and you want to add one, you should specify 3 cards for the key count, put the virgin card in the ignition, then when invited to put first key/card do nothing. Then when invited to put second and third key/card, put the original working keys into the ignition. If you want to add two virgin cards, you need to execute the whole procedure twice!
- if you will learn only cards which are working (e.g. car has three working cards, one of them is loosed and you want to relearn that only the other two cards continue to work), in that case no card should be on the ignition for this step.

NOTE: For Renault Fluence if you want to learn a virgin key, put it in the ignition lock (without giving ignition ON) and perform the procedure (this is the original procedure). If you've message "PIN code not accepted! Make sure ignition is OFF!" - then repeat the procedure from the beginning with the SAME VIRGIN KEY, and this time the key should be outside the ignition lock! (i.e. the exception here is that the virgin key is not in the ignition lock).

#### 4.1.3 X95 based cars with updated software

Starting from about 2011 these cars have updated software in the immobilizer and it is no more possible to make them by OBDII. With ABRITES Diagnostics for Renault, it is possible to make cards for them, but you should first read them with the ABPROG. You can easily recognize these immobilizers since they are showing "09090909" for the existing key-IDs.

Key L	earning				×
0	(ey ID 9090909 9090909 9090909	Key type Key without RF Key without RF		_	Start
					Learn
PI	N Code:		Read PIN Code		Preapare PCF7936 transponder
D	one.				<b>X</b> Exit

If you press "Learn" or "Read PIN Code" for such immobilizer, there will be a warning that first you need to read the immobilizer with the ABPROG. You should press here "Yes" after you already read the immobilizer dump.



To read using Abprog please refer to the Abprog user manual.

# 4.1.4 Using "Abrites key" cards

Vehicles like the Clio IV can use the key cards, produced by Abrites ltd. These cards come prepared for the user and look like this:

It is used together with the Abrites PROTAG programmer and can be purchased from abrites.com or our dealer network.



The correct position of the card over the PROTAG programmer is shown below:





The procedure for "Abrites key" cards requires connection to the internet. The car will be autodeted:

The Abrites diagnostics for Renault/Dacia will ask you to confirm whether orr not the vehicle is correctly autodetected. You can confirm.

	All Units for CLIO IV Protocol DTC	
	INJECTION (\$'A)	
	A.B.S. (\$01)	Previou
	INSTRUMENT PANEL (\$51)	
	UCH (\$26)	
	AIRBAG / PRETENSIONERS (\$2C)	Ģ
		Open
	2 Model	
0		1
8	V Clio IV card 2012+ Vpen	Next
0	ų	
1		
<del>)</del> (	/ehicle Selection 👔 Special Functions	
0	🔊 📰 👔 🔳 🖷 🧼	()
٢ey	Learning Dump Tool Change ID PIN Calculator Clio PIN by Cluster Read/Update Open	Options
	👷 🛛	0
	Airbag ECU Flasher	



Press start and the software will ask you to input the number of keys to be programmed:

In this case we will be programming 1 key-card.



A ABRITES Di Key Learning 23 53 # A11 Key ID 09090909 Key type Key without RF 1 INJE 2 A. H Previous 3 INST 4 UCH STOP 5 G AIRD Please Wait... Stop 8 Open AIR Reading Configuration Data, please wait... 9 AUTO 10 COMM Learn keys 18 VARI Next X Cancel 20 UPC 55 % R a Time: 00:00:14 41 -Preapare PCF7936 transponder 🚘 Vehicle S PIN Code <u>وم</u> Read PIN Code -Key Learnin Options × Rirbag Reading PIN. Please wait... Exit Exil

After following the instructions the Configuration data and PIN are being read:

At this point the software will ask you if you are using and Abrites key. Please confirm.

A AB	RITES DI	Key Learning		83	Ξ Σ3
# 1 2	All INJE A.B.	Kcy ID 09090909	Key type Key wilhout RF	Start	Previous
3 4 5 8	INST UCH AIRB ATR		ABRITES Diagnostics for Renault	5TOP Stop	Open
9 10 18 20	AUTC COMM VARI UPC		Do you want to learn an ADRITES key?	Learn keys	Next
41 🖨 1	Vehicle Se	PIN Code A90	SDC60D032 Read PIN Code	Prcaparc PCF7936 Lransponder	Options
	Rirbag	Done. PIN: A90	8DC60D032	Exit	Exit

23 A ABRITES DI 23 Key Learning # A11 Key ID Key type Key without RF 1 INJE 09090909 2 л.в. Previou 3 INST 4 UCH STOP G 5 AIRB 5top ABRITES Diagnostics for Renault Open 8 AIR 9 AUTO In order to continue this operation you must be connected to the Internet. 10 COMM Please establish an internet connection and press OK to continue. J n keys 18 VARI Next Cancel ок 20 UPC 11 -Preapare PCF7936 transponder 😝 Vehicle Se PIN Code A908DC60D032 **%** Read PIN Code 3 Key Learnin Options X × Done. PIN: A908DC60D032 Exit Airbag Fxit

At this point you will be reminded to check the internet connection.

Then connect the PROTAG programmer:

	RITES DI	Key Learning		23	
# 1 2	All INJE A.B.	Key ID 09090909	Key type Key without RF	Start	Previous
3 4 5	INST UCH AIRB			STOP	
8	AIR	ABR	ITES Diagnostics for Renault	Stop	Upen
10 18 20	COMM VARI UPC		Please connect PROTAG via USB or directly to AVDI and click OK     OK Cancel	arn keys	Next
	Vehicle Se	PIN Code A903	DC60D032 Read PIN Code	Preapare PCT7936 transponder	) (Vptons
	<b>P</b> Airbag	Done. PIN: A908	NDC60D032	Exit	Exit



Then place the Abrites card over the Protag programmer as per the photo above and click "OK"

The Abrites card will be prepared:

L					10 C
	INJE	Key ID 09090909	Key type Key without RF		
		09090909	Key without KF	Start	
	A.B.				Previou
5	ATRR				
3	AIR			STOP	
9	AUTO				<b>G</b>
12	GAS		ABRITES Diagnostics for Renault	Stop	Open
21	TYRE				
15	SUNR		ABRITES card prepared successfully!		
55	SEAT			Learn keys	
			ОК		Next
		1		Preapare PCE/936	
	ehicle Se		BDC60D032	transponder	1
-		PIN Code A90	Read PIN Code		
	earning				Option
				X	
7	*	ABRITES card p	prepared successfully!	Exit	

#	All	Key ID	Key type		
1	INJE	09090909	Key without RF	Start	
2	A.B.			Jun	Previou
5	AIRE				FIEVIOU
	AIR			STOP	
,	AUTO		Key Learning		<b>\$</b>
2	GAS		Key Learning	Stop	Open
21	TYRE				
25	SUNR		Please insert key 1 and give on ignition and press 'OK'	Learn keys	
65	SEAT		OK		Next
				Preapare	
	/ehide Se			PCF7936 transponder	1
(		PIN Code A90	8DC60D032 Read FIN Code	uunaponder	() 5=
Key	Learning				Option
	*	Transformer		×	
0.0	~	Insert key 1		Exit	

Continue by putting the card in the ignition and press  $\mathsf{OK}$ 

The software will then confirm by saying "Done" in the bottom left corner:

ŧ	All	Key ID	Key type		-
	INJE	09090909	Key without RF	Start	
	А.В.				Previou
	AIRE				
	AIR			STOP	
•	AUTO			Stop	Ģ
2	GAS			Stop	Open
1	TYRE				
25	SUNR			Learn keys	
55	SEAT				Next
	/ehicle Se			Preapare PCF7936 transponder	
Kcy	Learning	PIN Code A90	Read PIN Code		Option
				X	
-	<b>R</b>	Done.		Exit	

Please note that in case you have not used an Abrites card during the process the software will note this immediately.



### 4.2 Dump Tool

The dump tool give to the user the ability to make modification in the dump files of different devices (e.g. airbags). But you will need to read EEPROM/flash with a programmer, and after modifications in the dump tool the resulting file has to be write back to the EEPROM/flash with a programmer.

# 4.3 Change ID

Calling this function will bring you a dialog, where all devices for the selected model are available.

Lhange ID		×
Hnit name:	ОСН - ВСМ	▼ Read
ID:	VF1FLBUDC8y284398	
		Write
		×
Done		Exit

For each device you can try to read and change the Vehicle Identification Number. When changing this number there is also a checksum which is calculated automatically. Please note that in the most of the device there will be no such number present.

## 4.4 PIN Calculator

This is a calculator which can evaluate the immobilizer security code from the vehicle model and the code written on the key itself (when you open the key). This calculator is used for cars with 4 digit PIN till 2001 year.



### 4.5 Clio PIN by dump

This is a calculator for getting the Clio PIN code from the immobilizer dump. After starting this special function you will need to select the EEPROM dump file and after that you will get the security (PIN) code.

#### 4.6 Cluster calibration

This function allows the user to calibrate the mileage in all relevant modules. Please note that regarding the vehicle models that use ABS synchronization there is the added option to disable the sync. This special function also provides the option to read and write the EEPROM and flash so that in case of any issues during calibration or others you can repair the vehicle. The function provides the added option to disable the synchronization between the cluster and the ABS module - Ideal for replacing components containing the vehicle mileage. Once you replace the faulty mileage containing module you can set the value to the car's actual mileage with no more than a few clicks. Incrementing and decrementing is available in this option.

You can re-enable the synchronization easily by reflashing the cluster with its original file which you can find in the log files folder. It is automatically saved there before you start the synchronization disabling procedure.

In order to determine the mileage it has to be read:



In some cases it is inevitable to disable the synchronisation between the ABS and cluster:

Instrument cluster	
Current mileage value: 25227 km Read	Exit
New mileage value: 0 km Recalibrate	
Disable ABS synchronization	
ABS Current mileage value: 0 km Load Com/Data dum	q
New mileage value: km	ıp
Done.	

Instrument cluster Conf Data can be read, updated, saved to file and loaded via OBD:

00000000         00         02         FF 3F 01         01         09           00000010         01         01         01         00         01         00         01         00         01         00         01         00         01         00         01         00         01         00         01         00         01         00         01         00         01         00         00         00         00         00         01         01         01         00         01         00         01         00         01         00         00         00         00         01         01         01         00         01 <th>10 00 10 03 E8 03 84 03 20?</th> <th>Bead Update Save to file</th>	10 00 10 03 E8 03 84 03 20?	Bead Update Save to file
00000160 00 78 00 04 00 06 00 00000170 00 18 00 06 00 0C 04 00000180 12 03 04 06 12 01 01 00000190 01 01 01 01 00 00 FF 000001A0 FF FF FF FF FF FF 000001A0 FF FF FF FF FF FF FF 000001CU FF FF FF FF FF FF FF 000001D0 FF FF FF FF FF FF FF	06 00 04 00 04 00 07 00 06 .x 02 01 02 04 01 01 01 01 01 FF FF FF FF FF FF FF FF FF FF FF FF FF	, Exit

### 4.7 ECU configuration data, flash and IMMO data reading and updating

When a situation requires for the ECU configuration data, flash and IMMO data to be read the Abrites diagnostics for Renault can assist. This option is focused on different ECUs within the Renault vehicle brand. Currently the support for the ECUs includes the following:

#### Reading and updating the EEPROM of the following ECUs:

- EDC15C3
- EDC15C13
- EDC17
- SIRIUS32
- SID301
- SIM32
- SAFIR/SAFIR2/SAFIR200
- IAW 6R.20
- IAW 6R.30 (reading only)

#### Reading and updating the FLASH of the following ECUs:

- EDC15C3
- EDC15C13
- EDC17
- SIRIUS32
- SID301
- SIM32

#### Clearing IMMO code data for the following ECUs:

- EDC15C3
- EDC15C13
- EDC17
- SIRIUS32
- SID301
- SIM32
- IAW 6R.30

You can operate with all these ECUs on a desk using the following adapter OBDII to DB9 Male:



# 4.7.1 EDC15C3

For this ECU the type of MCU is SAK-C167CS-LM, the external flash is AM29F400BT with size of 512 KB. The configuration data is stored in EEPROM 95P08 with size of 1 KB. Use the following pinout to DB9 Female connector:

DB9 F Pin	ECU Connector		EDC15C3
1	В	M4	
2	В	E3	
3			АВС
4	А	C3	
5			
6	В	M3	(PinG2 IMMO line)
7	В	D4	
8	А	D3	
9			

After clearing the IMMO code, the ECU will perform self-learning with the first ignition cycle when a valid signal from immobilizer is present. Note that you need a valid signal from immobilizer system to start the engine!

ECU TYPE	F	DC	:15	C3	i.												•	EEPROM
00000350	0E	OA	02	02	0E	03	00	01	01	44	00	01	01	01	01	01	D ^	
00000360	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01		Read EEPROM
00000370	27	0B	1D	27	13	09	03	01	63	31	13	OF	0E	09	04	03	''c1	
00000380	02	63	1F	13	09	07	05	80	07	06	05	04	03	02	01	00	.c	
00000390	00	01	80	OF	01	00	00	01	01	00	00	01	00	01	00	00		Write EEPROM
000003A0	01	00	01	02	03	04	05	06	01	01	00	01	00	01	01	00		
000003B0	01	00	01	00	01	00	01	00	01	04			01	03	02	00		
00003C0	01	00	00	00	00	00	00	00	01	01	01	01	01	01	01	01		Clear IMMO code
00003D0	01	01	01	01	01	01	01	01	01	00	01	00	01	01	00	01		
00003E0	00	01	03	02	03	00	03	00	01	00	00	00	01	01	00	01		
00003F0	00	01	03	04	03	01	03	00	64	00	32	0A	7D	FF	32	01	d.2.}.2.	EXTERNAL FLASH
0000400					01			00						06	_			
0000410	80	5A	5A	00	2C	05	00	00	02	02	5A	05	08	07	80	09	.ZZ.,Z	Read FLASH
0000420			_											62			2.7Zbc.	
																	Z(	
0000440																		
0000450											_	_				01		Write FLASH
0000460																		
0000470	00	05	00	00	00	05	00	00	00	00	00	00	00	00	00	00		
0000480			00	01	00	00	01		FF	01	00			00	00	00		
0000490		01	00	01	00	01	01	00	01	01	00	00	00	00	00	00		
	01		96	D2	00	FF	50	01	01	00	01	01	01	01	01	01	P	
00004B0	01		96	6E	00	9B	01	01	01	00	01	01	01	01	01	01	n	
	14	FE	FF	FF	14	FE	FE	14	14	14	14	14	14	14	14	14		Load from file
00004D0	00	FF	FF	6E	00	FF	7D	00	00	00	00	00	00	00	00	00	n}	
00004E0	00	00	00	01	00	00	01	00	00	00	00	00	00	00	00	00		1.1
00004F0	00	00	00	00	00	00	00	00	01	01	01	01	01	01	01	01		
0000500	00	00	01	02	01	00	01	00	00	00	00	00	00	00	00	00		
0000510	00	00	01	00	01	00	00	01	00	00	00	00	00	00	00	00		Save to file
0000520	00	00	01	02	01	00	01	00	00	00	00	00	00	00	00	00		
	01	00	00	00	00	00	01	00	01	01	01	00	00			00		×
0000540	00	01	01	00	00	01	01	08	00	00	00	00	08	OA	09	08		$\wedge$
<																	>	Exit

# 4.7.2 EDC15C13

Please bare in mind that the EDC15C13 box looks very similar to the EDC16 boxes. Please make sure that you check the BOSCH number to be 100% sure what ECU you have. The MCU type is SAK-C167CS-LM. The external flash is AM29F400BT with size of 512 KB. The configuration data could be stored either on 5P08 or 35P08 EEPROM with size is 1KB.

You can read and write the configuration data and the full flash using the appropriate buttons.

After clearing the IMMO code, the ECU will perform self-learning with the first ignition cycle when a valid signal from immobilizer is present. Note that you need a valid signal from immobilizer system to start the engine!

DB9 Female Pin	ECU Connector	
1	В	M4
2	В	A1
3		
4	С	F2
5		
6	В	M3
7	В	F1
8		
9		

Use the following pinout to DB9 Female connector:



#### 4.7.3 SID301

The SID301 ECU has a MPC561 MCU type and the external flash type is AM29BDD160GB with size of 2 MB. The configuration data is stored on 95320 EEPROM with 4KB. After clearing the IMMO code, the ECU will perform self-learning with the first ignition cycle when a valid signal from immobilizer is present. Note that you need a valid signal from immobilizer system to start the engine!

Use the following pinout to DB9 Female connector:

DB9 Female Pin	ECU Connector	ECU Pin
1	С	H4
2		
3	С	A4
4		
5	С	A3
6		
7		
8		
9	С	D1
9	В	G4



### 4.7.4 SIRIUS 32

For these ECUs we have two options for the type of MCU: SAK-C167SR-LM an SAK-C167CR-LM. The external flash is AM29F200BB, 256KB in size.

After clearing the IMMO code, the ECU will perform self-learning with the first ignition cycle when a valid signal from immobilizer is present. Note that you need a valid signal from immobilizer system to start the engine!

Use the following pinout to DB9 Female connector:

DB9 Female Pin	ECU Connector	
1	В	28
2	В	29
3		
4	В	56
5		
6	А	66
7	А	39
8	В	26
9	В	30



ECU TYPE SIR	IUS 32	•	EEPROM
	00 00 00 00	00 00 00 00 00 00 00 00 00 00 00	A Read EEPROM
00000030 00 00 00 00000040 00 00	00 00 00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0F 0F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	Write EEPROM
00000060 00 00 00 00 00 00 00	10 00 00 00 00 00 00 00 00 00 00 00 FF FF FF FF	00 00 80 01 80 01 01 00 00 80 00 FF FF FF F0 08 02 59 1 BC BA	Clear IMMO code
00000090 F0 F0 000000A0 00 00	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10 00 00 00 00 00 00 00 00 00	EXTERNAL FLASH
000000C0 00 00 000000D0 00 00	00 00 10 30 00 00 00 00	Operation completed successfully	Read FLASH
000000F0 00 00 00000100 00 00	00 00 00 00 34 94 08 10 00 00 00 00	Turn Ignition OFF/ON!	Write FLASH
00000120 00 00	00 00 00 00 00 00 0C 09 00 00 00 00	ОК	
00000150 00 00	A8 D8 00 00 00 00 00 00 01 00 01 80	1. 00 00 00 00 00 00 01 80 00 00 01 80 01 80 01 80 00 80 00 00	
00000170 00 00 00000180 FF FF 00000190 FF FF	00 00 20 00 8F 8F FF FF	00 00 00 00 00 00 E6 0B 00 00	Load from file
000001A0 FF FF 000001B0 FF FF	FF FF FF FF	FF	Save to file
000001E0 FF FF	FF FF FF FF FF FF FF FF FF FF FF FF	FF FF	
000001F0 FF FF	FF FF FF FF	FF	× C Exit

# 4.7.5 SAFIR/SAFIR2/SFR200 using 35 or 55 pin connector

The Sagem Safir/Safir2 and Magneti Marelli SFR200 ECUs have a TMS374 internal MCU. The configuration data is 256 KB. For these ECUs you can read the configuration data of the TMS374, you can clear the IMMO code and the car can run with the cleared code if the immobilizer line is disconnected from the ECU. In this case the Immobilizer line for the 35 pin connector is pin 30 and for 55 pin connector – it is pin 37.

After clearing the IMMO code, the ECU will perform self-learning with the first ignition cycle when a valid signal from immobilizer is present. Note that you need a valid signal from immobilizer system to start the engine!



Use the following pinout to DB9 Female connector for 35 pin version:

Use the following pinout to DB9 Female connector for 55 pin version:



DB9 Female Pin	
1	2.18
2	
3	
4	11
5	
6	
7	48
8	38
9	1

ECU TYPE SAFIR	2/SFR200 🗸	EEPROM
00000010 00 00 00 1	1C 86 13 00 00 00 00 00 00 00 00 00 00U 00 00 00 00 00 00 00 00 00 00 00 00 EE	Read EEPROM
00000050 00 00 00	FF 00 FF 01 FE 01 FE 00 FF 00 00 00 00	Write EEPROM
00000070 7C 77 00 00000080 00 00 00	80 80 80 68 9D 72 5A 46 4F 4B 93 8D 76h.rZFOKv 00 01 E5 08 FF 00 00 00 00 00 00 F6 39 [w9 00 00 00 00 00 00 00 00 00 00 00 00	Clear IMMO code
000000A0 00 00 00 000000B0 00 00 00	ABRITES Diagnostics for Renault × ·····	EXTERNAL FLASH
000000C0 00 00 00 000000D0 00 00 00 000000E0 00 00 00	00 00 00 00 Operation completed successfully	Read FLASH
00000F0 00 00 00	Turn Ignition OFE/ON	Write FLASH
	ОК	
		Load from file
		Save to file
		×

# 4.7.6 SIM32

The Siemens SIM32 has a HD64F7055 MCU with 512KB FLASH. The configuration data is 2KB stored in 95160 EEPROM.

After clearing the IMMO code, the ECU will perform self-learning with the first ignition cycle when a valid signal from immobilizer is present. Note that you need a valid signal from immobilizer system to start the engine!

Use the following pinout to DB9 Female connector:



DB9 Female Pin	ECU Connector	
1	С	H4
2	С	D1
3	С	A4
4	С	B4
5	С	A3
6	В	J1
7		
8	В	G1
9	А	G1

### 4.7.7 IAW 6R.20/6R.30

The Magneti Marelli IAW 6R.20/6R.30 ECUs have a TMS370 MCU. The configuration data is 256 bytes inside the MCU. For 6R.20 you can read/write the configuration data while on 6R.30 you can read the configuration data and clear the IMMO code.

The car can run with the cleared code if the immobilizer line (pin 25) is disconnected from ECU. After clearing the IMMO code, the ECU will perform self-learning with the first ignition cycle when a valid signal from immobilizer is present. Note that you need a valid signal from immobilizer system to start the engine!

Use the following pinout to DB9 Female connector:



### 4.7.8 EDC17 Boot mode reading

The EDC 17 ECUs can be read by boot mode. You can read the Flash and configuration data.



They can also be saved to files and used later. They can be transferred and updated to other ECUs. Please note that the pinout connections are similar to the ones in the Abrites diagnostics for VAG EDC17 connections.

ECU TYPE	1	EDC	:17	в	00	т											•		EEPROM
0000000	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		^	
00000010	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Read EEPROM
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			
0000040	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Write EEPROM
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			
0000070	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Clear IMMO code
0800000		00							00	00	00	00	00	00	00	00		_	Clear IMMO CODE
00000090					Plea	se V	lait.										– 🗆 X		
0400000																			EXTERNAL FLASH
00000B0				00	Re	ading	FL	ASH,	plea	se v	vait.								
000000000				DO															Read FLASH
00000000				DO															
000000E0				DO			_	_											
000000F0				po															in the second
00000100				00	1			-											Write FLASH
00000110																	(		
00000120				00															
00000130				DO															
00000140				00	1	5 %	R	emai	ning	Time	e: 00	:04:	13				Cancel		
00000150		00	00	bo			_					_							
	00	00	00	00	00	00	00		00		00	00		00		00	•••••		
00000170	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00			Load from file
00000180	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			
	00	00	00	00	00	00	00	00	00	00		00	00	00	00	00			
000001B0			00	00	00	00	00		00		00		00			00			Save to file
000001C0					00	00	00		00		00		00			00			save to nie
		00	00	00	00	00	00	~~	00		00			00		00	••••••		
000001E0									00		00			00		00			X
	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		¥	

### 4.8 EDC 17 Specific functions

There are some EDC17 specific diagnostic functions available - injector coding and DPF regeneration.

#	All Units for	MEGANE/SCEN	1.			F	Protocol	DTC	
L	INJECTION (\$7	A)							
2	A.B.S. (\$01)								Previou
5	AIRBAG / PRET	ENSIONERS (\$	32C)						ricviou
в	AIR CONDITION	ING (\$29)							
9	AUTOMATIC GEA	RBOX (\$6E)							Ģ
12	GAS INJ. (\$79	)		DPF Reg	generation				Open
21	TYRES (\$08)								
25	SUNROOF CONTR	OL UNIT (\$10	:)	Injector Coding					1
65	SEAT MANAGEME	NT (\$2A)							Next
					lose				
		,			iose				
	Vehicle Selection	Special Functions	·						1
0	010110 110011 101000 0001/	1				60000	^	6	6
Key	Learning Dump Tool	Change ID F	PIN Calculator	Clio PIN by dump	Cluster Calibration	Read/Upda ConfData	te	Open	Option
	*	<b>C</b> 0	-						0
	Airbag ECU Flasher	Engine Control	EDC17				~		Exit

The injector coding function will allow you to read the injector codes, and write the new ones when an injector has been replaced for example. Take additional attention when writing the new values - there is a checksum inside the code and ECU will refuse to accept invalid codes.

ŧ	All Units for CAPTUR/Q	43	ine film des de	in the second	Protocol	DTC	-	
	INJECTION (\$7A)							
	A.B.S. (\$01)							Previo
	INSTRUMENT PANEL (\$51)							
	UCH (\$26)	Injector Coding			×			
	AIRBAG / PRETENSIONERS		Current	New				9
	AIR CONDITIONING (\$29)	Injector 1	AZ1CCSA	AZ1CCSA	Arrest			Oper
	AUTOMATIC GEARBOX (\$68	Injector 2	7P8GAS7	7P8GAS7	7			
0	COMMUNICATIONS UNIT (\$	Injector 3	8Y887W7	8Y887W	7			
в	VARIABLE P.A.S. (\$04)	Injector 4	8ZR1DEB	8ZR1DEB	3			Next
0	UPC (\$27)	<u> </u>	4	X				
1	/ehicle Selection	Read	Write	Exit	t		-	
0				Contra Contra	<b>^</b>	Ģ	7	
(ey	Learning Dump Tool Change ID		PIN by Cluster Imp Calibration	Read/Upo n ConfDa		Open		Option
	🖈 🖻							0
	Airbag ECU Flasher Engine Contr	ol EDC17			~			Exit

Before starting the procedure, please be sure that the vehicle is placed on non-flammable surface away form public places! It is recommended to observe the vehicle from a distance with a fire extinguisher on hand.

A AB	RITES Diagnostics for Renault	6.9		www.abri —		
#	All Units for CAPT	UR/QM3	Protocol	DTC		
1	INJECTION (\$7A)					
2	A.B.S. (\$01)	DPF Regeneration	>	<		Previous
3	INSTRUMENT PANEL (	The procedure can be paused by two short pres	ses of the			
4	UCH (\$26)	START-STOP button. To stop the procedure, turn IGNITION OFF for a During the procedure do NOT:	t least 1 munute.			
5	AIRBAG / PRETENSIO					6
8	AIR CONDITIONING (	- Press the brake pedal The operation takes 30 minutes.				Open
9	AUTOMATIC GEARBOX	Engine Speed	0 RPM			
10	COMMUNICATIONS UNI	Coolant temperature	0 °C			1
18	VARIABLE P.A.S. (\$	Turbo temperature	0 °C			Next
20	UPC (\$27)	DPF temperature	0 °C			
11	DADUTNIC DDOX CAN (				-	
<b>1</b>	Vehicle Selection 🕌 Special F		~	1	_ 1	
(	010110 110011 101000 9001/	Start	Cancel	G		
Key	Learning Dump Tool Cha		ConfData	Open		Options
	•					
	Airbag ECU Flasher Engin	e Control EDC17				
			*			Exit

Reading the CLIO IV/ Captur handsfree module:





#### NB!

Please note that the Male DB25 must be connected to the ABPROG which must be connected to the AVDI. Then you can read the handsfree module.

### 4.9 Renewal

The Abrites Diagnostics for Renault/Dacia offers the new "Renew" Special Function. It will allow you to renew Airbags, UCH, EPS and ESL. The "Renew" Function can be located under the main Special Functions list:

NOTATES DI	agnostics for F	Renault 7.3					www	.abrites —	>
Scan	ned Units	for MEGANE	III/SCENIC			Pr	otocol	DTC	
UCH	(\$26)					CI	N	12	
									Previou
									6
									Open
									Next
Vehicle Sel		pecial Functions							
		2				Cassille .	^	6	
<b>A</b>	010110 110011 101000 6603								
Key Learning	Dump Tool	Change ID	PIN Calculator	Clio PIN by dump	Cluster Calibration	Read/Update ConfData		Open	Option
ر دو Learning کې		Change ID		Clio PIN by		Read/Update ConfData		Open	Option

Once you open the "Renew" Special Function, a new Window will appear, letting you choose from four different options- Airbag, UCH, EPS and ESL:

Scan		for MEGANE					rotocol	DTC	
Scan	ned Units	IOT MEGANE	III/SCENI	5111		Pr	COTOCOL		
UCH	(\$26)					CF	AN	12	
						T			Previo
					Airbag				
				~	Airbag				6
				-	UCH				Ope
				Ð	EPS				
					]				Next
				1	ESL				
Vehicle Se	lection 👔 S	pecial Functions	1	×	Close				
(B)	010110	a	-	· .			<u>^</u>	6	
AL.	010110 110011 101000 8001	14		jadi a		00000		<b>\$</b>	3
ey Learning	Dump Tool	Change ID	PIN Calculator	Clio PIN by dump	Cluster Calibration	Read/Update ConfData	: [	Open	Option
	(Internet)	-		1					
- TP	265%		-	The second second					

After choosing the desired renewal function, you will be prompted to select the ECU of the car.

#### A AB Scanned Units for MEGANEIII/SCENICII) UCH (\$26) DTC ♠ ♣ X Options **\$** î 110011 100010 100000 -Ģ Cluster dump ead/Updat 6 S. $\bigcirc$ 0 Exit 0 -0220-



#### 3. EPS

1. Airbag

1 Sci								1	_		
. 190	anned Units	for MEGANE	III/SCENIC	III		Pr	otocol	DTC	_		# Sc
4 UCI	H (\$26)					cr	21	12	Previous	•	4 00
	Renew Elect	ronic Power Ste	ering					×	Open		
	Unit P.	Lease sel	lect an H	SCU				-			
	-						Cancel	]	Next		
📾 Vehide	e Selection 👔 Sa		]				Cancel	]			👄 Vehicle
P Vehide	01001100 1100011 1400000 88000	1	PIN Calculator	Clio PIN by dump	Cluster Calibration	Read/Update	^	) Open	Next		vehick

#### 4. ESL

	agnostics for R	lenault 7.3					WWW.	abrites –	
Scan	ned Units	for MEGANE	III/SCENI	2111		Pro	tocol	DTC	
UCH	(\$26)					CAN		12	Previou
	Renew Electr	ronic Steering (	Column Lock					×	
	Unit [P]	lease se	lect an	ECU			X	• 	-
🗟 Vehide Sel	lection 2 Sp	pecial Functions			•	<i></i>	^	ç	
<b>\$</b>	163505								
Key Learning	Dump Tool	Change ID	PIN Calculator	Clio PIN by dump	Cluster Calibration	Read/Update ConfData	l	Open	Option

Renewing the UCH will offers more options, which should be taken into consideration. After you make he renewal, you can also adapt the UCH by entering new VIN to the unit and new PIN. To make the renewal, the next steps can be followed.



#### 1. Open the UCH renewal and select an ECU

#### 3. The unit is renewed now



#### A # Scanned Units for MEGANEIII/SCENICIII Protocol DTC UCH (\$26) 12 evious G Open Unit UCE • Next at the section of Yes No tion 👫 Spe al Functions Change ID Options Clio PIN dump R 110010 G Open -Dump Tool Cluster Read/Update Calibration ConfData CU Flash 0 Exit 0 S EDC17 0 adio Con

#### 4. Make sure to have the original PIN code



To adapt the new UCH module, simply click on "Adapt" and enter the new VIN:

	Scanned Units	for MEGANEI	II/SCENICIII		Pro	tocol	DTC	
	UCH (\$26)				CAN		12	Previo
	_	(Body Control Mo		new Vehicle Identific		×	×	Ope
	Unit O	on megane					•	
	The unit is	Rene	VF1JZ090	347052420 Ок	Cancel		]	Nex
and and	The unit is	renewed pecial Functions	VF1JZ090	OK	Cancel	]		Nex

#### 2. Confirm with "Yes" after the warning



#### 1.Remove the key card and switch ignition OFF

#### 3. Insert the key card and switch Ignition ON



#### 2. Enter the original PIN



#### 4. Turn the ignition to OFF/ON



5. The operation has successfully completed and the new UCH is now adapted.



### 4.10 Radio Code

The Abrites Diagnostics for Renault 7.3 offers the "Radio Code" Special Function. It will allow you to adapt the radio if it was somehow reset. You need to have the last 4 symbols from the ID, which can be obtained in three ways:

On the back side of the unit you can find the code. In this case it is **Y135:** 



You can hold the radio buttons 1 and 6 for 3-4 seconds and the code should be automatically loaded on the radio display. The Twingo III car is an exception, where the code standard is different.

You can also click on the "Extended Identification of the radio when diagnosing the car and the code will be displayed as well.

Once you have the code, go to the "Radio Code" Special function and enter the code and calculate the radio code:



۰.	All Units for MEGANE/SCEN.	Protocol	DTC	
1	INJECTION (\$7A)			
2	A.B.S. (\$01)			Previo
5	AIRBAG / PRETENSIONERS (\$2C)			Freno
8	AIR CONDITIONING (\$29)			
9	AUTOMATIC GEARBOX (\$6E)			Ģ
12	GAS INJ. (\$79) Radio Code Calculator	×		Oper
21	TYRES (\$08)			
25	SUNROOF CONTROL UNIT (S Precode Y135	X		
65	DRIVER'S SEAT (\$2A) Radio Code 1823 Calculate	Cancel		Next
	Vehicle Selection 👔 Special Functions			
		^	Ģ	(
Key		d/Update onfData	Open	Option
	🕂 🚓 🏹 🚥 🚥			

# SAGEM SAFIR - SAFIR2 - SFR200 **2 2** 10 9 18 **35 PIN** 30 20 CAN 🜔 •

SAGEM SFR200

# 5. Connecting ECUs on bench using ZN051 Distribution Box

12V ALIM EXT

12V ALIM EXT

#### SAGEM SFR200





SIEMENS SIRIUS35

SIEMENS SIRIUS 35

С

A3 A4

в

A

SIEMENS SIM32

ALIM EXT





SIEMENS SIRIUS32N



12V ALIM EXT SIEMENS SIRIUS34 EMS3134



SIEMENS SIRIUS34 EMS3134







MM IAW 6R.20 6R.30



SIEMENS SID301



BOSCH EDC15 C13



ALIM EXT