



# Achieve the impossible

# Abrites or Jaguar/ Land Rover User Manual

Version: 1.1

www.ABRITES.com

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- 2. Using the Abrites diagnostic for Jaguar/ Land Rover
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## 1. Introduction

"Abrites Diagnostics for Jaguar/ Land Rover" is a Windows PC based diagnostic software for Jaguar/ Land Rover vehicles. With the help of this software you can perform complete diagnostic operations of all vehicles.

For proper operation of your diagnostic software you will need a corresponding interface for connection between your PC and vehicle named "AVDI".

AVDI is an interface produced by Abrites Ltd. intended to act as an interface between the PC and the electronic control units.

AVDI should be used with ABRITES software produced by Abrites Ltd.

#### ABRITES is a trade mark of Abrites Ltd.

ABRITES Diagnostics for Jaguar and Land Rover provides the user with the ability to perform dealer-level diagnostic functions, such as module identification, both basic and detailed, reading of diagnostic trouble codes (DTCs), clearing of DTCs and many others.

## 2. Using the Abrites diagnostic for Jaguar/ Land Rover

The Abrites diagnostics for Jaguar/ Land Rover is installed together with the rest of the Abrites diagnostic software applications as a part of the Abrites diagnostic suite provided to the user via e-mail. The user can start the software by clicking on the appropriate icon from the Abrites "Quick start" menu.

Once the Jaguar/ Land Rover icon is selected the software will start and the user will see the following screen:

A ABRI	TES Diagnostics for Jaguar / Land Rover 1.4	www.abrites.	com	
ID	< All Units >	Protocol	VIN DTC	*
733	(EATC) Electronic Automatic Temperature Co	CAN		
734	(HCM) Headlamp Control Module	CAN		
735	(NCM) Navigation Control Module	CAN		Previous
736	(PAM) Parking Aid Module	CAN		
737	(RCM) Restraint Control Module	CAN		
740	(DDM) Driver's Door Module	CAN		Open
741	(PDM) Passenger's Door Module	CAN		
742	(DRDM) Driver Rear Door Module	CAN		
743	(PRDM) Passenger Rear Door Module	CAN		
744	(DSM) Driver's Seat Module	CAN		Next
745	(BCM) Battery Control Module	CAN		
746	(DCDC) DC to DC Converter Control Module	CAN		
747	(ACDC-B) AC to DC Converter Module B	CAN		-
750	(FCCM) Fuel Cell Control Module	CAN		¥=
751	(TPM) Tire Pressure Monitor	CAN		Options
752	(CTCM) Coolant Temperature Control Module	CAN		-
•	m		۱	
😭 Ve	hicle Selection 🛛 👔 Special Functions 🛛 🔯 Options			Exit

This is the main screen of the software and it shows all the navigation buttons as well as the ones for vehicle selection, scanning and general diagnostic.

# 3. Standard Diagnostics

Standard diagnostics within the context of the Abrites diagnostics for Jaguar and Land Rover refers to functions such as device scanning for all the electronic control modules incorporated in the supported vehicles, reading of the identification data for all the modules, reading and clearing diagnostic trouble codes as well as service functions.

- Device scanning allows the user to connect to the electronic modules of the vehicle and see the identifications for the them, the amount of diagnostic trouble codes for each one as well as the VIN numbers assigned to the separate units.



### Once the scan is completed the details are displayed in the main window:

A ABRI	TES Diagnostics for Jaguar / Land Rover	www.abritus72.	com			
ID	Scanned Units - Range Rover Sport / L494	Protocol	VIN	DTC		
760	(ABS) Antilock braking system	CAN HS	SALWA2EF6EA010011	0		
792	(ATCM) All Terrain Control Module	CAN HS		0		
726	(BCM) Battery Control Module	CAN HS	SALWA2EF6EAJIJJII	1		Previous
764	(CCM) Central Control Module	CAN HS	SALWA2EF6EA015011	0	Ξ	
710	(CHCM) Chassis Control Module	CAN HS	SALWA2EF6EAC10011	1		
773	(CHCMB) Chassis Control Module B	CAN HS	SALWA2EF6EAC10011	0		Open
701	(GPSM) Global Positioning System Module	CAN HS	SALWA2EF6EA010011	0		
732	(GSM) Gear Shift Module	CAN HS	SALWA2EF6EA010011	0		
716	(GWM) Gateway Module A	CAN HS	SALWA2EF6EA010011	0		-
734	(HCM) Headlamp Control Module	CAN HS	SALWA2EF6EA010011	0		Next
720	(IPC) Instrument Panel Control Module	CAN HS	SALWA2EF6EA010011	0		
736	(PAM) Parking Aid Module	CAN HS	<u> </u>	0		
756	(PBM) Park Brake Control Module	CAN HS	SALWA2EF6EA010011	0		024
7E0	(PCM) Powertrain Control Module	CAN HS	SALWA2EF6EA010011	0		() ()
730	(PSCM) Power Steering Control Module	CAN HS	SALWA2EF6EA010011	1		Options
737	(RCM) Restraint Control Module	CAN HS	SALWA2EF6EA010011	0	+	
•	III			•		
😑 Ve	hicle Selection 🛛 🙀 Special Functions 🛛 🖗 Options				_	Exit



#### - Diagnostic trouble codes and live data monitoring

When the initial connection with the vehicle is established the user can select an electronic module and enter by clicking over it. In the following screen the full identification of the module can be displayed. Also the DTCs will be shown together with the live data from the vehicle.

🐼 730 ( PSCM ) Pov	ver Steering Control	Module	Ingenti Wegebergten 3									
	Cs found! 4:16-68 Electration Circuit Volta Circuit Volta DTC test is DTC test is DTC test is Confirmed I DTC test co Test Failed	conic Power As ge Below Three s not failed a s not failed t t failed on th OTC ompleted since d Since Last C ompleted This	shold at time of request this monitoring cycle the current or previous monitorin the last code clear Clear Monitoring Cycle	g cycle	16	- III						
₩ 51 ₩ 51 ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ 	Test Not Completed This Monitoring Cycle DTC does not request warning indication Status byte Snapshot Data Status Data Stat											
Identification	Clear DTCs	ECU Reset		Clear log	Write log							
Read DTCs	Data Display				Close							

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- Performing service functions for the Jaguar/ Land Rover vehicles

This function allows the user to complete the process of the vehicle service or maintenance by registering their modification into the vehicle's ECUs. This functionality also allows the calibration of modules, and testing on them.

I Land Rover / 2014 / Range Rover Sport / L494/ 5.0L OHC SGDI SC V8 GAS- AJ133 - Service Functions	
Battery - Battery replacement	<b></b>
Battery - Battery replacement	<u>E</u> xecute
Battery - Battery replacement 2	
Running board control module - Service mode enabled	
Running board control module - Service mode disabled	
Body systems - Driver's side - Door glass window calibration	
Body systems - Passenger's side - Door glass window calibrati	
Body systems - Valet mode reset	
Parking brake - Longitudinal accelerometer calibration.	
Parking brake - Parking brake activation	
Parking brake - Parking brake pad replacement - Release to se	
$\checkmark$	Close

# 4. Special Function Key learning

"Key learning" is a function dedicated to the learning of keys to Jaguar/ Land Rover vehicles by the On Board Diagnostics port (OBD).
The vehicles currently supported by this function are described below:
Land Rover:
Evoque (L538) - 2011- 2014
Range Rover Sport (L494) - 2013- 2014
Range Rover (L405) - 2012 - 2014 (incl.long wheel base)
Discovery LR4 - 2010-2014
Freelander 2 (L359) - 2006-2014
Jaguar:
F-Type Convertible and Coupe 2013-2014
XF (X250) - 2007 - 2014
XJ (X351) - 2010 - 2014
XK (X150) - 2010 - 2014

The procedure for key learning should start after a diagnostic connection to the vehicle is established and the icon for it is clicked.

The first step is to select the vehicle and the requested operation:

💦 Key Learning	a tan har ti anata tan	
Vehicle		🖌
Brand	Land Rover	Execute
Model	2014 Range Rover Sport / L494	
Engine	5.0L OHC SGDI SC V8 GAS- AJ133	
TAI3		
Operation	(PATS) information	
	(PATS) information	
	Ignition Key Programming	
	Ignition Key Code Erase	
	Module Initialization	
	Program Smart Key	
	Erase All Smart Keys	
	Steering Lock Unit Programming	
1		×
		Close

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After that the software will start the on screen guidance. Please follow the steps and place the key in the ignition and set it to the **ON** position:

Land Rover/2014/	Range Kover Sport / L494/ (null) - Key learning Smart Key	STOP								
	PORTANT INSTRUCTIONS	<u>Stop</u>								
	Close all vehicle doors									
	Switch the ignition ON.									
	Press OK to continue.									
	ABR									
	Dk Cancel									
300 - C		Back								

Again, the steps are shown in the message boxes on the screen.

S Land Rover /	/ 2014 / Range Rover Sport / L494/ (null) - Key learning										
Prog	gram Smart Key	STOP									
- 1	MIMPORTANT INSTRUCTIONS	Stop									
	Switch the ignition OFF. Remove key from ignition switch.										
	Press OK to continue.										
	ABr										
	Ok   Cancel										
N. S.		Back									

The software will perform the key calculation and provide detailed information about all the steps

🐘 Ke	y Learning	
	Erase All Smart Keys	
BCM	03 SECURITY ACCESS GRANTED.	STOP
BCM	21 SECURITY ACCESS GRANTED.	Stop
BCM:	3F SECURITY ACCESS GRANTED.	<u> </u>
BCM:	2038: Ignition ON Success	
BCM	7001 Steering Column lock Power on Success	
BCM	c124 04046c04	
PCM:	Type 5 found.	
IPC	Type 1 found.	
AKE	03 SECURITY ACCESS GRANTED.	
AKE	: 09 Security Access Denied	
AKE	11 SECURITY ACCESS GRANTED.	
AKE	Type 3 found.	
AKE	8004 Check all Learned Keys Success	
AKE	Number Of keys: 2 / 2	
AKE :	KeyNo 0 FC9AAC 33	
AKE	KeyNo 1 8F21BE 33	
AKE	8005 Check Transceiver Communication Success	
AKE :	8006 Check all antennas	
2	ŧ	

Once the calculation is completed the software will inform you about that and will ask you if you would like to program the key.



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# 5. Special Function Cluster calibration

Cluster calibration is a function dedicated to the calibration of electronic units after an exchange with a used unit. Please note that the calibration needs to be done in coordination with local laws.

Vehicles supported for cluster calibration include but are not limited to: Land Rover: Evoque (L538) - LL and HL July 2011- 2014 (2dr and 4dr) Range Rover Sport (L494) - 2013- 2014 Range Rover (L405) -2012 – 2014 (including long wheel base models)

Jaguar: F-Type Convertible and Coupé 2013-2014 XF (X250) - 2007 – 2014 XJ (X351) - 2010 – 2014 XK (X150) - 2010 – 2014

The procedure for cluster calibration should start after a diagnostic connection to the vehicle is established and the icon for it is clicked.

1. Select the Electronic Control Unit that needs to be calibrated and click "read":



2. Input the appropriate value in the "new" window and press update:



3. Confirm that the correct value is set and close the window:



**6. Special Function NV DATA** This function is used for reading, saving and updating of the Configuration data of the modules within Jaguar and Land Rover vehicles. It is particularly useful for cases where module exchange is required.

4	Read	d / Up	date	Con	figur	ation	n	-	*	-								-				
E	CU	(	AC	M)	) A	ud	io	Co	nti	rol	M	odu	ıle							-		
	00000	0470	01	8E	08	8E	08	4F	F3	01	94	01	94	01	94	01	94	01	0		•	Read Config
	00000	0480	94	01	8E	08	8E	08	4F	F3	01	94	01	94	01	94	01	94	0			
	00000	0490	01	94	01	09	74	09	74	09	74	FF	FF	FF	FF	FF	FF	93	t.t.t			
	00000	04A0	2A	F4	93	2A	F4	93	2A	F4	39	86	AD	0C	C0	в2	8C	28	***.9(			🛯 🖌
	00000	04B0	3C	84	39	86	AD	0C	C0	в2	8C	28	3C	84	39	86	AD	0C	<.9(<.9			Update Config
1	00000	04C0	C0	В2	8C	28	3C	84	39	36	12	39	36	12	39	36	12	1A	(<.96.96.96			
11	00000	04D0	4C	8B	1A	4C	8B	1A	4C	8B	C1	в8	D6	C1	в8	D6	C1	в8	LLL			
	00000	04E0	D6	84	BF	9E	84	BF	9E	84	BF	9E	C3	A0	07	C3	0A	07	•••••			
11	00000	04F0	C3	A0	07	10	E8	70	10	E8	70	10	E8	70	3D	51	6F	3D	pp=Qo=	-	-	Load from File
	00000	0500	51	6F	3D	51	6F	0D	2A	D3	0D	2A	D3	0D	2A	D3	<b>A</b> 0	<b>A</b> 0	Qo=Qo.***	_		
	00000	0510	A0	29	29	29	7E	6C	72	78	72	0B	18	0B	18	0B	18	0B	.)))~lrxr			
	00000	0520	18	0B	7E	6C	72	78	72	0B	18	0B	18	0B	18	0B	18	0B	~lrxr			Save to File
	00000	1530	7E	6C	72	78	72	0B	18	0B	18	0B	18	0B	18	0B	7F	6D	~lrxrm			
	00000	0540	7F	61	72	61	18	78	72	7F	6D	0E	10	AO	11	09	10	7F	.ara.xr.m			
	00000	1550	6D	7F	61	72	61	18	78	72	7F	6D	0E	10	AU	11	09	10	m.ara.xr.m			
	00000	1560	/F	6D	7F	61	72	61	18	78	72	7F	6D	0E	10	AU	11	09	.m.ara.xr.m			
	00000	1570	10	42	42	42	FF	FF	FF	2E	2E	2E	FF	FF	FF	00	00	00	.BBB			
	10000	1580	00	00	00	00	00	00	14	14	14	01	01	00	00	00	00	00	•••••			STOP
		1230	00	22	70	00	00	22	20	00	00	22	70	00	00	00	00	00	2			
		DAC	00	33	72	81	70	33	72	81.	70	33	12	81	20	33	12	99	.3r.p3r.p3r.p3r.			Stop
		1280	28	33	20	99	28	33	20	99	28	28	38	28	38	28	38	28	(3r.(3r.((;(;(;(;			
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	1		nae	h	+ -	-																X
	V	40	000	D.	yte	5																Close
L																						CIOSE

# 7. Special Function Flash

Special Function Flash is used in the cases where the flash file of a module within the vehicle needs to be read, saved or updated. It is used for module replacement as well as flash tuning.

🧼 Fla	ish				-	-	-	-	-	۰.						-	-	and the second second	l	
ECU	(	PC	м)	P	ow	ert	ra	in	Co	nt	rol	. м	odı	ıle				•	] [	
000	003F0	80	59	59	59	1A	E6	EC	E2	8F	61	3B	F6	26	23	87	CD	.YYYa;.&#		Read FLASH
000	00400	00 3B	3B E6	13 88	B7 87	45 4A	EC AF	82 F2	59 3A	59 1B	59 84	1A 3B	E6 F6	EC 26	E2 23	8F 87	5F CD	.;EYYY :J:	Ē	
000	00420	00	3в	13	в7	45	EC	82	59	59	59	1A	E6	3A	E3	E2	8F	.;EYYY:		- SZ
000	00430	63	6C	82	20	07	EE 07	80	80 80	6E 23	80 73	20 86	86 26	20	7F 87	CC	00	cln	L	Write FLASH
000	00450	3B	13	в7	45	EC	80	59	59	59	1A	E6	A6	84	в7	01	87	;EYYY		<b>(</b>
000	00460	AC	E2	23	15	22	50	F6	26	23	87	CD	00	3B	13	В7 22	45	#."P.&#;E</td><td></td><td>Load from File</td></tr><tr><td>000</td><td>00470</td><td>CD</td><td>00</td><td>3B</td><td>39 13</td><td>59 В7</td><td>45</td><td>EC</td><td>82</td><td>£2 59</td><td>23 59</td><td>19 59</td><td>зв 1А</td><td>гю Е6</td><td>Z6 EC</td><td>23 E2</td><td>23</td><td>;EYYY#</td><td></td><td></td></tr><tr><td>000</td><td>00490</td><td>17</td><td>3B</td><td>E6</td><td>88</td><td>87</td><td>4A</td><td>AF</td><td>F2</td><td>3A</td><td>1B</td><td>84</td><td>3B</td><td>F6</td><td>26</td><td>23</td><td>87</td><td>.;J:,.&#.</td><td></td><td></td></tr><tr><td>0000</td><td>004A0 004B0</td><td>23</td><td>00 1B</td><td>3B 6C</td><td>13 82</td><td>в/ 20</td><td>45 07</td><td>EC EE</td><td>82 80</td><td>59 08</td><td>59 6E</td><td>59 80</td><td>1A 20</td><td>£6 86</td><td>3A EC</td><td>E3 82</td><td>E2 1B</td><td>#.ln</td><td></td><td>Save to File</td></tr><tr><td>000</td><td>004C0</td><td>85</td><td>31</td><td>30</td><td>3D</td><td>34</td><td>35</td><td>1в</td><td>97</td><td>69</td><td>84</td><td>F6</td><td>26</td><td>23</td><td>87</td><td>16</td><td>59</td><td>.10=45i&#Y</td><td></td><td></td></tr><tr><td>000</td><td>004D0 004E0</td><td>48 11</td><td>00 85</td><td>01 1C</td><td>00 85</td><td>06 27</td><td>85 86</td><td>32 A0</td><td>84 6A</td><td>E5 81</td><td>84 B6</td><td>F0 2A</td><td>84 F2</td><td>FB 6A</td><td>85 80</td><td>06 20</td><td>85 48</td><td>H2 'i*.i. H</td><td></td><td></td></tr><tr><td>000</td><td>004F0</td><td>86</td><td>8C</td><td>6A</td><td>81</td><td>в6</td><td>2A</td><td>F3</td><td>6A</td><td>80</td><td>20</td><td>3D</td><td>86</td><td>90</td><td>6A</td><td>81</td><td>в6</td><td>j*.j. =j</td><td>_</td><td></td></tr><tr><td>000</td><td>00500</td><td>2A 27</td><td>F3 86</td><td>6A 88</td><td>80 63</td><td>20 81</td><td>32 86</td><td>86 21</td><td>88 F0</td><td>6A</td><td>81 80</td><td>B6 20</td><td>2A 1C</td><td>F3 86</td><td>6A 8C</td><td>80 63</td><td>20 81</td><td>*.j. 2j*.j.</td><td></td><td>STOP</td></tr><tr><td>000</td><td>00520</td><td>в6</td><td>2A</td><td>F1</td><td>6A</td><td>80</td><td>20</td><td>11</td><td>86</td><td>8C</td><td>6A</td><td>81</td><td>в6</td><td>2A</td><td>F1</td><td>6A</td><td>80</td><td>.*.jj*.j.</td><td></td><td>Stop</td></tr><tr><td>000</td><td>00530</td><td>20</td><td>06</td><td>86 CD</td><td>01</td><td>6A 219</td><td>84</td><td>20 P7</td><td>00</td><td>E7 EC</td><td>84 52</td><td>18</td><td>26</td><td>01 2P</td><td>5B</td><td>F6</td><td>26</td><td>j&.[.&</td><td></td><td></td></tr><tr><td>0000</td><td>00550</td><td>87</td><td>CD</td><td>00</td><td>3B</td><td>13</td><td>в7</td><td>45</td><td>EC</td><td>EC E2</td><td>23</td><td>17</td><td>3B</td><td>5B F6</td><td>26</td><td>23</td><td>87</td><td>*;E#.;.&#.</td><td></td><td></td></tr><tr><td>000</td><td>00560</td><td>CD</td><td>00</td><td>3B</td><td>13</td><td>в7</td><td>45</td><td>EC</td><td>E2</td><td>23</td><td>15</td><td>4A</td><td>AF</td><td>F2</td><td>3A</td><td>1B</td><td>84</td><td>;E#.J:</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>4</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Γ</td><td>×</td></tr><tr><td><math>\checkmark</math></td><td>13</td><td>310</td><td>72</td><td>by</td><td>te</td><td>s</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Close</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td>_</td><td></td><td></td><td></td><td></td><td></td><td></td><td>L</td><td>CIUSE</td></tr></tbody></table>		

# 8. Special Function "Immo Advance

The "Immo Advanced" special function allows the user to write the transponder ID and the secret key ID in the car's BCM.

After that you the engine can be started with a key and moved to an emergency slot. The keyless start of the engine won't be possible. Writing in the KVM (Keyless Start Module) is also not possible. If the KVM is locked, writing by OBD won't be possible as well.

1. Select the mod	2.	. Keys scre		
Model Selection	— 🗆 🗙 📲 Ke	Key Learning		×
Vehicle Brand Land Rover Model 2014 Range Rover Sport / L494 Engine 4.4L DOHC DITC V8 DIESEL 260PS	• • • • • • • • • • • • • • • • • • •	Keys         %         %         Ignition           ID         Key1         00000000           ID         Key2         00000000           ID         Key3         00000000           ID         Key4         00000000           ID         Key5         00000000           ID         Key5         00000000           ID         Key5         00000000           ID         Key7         00000000		
Select	K Close	ID Key8 0000000 Window Ship 726 BCM Read Write 731 KVM Read Write	Clo	se se

#### 3. SK Scre

Key Learning			×	1
👔 Keys 👔 SK 👔 👔 Ignition				1
SK 000000000000000000000000000000000000				
726 BCM Read Write				
731 KVM Read Write				
	Г	~		
$\checkmark$		Clee	20	1

#### 4. Ignition Scre

1	Key Learning			×
P	Keys 🚰 SK. 🔐 Ignition			
	Touch the key at emergency slot and press START button.			
	Ignition			
		_		
0	1		X	
			Close	