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Abrites Diagnostics for Nissan/Infiniti
User Manual

Version: 5.7

www.ABRITES.com

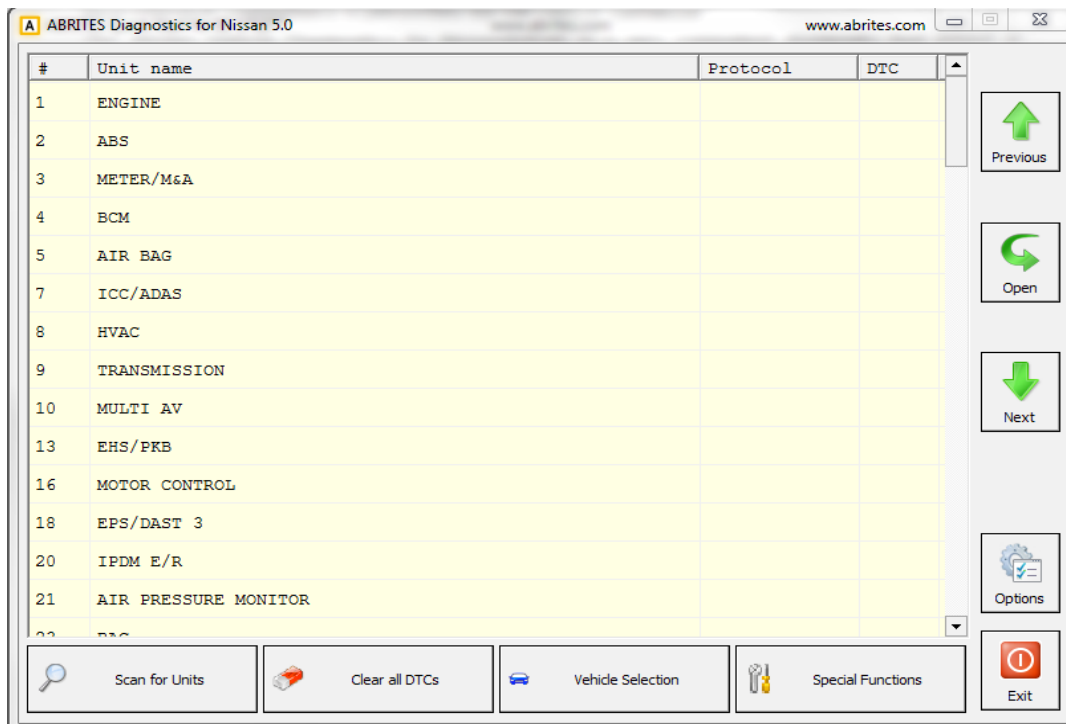| List of Revisions				
Date	**Chapter**	**Description**		**Revision**
24.06.2009		Initial version of the document.		2.0
01.06.2013	all	Revised, updated, renewed		4.2
02.03.2014	all	Revised, updated, renewed; design update; structural and content changes		4.3
02.10.2015	all	Revised, updated		4.5
22.07.2019	all	Revised, updated. Diagram for ESL emulator added.		4.5

1. Introduction

"ABRITES diagnostics for NISSAN/ Infiniti" is a Windows PC based professional diagnostic software for vehicles from the NISSAN group. With the help of this software you can perform complete diagnostic operations of all 2000-present vehicles from the NISSAN group, which are in most cases unsupported by other diagnostic testers manufacturers. The "ABRITES diagnostics for NISSAN" also provides complete standard diagnostics (read faults, erase faults, current data, actuator tests) for NISSAN vehicles. Our PC USB diagnostic interface supports K-Line and CAN-BUS interface. Diagnostics is performed via the OBD-II connector.

The Abrites Vehicle Diagnostics for Nissan/Infiniti is a very competent diagnostic tool aimed at professionals looking for a multipurpose tool that fulfills all their needs in one place. All Abrites diagnostic software applications provide an unmatched, dealer level diagnostics, previously available to the OEM services only.

2. Standard Diagnostics

-The "Standard diagnostic functions" of the software include three separate diagnostic protocols (K-line, CAN and UDS). This provides all the versatility that you may need from
a tool. Using these three protocols allows you to work on almost all the cars produced by Nissan/Infiniti due to the fact that the manufacturer often combines various modules using different communication protocols in one vehicle.
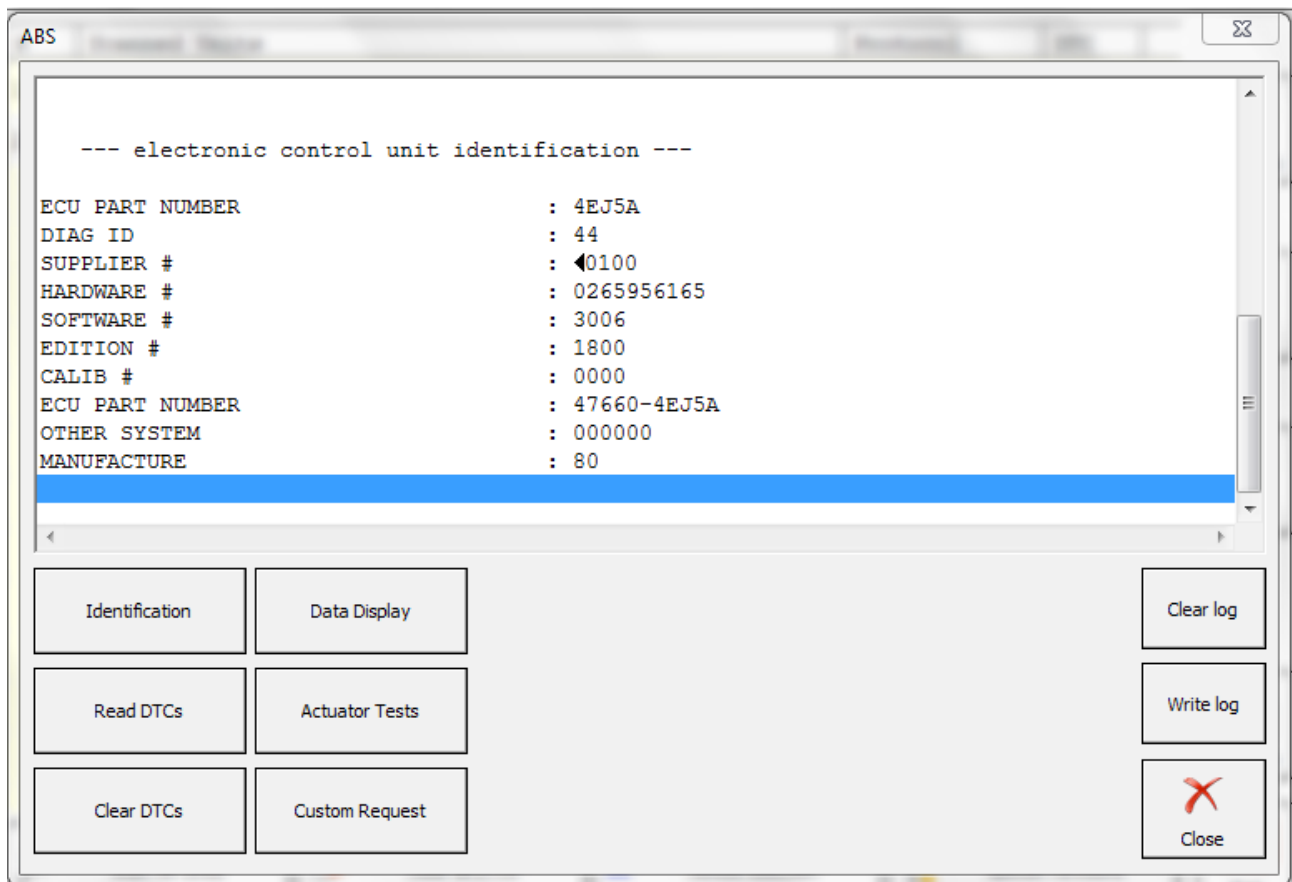- Also included in the standard diagnostics is the reading and clearing of Diagnostic Trouble Codes (DTCs) - this allows for the DTCs to be deleted after correcting the fault, thus enabling the vehicle to restore its normal operation.
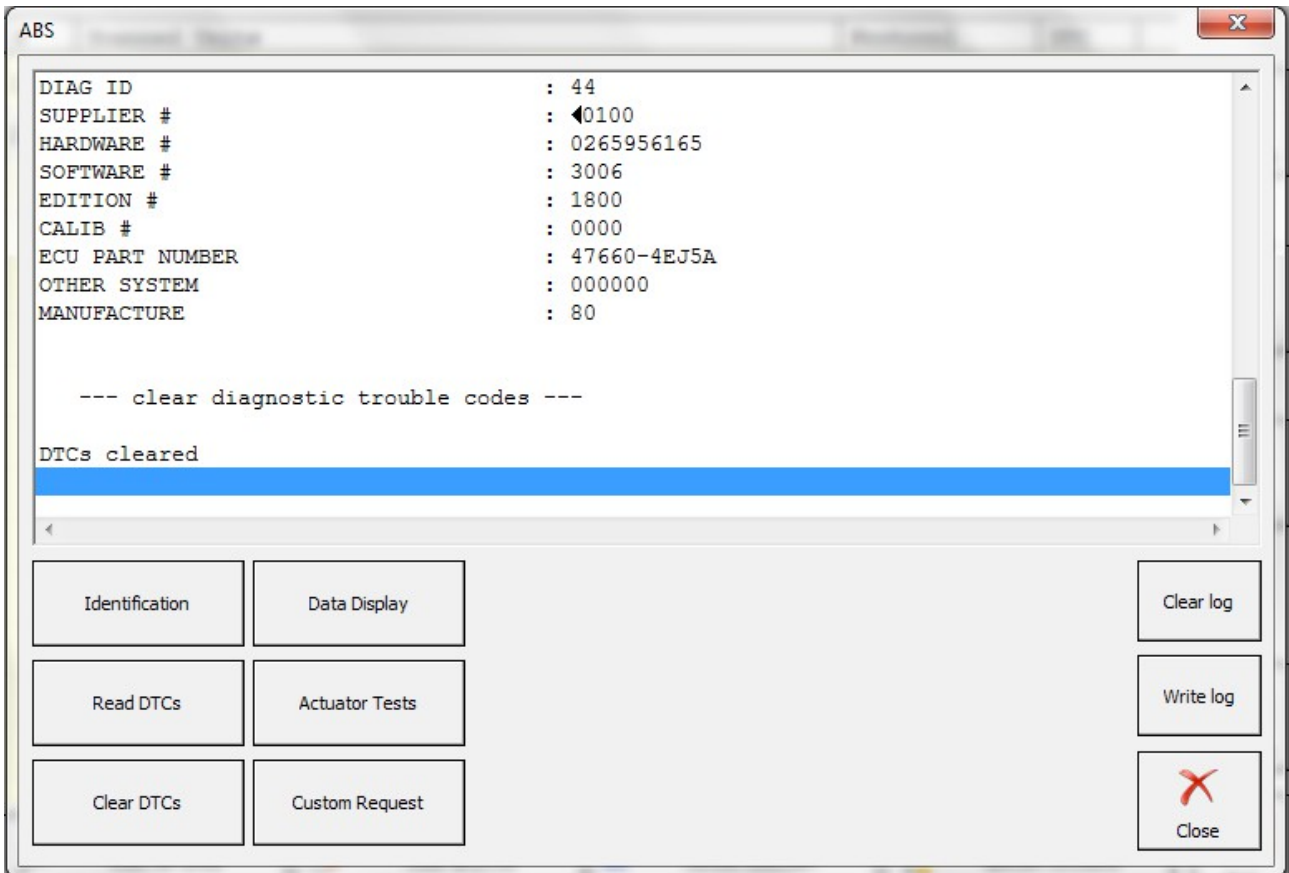
The above is the

2.1 Module Identification

In order to perform module identification you need to select the module from the main diagnostic screen (shown above). Afterward you need to double click in the module and a new screen with the available options will be displayed. The first option from the list will be to perform module identification on the selected electronic module.
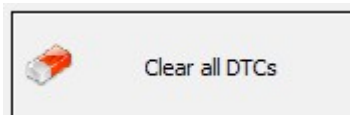
2.2 Reading and clearing of Diagnostic Trouble Codes (DTC)

From the main screen you need to enter the module and select it, Once you select the module you can choose the "Read DTCs" option. This will allow you to see all the diagnostic trouble codes for the module. Afterward you can remove the cause of the issues and press the "Clear DTCs" button.
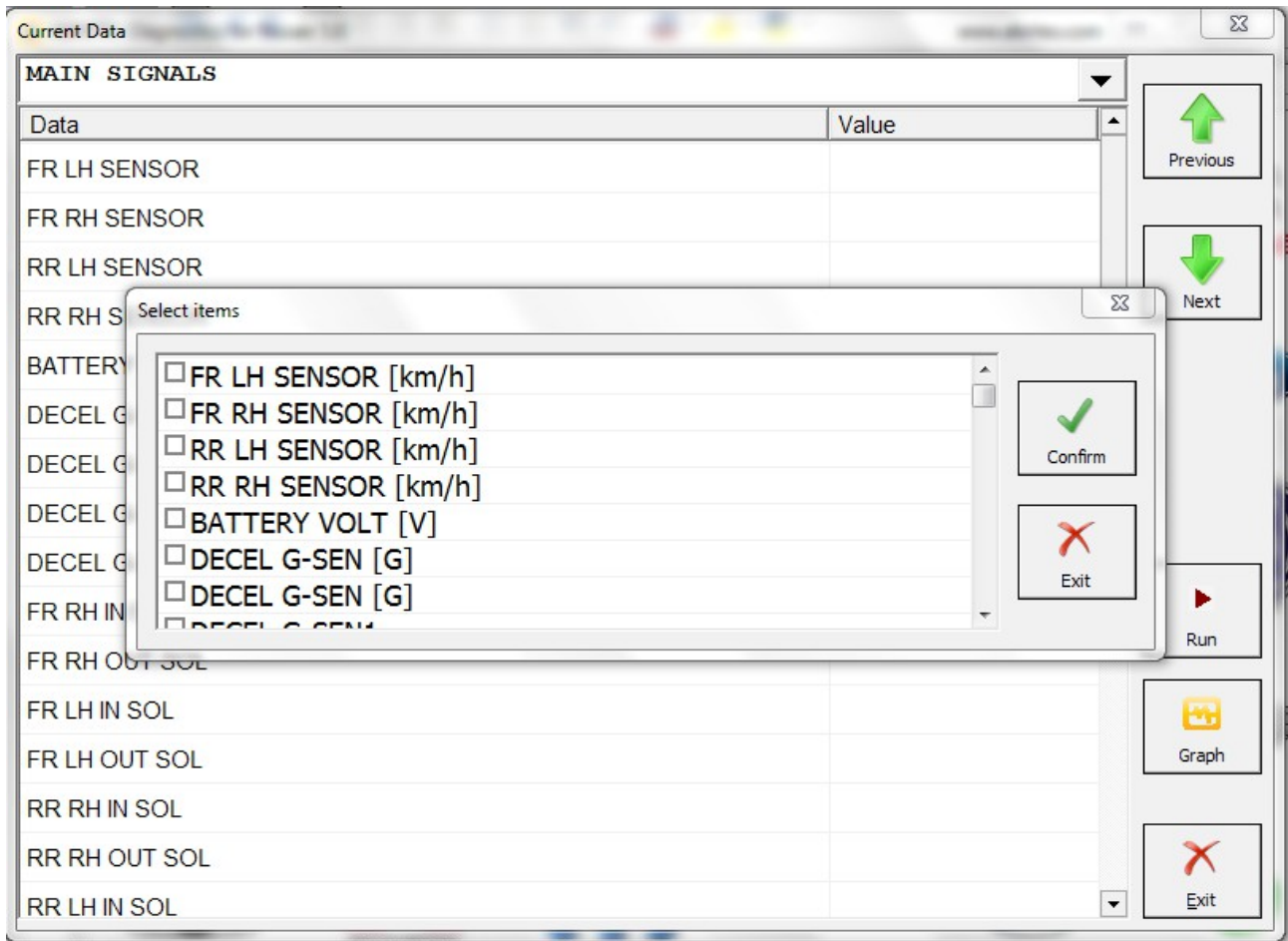

This procedure applies to the selected module. In case you would like to remove all the DTCs from the vehicle's electronic modules you could press the "Clear All DTCs" button from the main diagnostic menu.
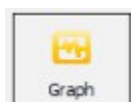
2.3 Live data values

When an electronic control module is selected you can also select to view the live data values from the sensors connected to each ECU. This allows to perform detailed diagnostics and analyze the behavior of the vehicle in real time. The values can be viewed in a list form, as well as a graph.
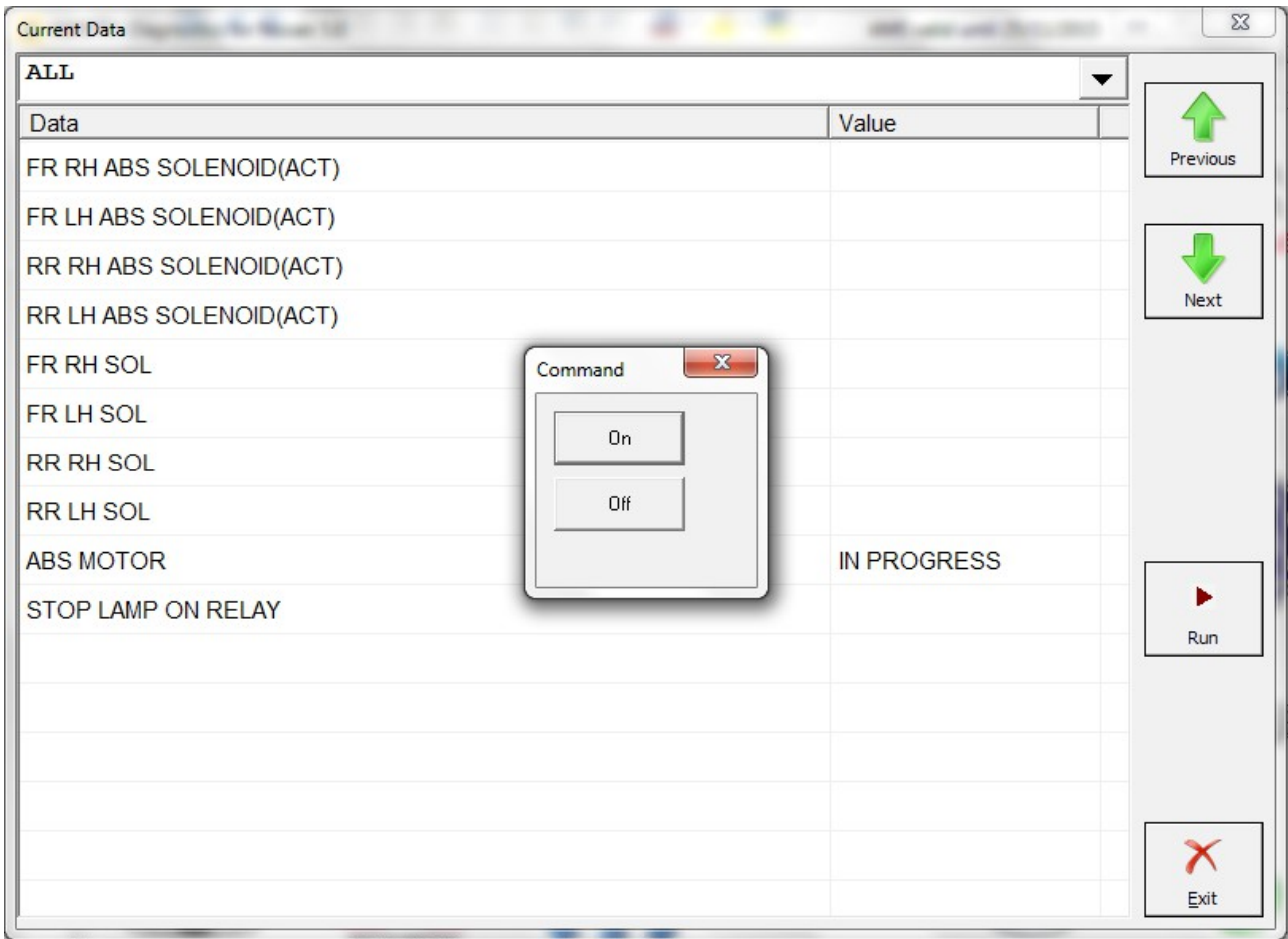

If you would like to see the details about the vehicle in a graph you can select the graph button on the right of the screen:

2.4 Actuator Tests

Actuator testing is very important when a fault within the vehicle needs to be fount, the option can also be used when enabling or disabling features on the vehicle.
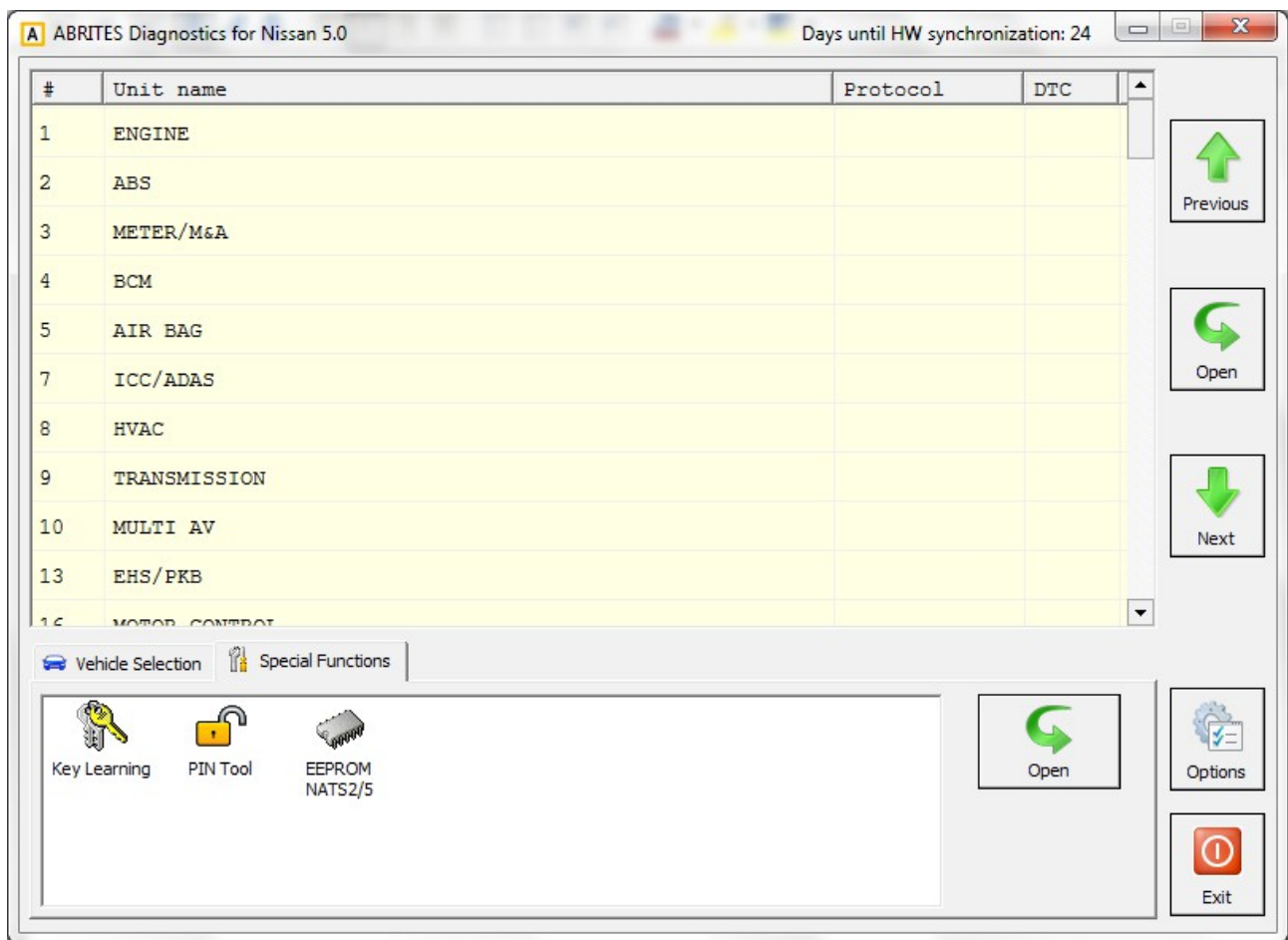

From the list of items that is displayed when selecting the "Actuator Tests" button you can select the appropriate actuator and perform the test needed. As an example you can see that the ABS motor is being tested.
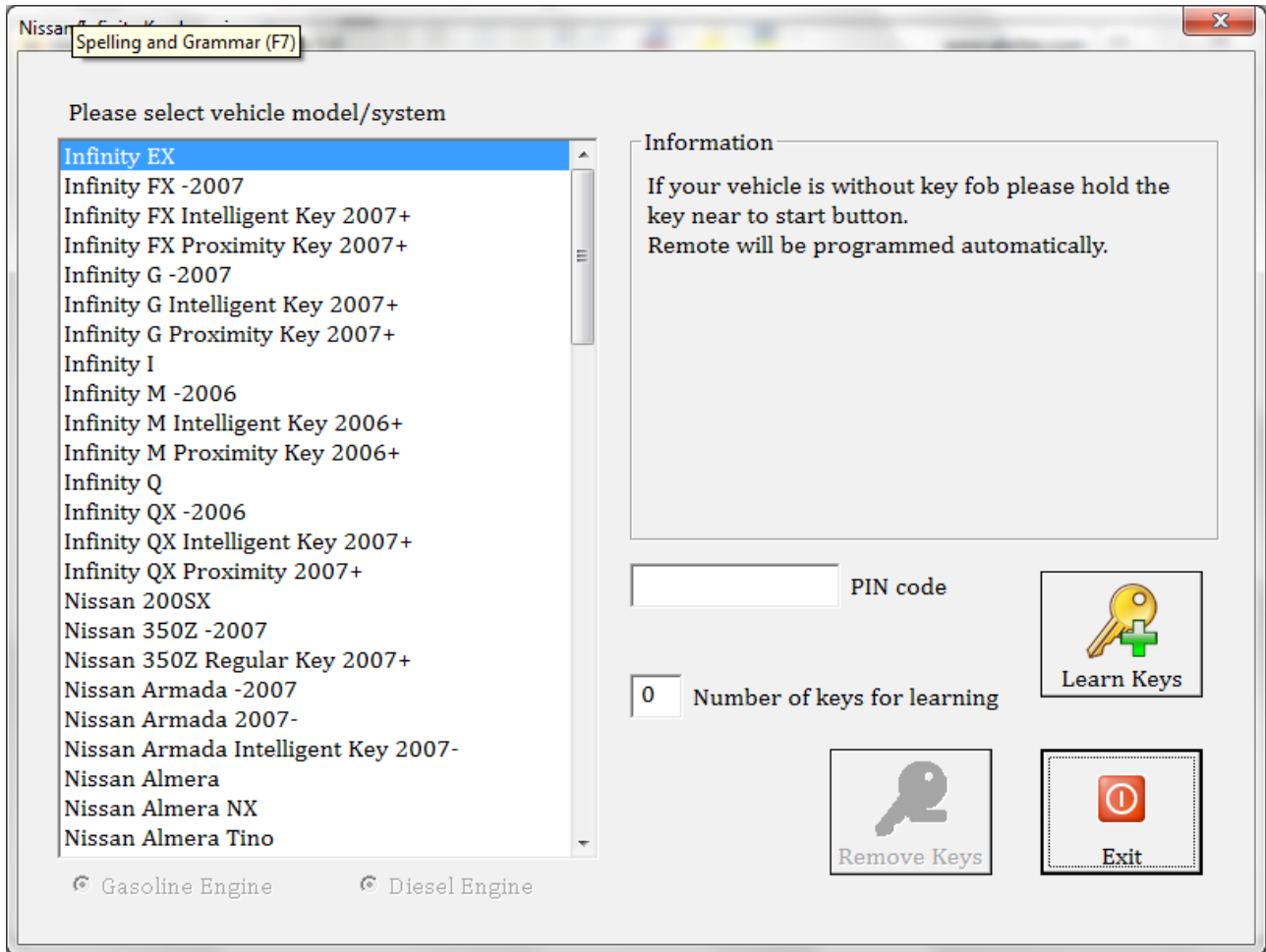
3. Special Functions

Abrites Diagnostics for Nissan/ Infiniti provides a list of special functions that apply to performing advanced diagnostics such as PIN code extracting and key learning for Nissan and Infiniti vehicles.

From the main screen of the software you can select the "Special functions" tab and see the available special functions:

3.1 Key learning

This function allows you to perform key learning of Nissan vehicles with Immobilizer systems – NATS-2, NATS-4, NATS-5, NATS5+.
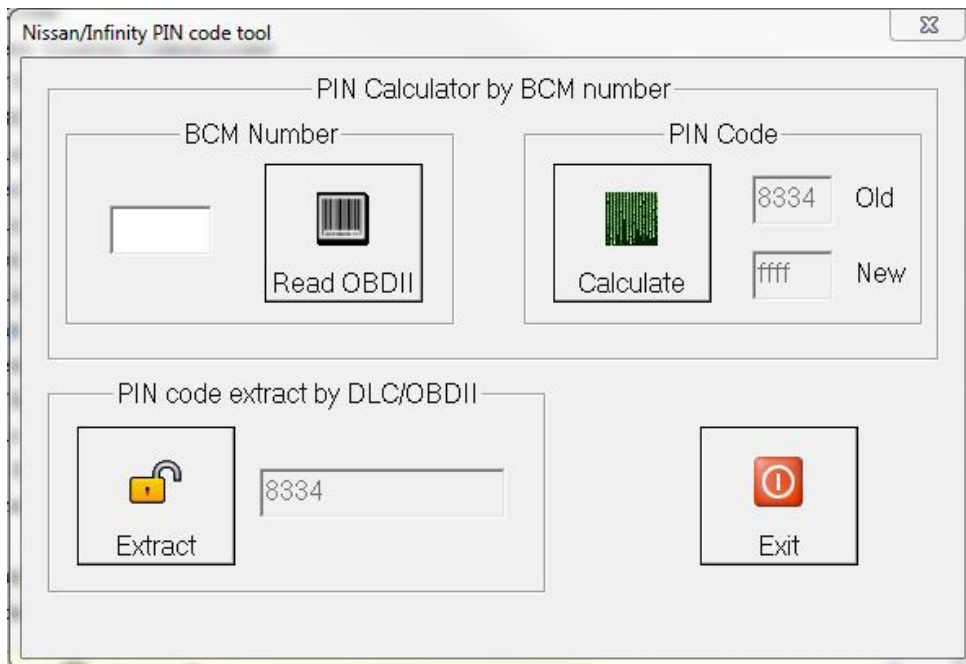

After the vehicle is selected the PIN code must be entered, as well as the number of keys to be learned and then you need to press the "Learn keys" button.

3.2 PIN Code

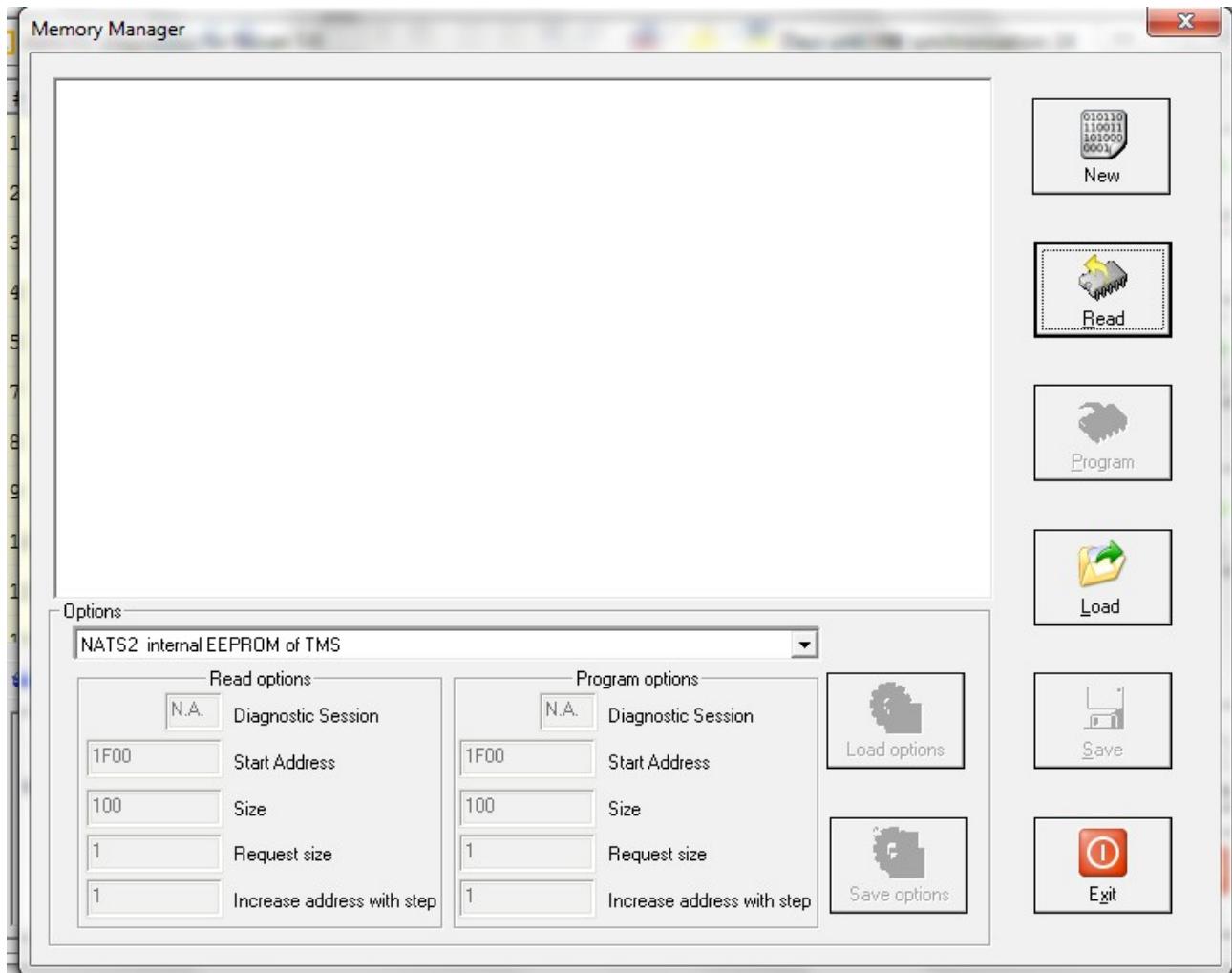The PIN Code function allows the reading of the PIN CODE from the immobilizer.

The function also allows for the PIN code to be calculated.

3.3 Configuration Data NATS Memory Manager

This function allows you to read the Configuration data from the Nissan Anti Theft System

(NATS). It will allow you to read the data, save it to a file on your computer in order to use it later,

update it back to the vehicle. This function is very useful when these operations are required.

This is the main screen of the function when it is selected:

- When pressing the "read" button the Data will be displayed.

- The "New" button has the ability to create a new conf data file.

- "Program" updates the file to the NATS system.

- "Save" saves the conf data file locally on your computer.

4. Pinouts

Here you can find the Pinouts of the NATS immobilizer modules for the cases when they need to be connected on a bench.

The version of the NATS can be determined by the label on the immobilizer unit itself.

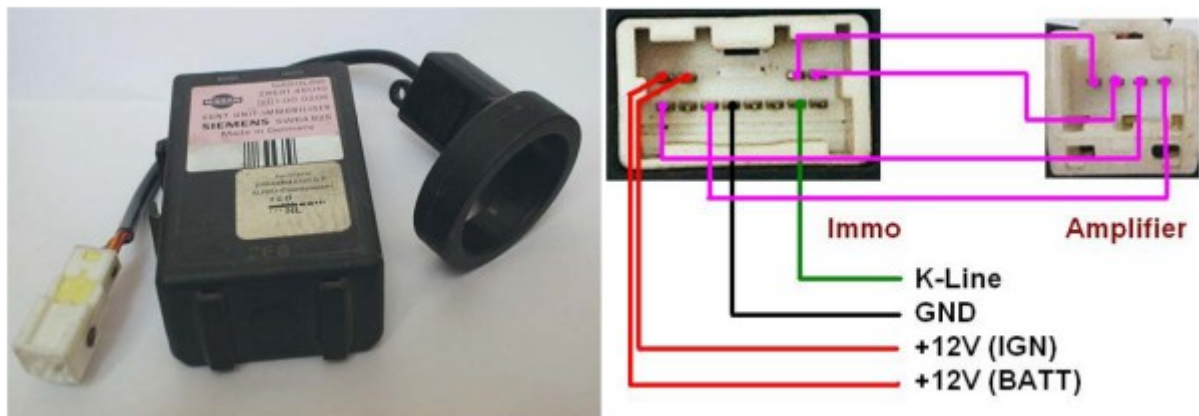**- NATS 2 Siemens:**

Immobilizer version:

5WK4593, 5WK4640, 5WK46472, 5WK4825, 5WK48642

Vehicle models:

NISSAN MICRA (K11) 1997
NISSAN Primera W/P10 1991-1996
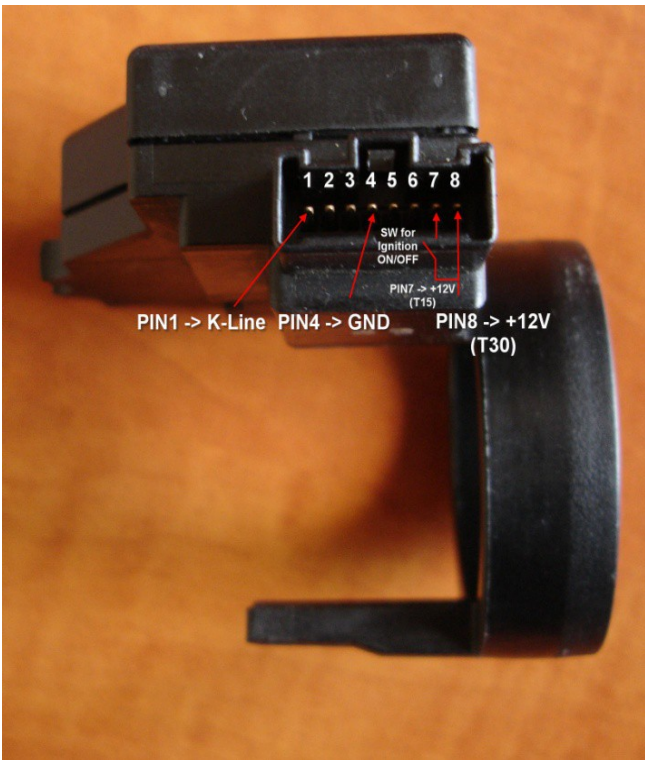NISSAN Maxima QX (A32) Schalter V 6 2,0ltr – 1995-2000

-NATS 4 Siemens:

Immobilizer version:

5WK4738, 5WK4750, 5WK4803, 5WK48543A, 5WK48543B, 5WK48692.

Vehicle models:

NISSAN Micra MY 1998-2000
NISSAN Primera MY 2000-2003
NISSAN Almera MY 1998-2000

When connecting the NATS on a bench you need to keep in mind that the following is the Pinout of the AVDI:

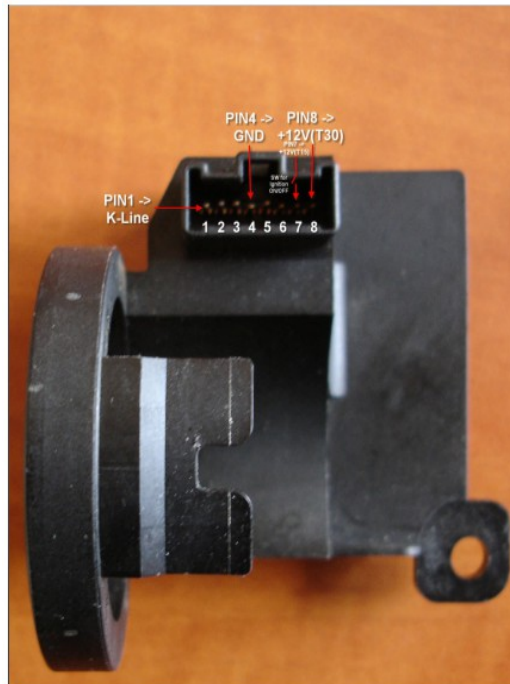| AN001 – Base Interface OBDII Male Cable	NATS – 4
Pin 7	Pin 1
Pin 4	Pin 4
Pin 16	Pin 8
	Switch between Pin 7 and Pin 8 for Ignition ON/OFF

- *NATS-5, NATS-5+ Siemens*:

Immobilizer version:

5WK48041, 5WK48042, 5WK48042, 5WK48643, 5WK48643, 5WK48644, 5WK48644, 5WK48644.
Vehicle models:

NISSAN Altima MY 2001-2004
NISSAN Altima MY 2005
NISSAN Armada MY 2004-2005
INFINITI FX35/FX45 MY 2004-2005
INFINITI G20 MY 2000-2002
INFINITI G35 MY 2003-2005
INFINITI I30, I35 MY 2000-2004
INFINITI M45 MY 2003-2005
NISSAN Maxima MY 2000-2005
NISSAN Murano MY 2003-2005
NISSAN Pathfinder MY 2001-2005
NISSAN Quest MY 2004-2005
INFINITI QX4 MY 2001-2004
INFINITI Q45 MY 2002-2004
NISSAN Sentra MY 2000-2004
NISSAN Titan MY 2004-2005
NISSAN 350Z MY 2003-2005
NISSAN Primera MY 2003

AN001 – Base Interface OBDII Male Cable	NATS – 5, 5+
Pin 7	Pin 1
Pin 4	Pin 4
Pin 16	Pin 8
	Switch between Pin 7 and Pin 8 for Ignition ON/OFF

5. Supported Models

A full list of supported models can be found at **abrites.com.**

6. ESL emulator (EM002)

The Abrites **EM002 emulator for Renault/Nissan** supports all ESL types (old 6 pins(Renault) , new 6 pins(Renault), 8 pins(Nissan).

OLD type ESL diagram(Renault):

Connection to old ESL :

1 - BLACK (-)
2 - RED(+)
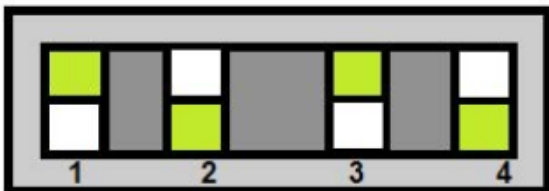3 - GREEN (CAN H)
4, 5 - NOT USED
6 - BLUE   (CAN L)

NEW type ESL diagram(Renault):

Connection to new ESL :
1 - BLACK (-)
2 - RED(+)
3 - GREEN (CAN H)
4 - Connect pin 4 of the ESL to pin 2 of the ESL through 100 Ohm resistor.
5 - NOT USED
6 - BLUE (CAN L)

8 pins ESL diagram(NIssan):

Connection to new ESL :
1 - BLACK (-)
2 - RED(+)
3 - GREEN (CAN H)
4, 5, 7 - NOT USED
6 - Connect pin 6 of the ESL to pin 2 of the ESL
    through 100 Ohm resistor.
8 - BLUE (CAN L)

Example new type ESL diagram(Renault):

Note:

The green square respresents the position of the toggle switch

*The white wire is used to update the emulator but at the moment there are no updates available.