ABRITES

Commander for

NISSAN

User Manual

Version:

2.1

issued by:

Abritus 72 Ltd.

List of Revisions			
Date	**Chapter**	**Description**	**Revision**
24.06.2009		Initial version of the document.	2.0
4.11.2009		New hardware the same functionality	2.1

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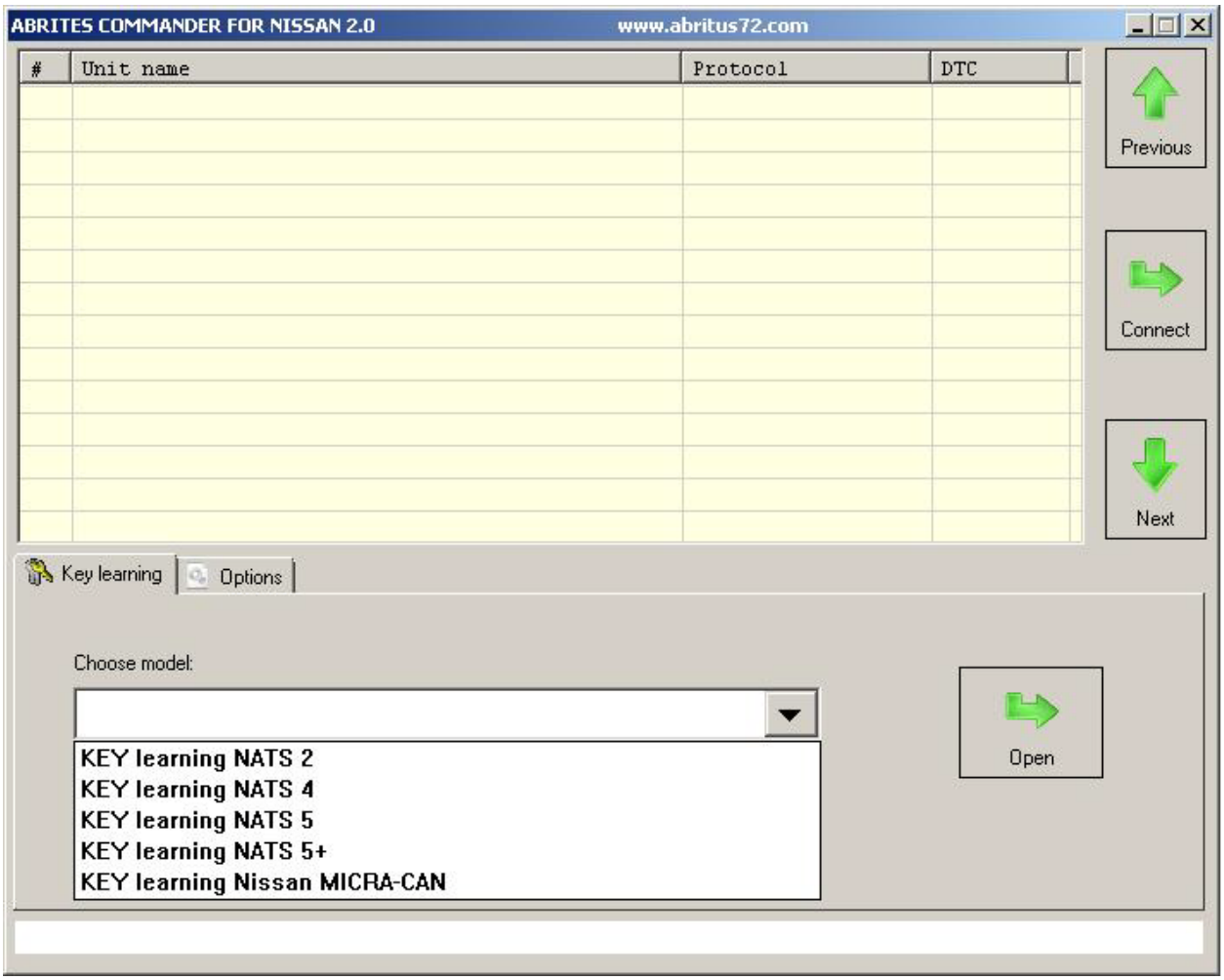
1. INTRODUCTION

"ABRITES Commander for NISSAN" 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 from the producer diagnostic testers. The "ABRITES Commander for NISSAN" provides also 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.

2. Key learning

Nissan Commander is intended for learning of keys of Nissan with Immobilizer systems - NATS-2, NATS-4, NATS-5, NATS5+. Connection with immobilizer shall be carried out directly to immobilizer, not in OBDII. You have to make connection of the base interface – AN001 to immobilizer.



From Main screen can select the type of immobilizer system you want to deal with.

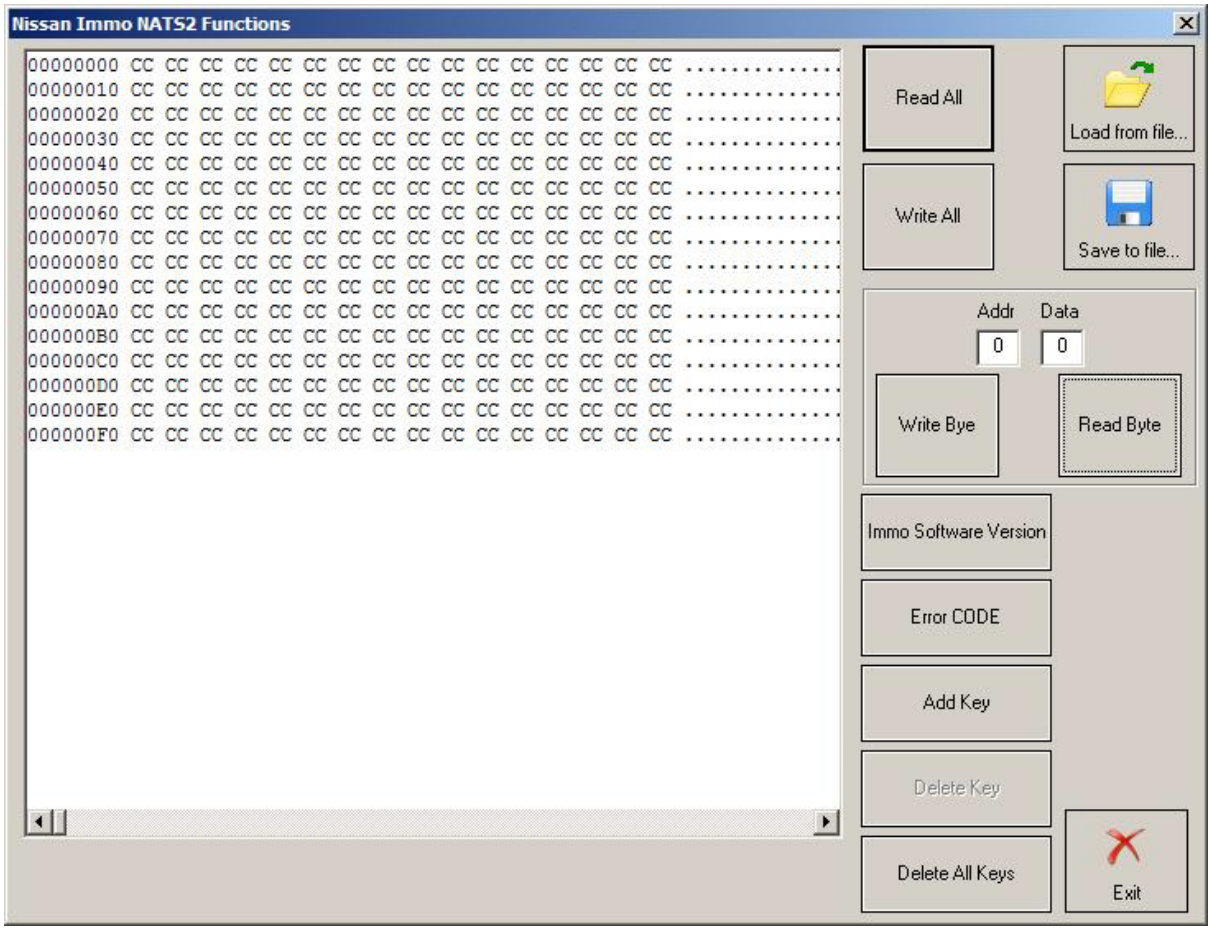
2.1 Immobilizer NATS-2 Siemens :

Immobilizer version:

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

Vehicle models:

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



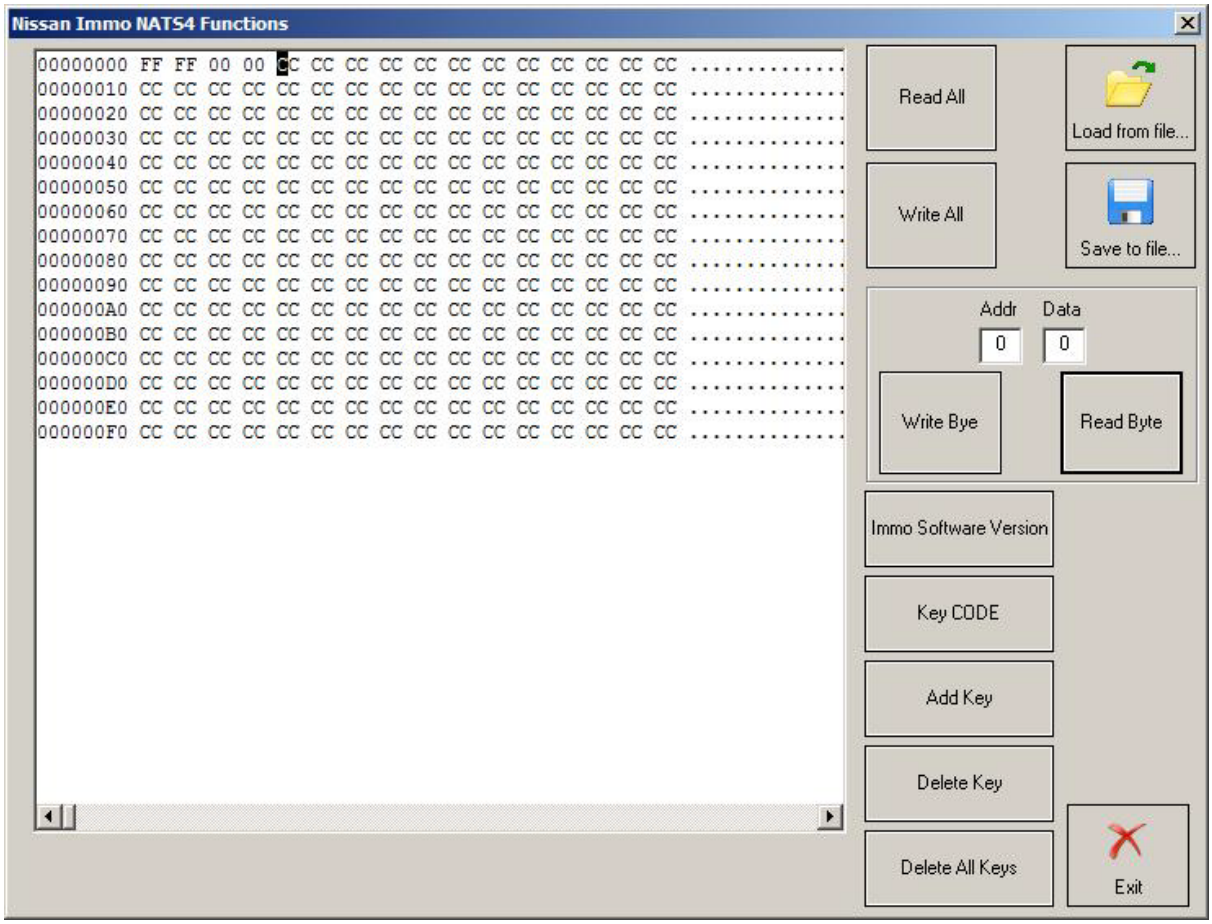
2.2 Immobilizer NATS-4 Siemens :

Immobilizer version:

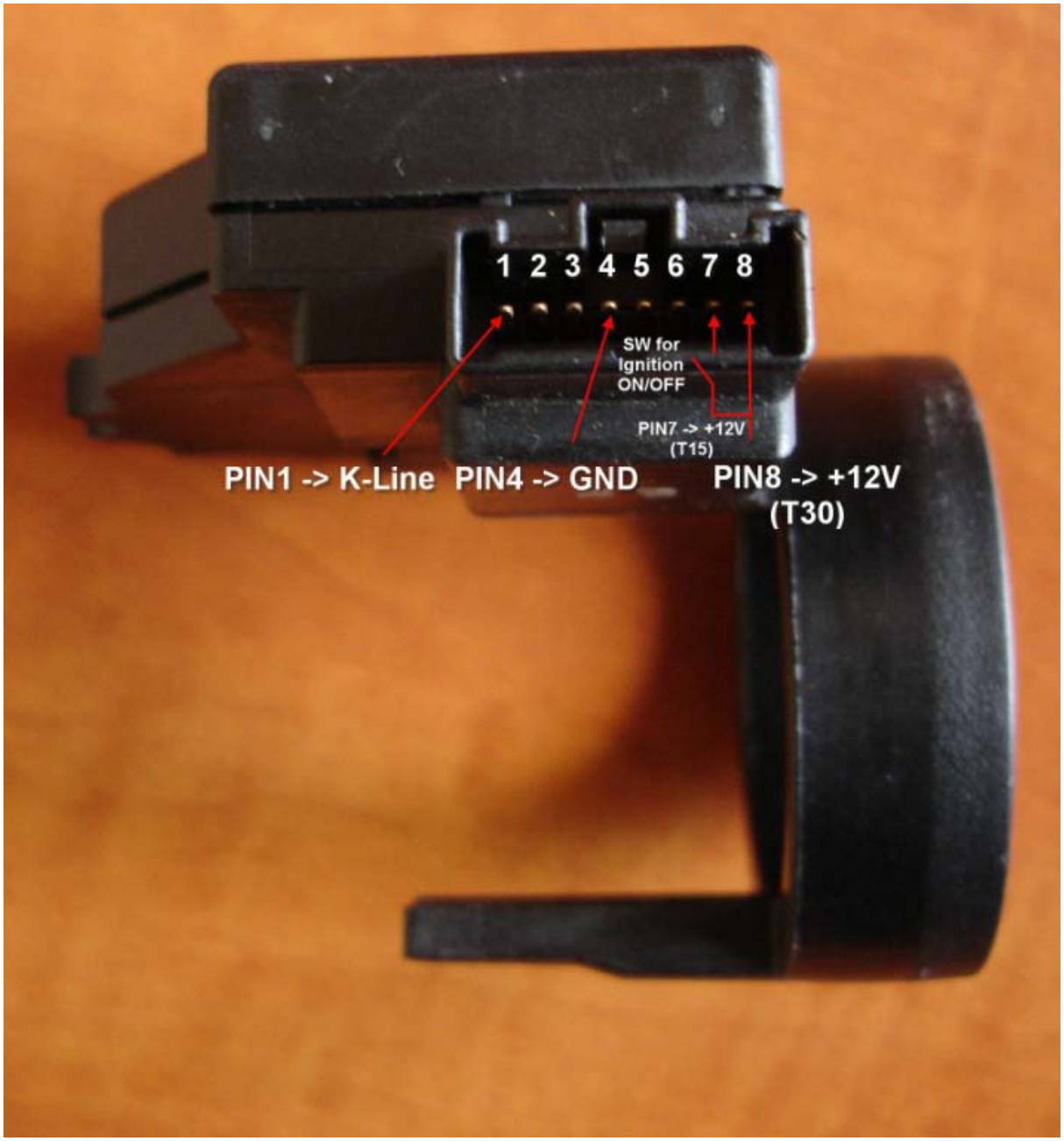
5WK4738, 5WK4750, 5WK4803, 5WK48543A, 5WK48543B, 5WK48692.

Vehicle models:

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



The Immobilizer version can be seen on immobilizer label:



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

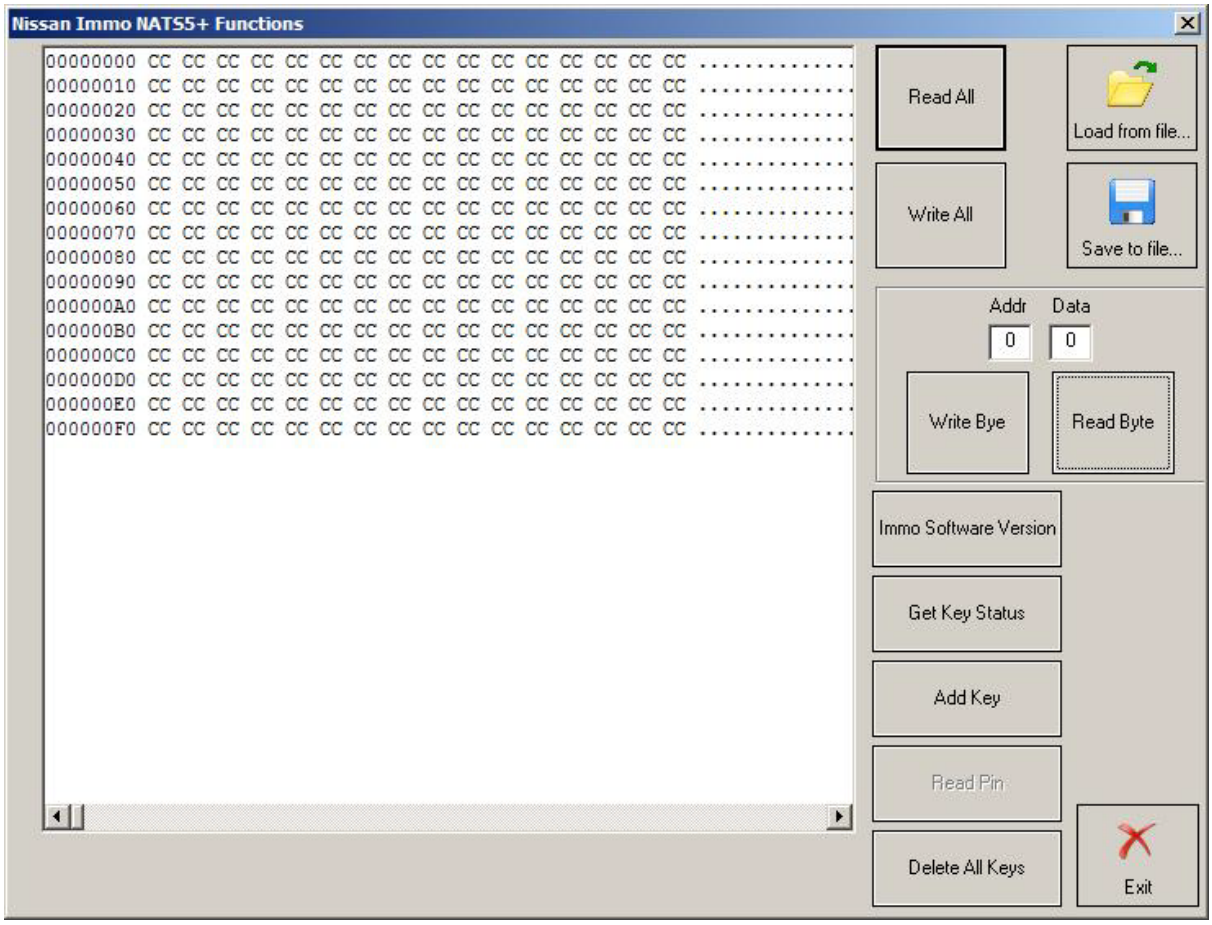
2.3 Immobilizer NATS-5, NATS-5+ Siemens:

Immobilizer version:

5WK48041, 5WK48042, 5WK48042, 5WK48643, 5WK48643, 5WK48644, 5WK48644, 5WK48644.

Vehicle models:

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


Nissan Immo NATS5+ Functions
00000000 CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC ....
00000010 CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC ....
00000020 CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC ....
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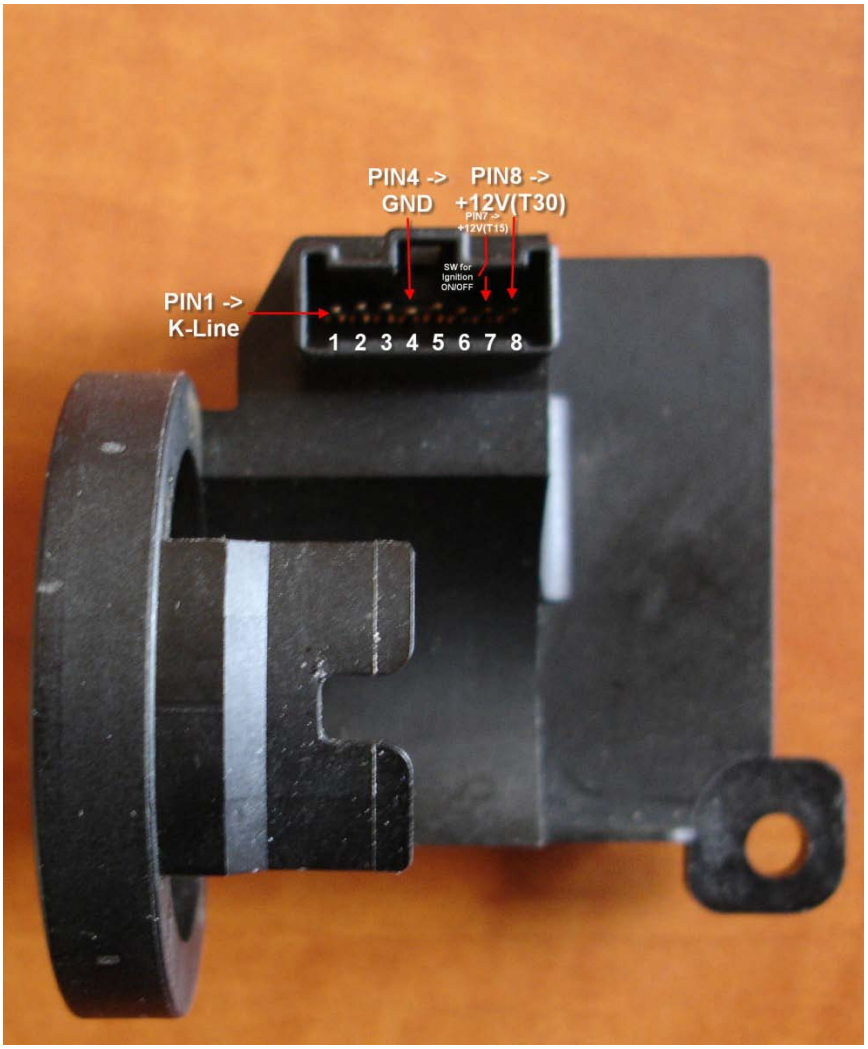
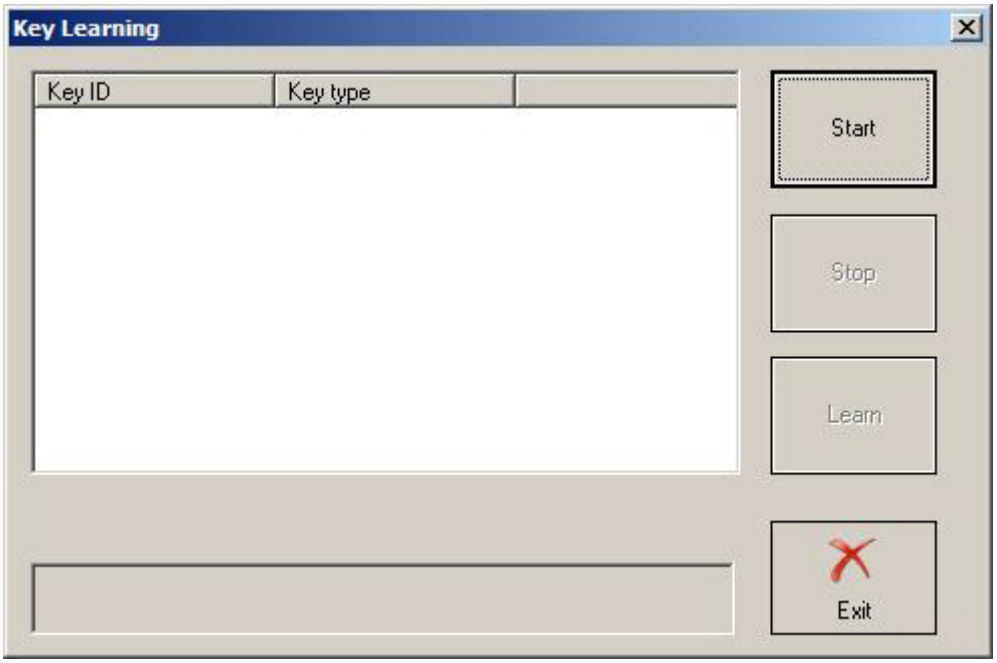
000000B0 CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC ....
000000C0 CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC ....
000000D0 CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC ....
000000E0 CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC ....
000000F0 CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC CC ....
Read All
Load from file...
Write All
Save to file...
Addr
Data
0
0
Write Bye
Read Byte
Immo Software Version
Get Key Status
Add Key
Read Pin
Delete All Keys
Exit

NISSAN
B
5WK4 8042A_R 24321A
SIEMENS
28590 C9902
Made in Germany
5E54
CAN: 267 103 2209
FCC ID: KR5STEP5-6
MCW 129/95 11/1998
97RI-000005
I-00 0282
Nissan
STEP 5/5.6
f=134kHz
0499
電波 89LP0077
Ref.: 5WK4 8643/8644
SIEMENS



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

2.4 CAN Key Learning



3. Software functions

Functions available for Immobilizer manipulations are:

3.1 Read all…

Reading the whole EEPROM from the immobilizer.

3.2 Write all…

Writhing data from the screen to the immobilizer EEPROM.

3.3 Load from file…

Load user memory map in order to be programmed into immobilizer EEPROM.

3.4 Save to file…

Store data from the screen into a file.

3.5 Write Byte

A special function for writing just a single Byte into immobilizer EEPROM.

Pushing button “Write Byte” you will write the data from field “Data” into immobilizer EEPROM on exact Address pointed by field “Addr”. What you see is what you get!

Caution! You have to edit desired Address into “Addr” field and Data into “Data” field before pressing “Write Byte” button.

3.6 Read Byte

A special function for reading just a single Byte from immobilizer EEPROM.

Pushing button “Read Byte” you will read the data from immobilizer EEPROM by the exact Address pointed by field “Addr” and data will be displayed into field “Data”.

Caution! You have to edit desired Address into “Addr” field before pressing “Read Byte” button.

3.7 Immo Software Version

This function will extracting the Immobilizer Software Version and a pop-up box will display it.

3.8 Get Key Status

You can check if a single key is already learned for this car or not and its status.

3.9 Add Key

An interactive procedure for adding a new key for the vehicle.

3.10 Read Pin

This function will allow you to read PIN Code from the immobilizer.

Caution! Not all of the Immobilizer types supports this function!

3.11 Delete All Keys

Delete All Keys if very dangerous function. It will erase all registered keys from the immobilizer memory. Be sure that you are prepared to add at least one key after deleting all keys in order to be able to use the vehicle.

WARNING! This is very dangerous functions. Be sure that you learn at least one key before leaving the vehicle.

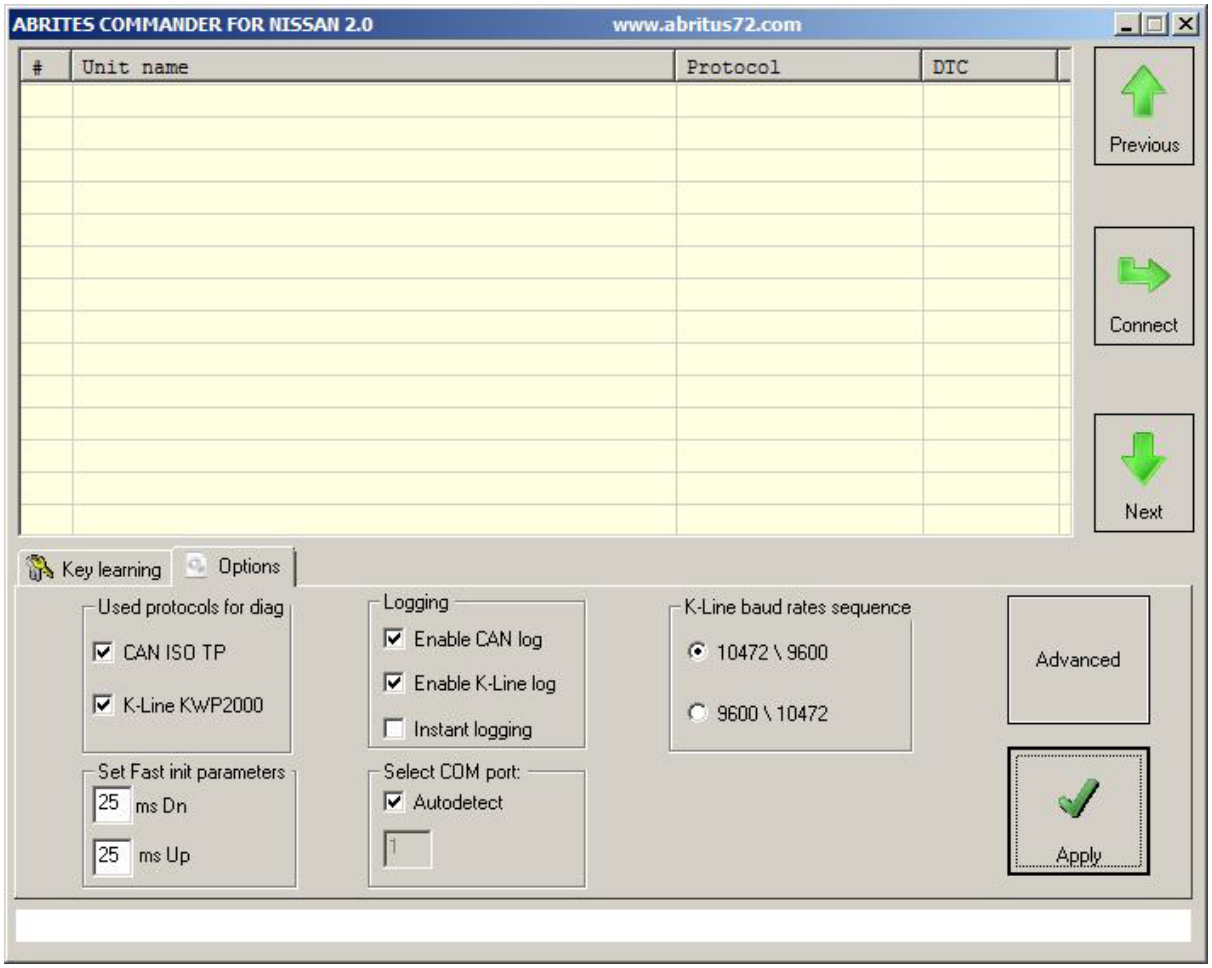
3.12 Exit

Exit from Key functions.

WARNING! Not all functions are available for every Immobilizer type.

4. Options

This set of functions allows you to set up your software.



4.1 Used Protocols

The meaning of the check-boxes is as follows:

- CAN ISO TP - when trying to connect to the device the commander will try to connect to it using “KWP2000 over ISO transport protocol” with baud 500KB/s
- K-Line KWP2000 - when trying to connect to the device the commander will try to connect to it using “KWP2000 over K-Line with fast init” with selected in “K-Line Baud Rate Setting” group speed.

4.2 Set Fast init parameters

You can set-up you own time for fast init procedure. By default it is 25 msec. “Up” and “Dn” time.

4.3 Logging

By checking the “Enable CAN Log” and “Enable K-Line Log” check-boxes on the “Logging” group it is possible to log the whole CAN/K-Line communication when a problem with a specific control unit occurs.

Please, note that they are active by default!

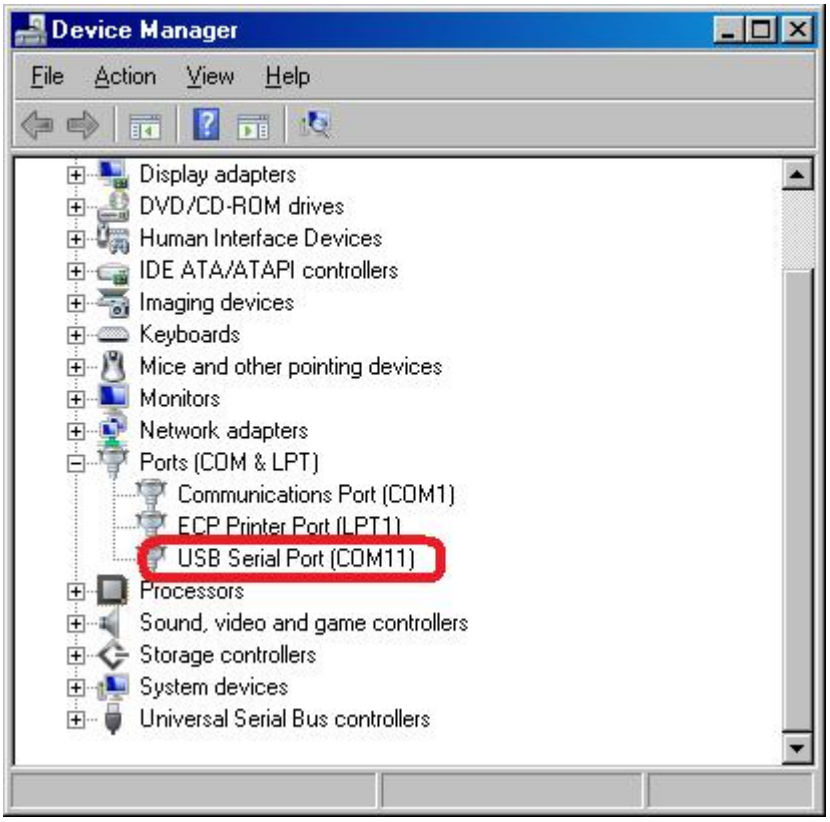
The log-files are binary files which are placed in the “Trace” sub-folder of the ABRITES Commander for NISSAN. With each start of the ABRITES Commander for NISSAN one file is created, and it contains the date/time when it is created in its filename.

NOTE: Please, pay attention that if you enable logging this may significantly decrease the PC performance since writing big data blocks on the hard drive may consume more time on slower machines. So, if your PC is slower, please use the log function only when a problem has to be reported. Also if you are luck of Hard disk space, you can disable communication logging and/or remove old Log files.

4.4 Set COM port

Normally, the “ABRITES Commander for NISSAN” USB Interface is recognized automatically, but there is an option to set it manually. So if you have troubles, as described in the “Troubleshooting” section, you can try to set the port used by the “ABRITES Commander for NISSAN” manually. This can be done as follows:

- Open the “Device manager” and check as which COM port the USB interface is recognized
- Uncheck the “Automatic” check-box and set the port in the respective field.



***Example**: USB interface device recognized as COM11*

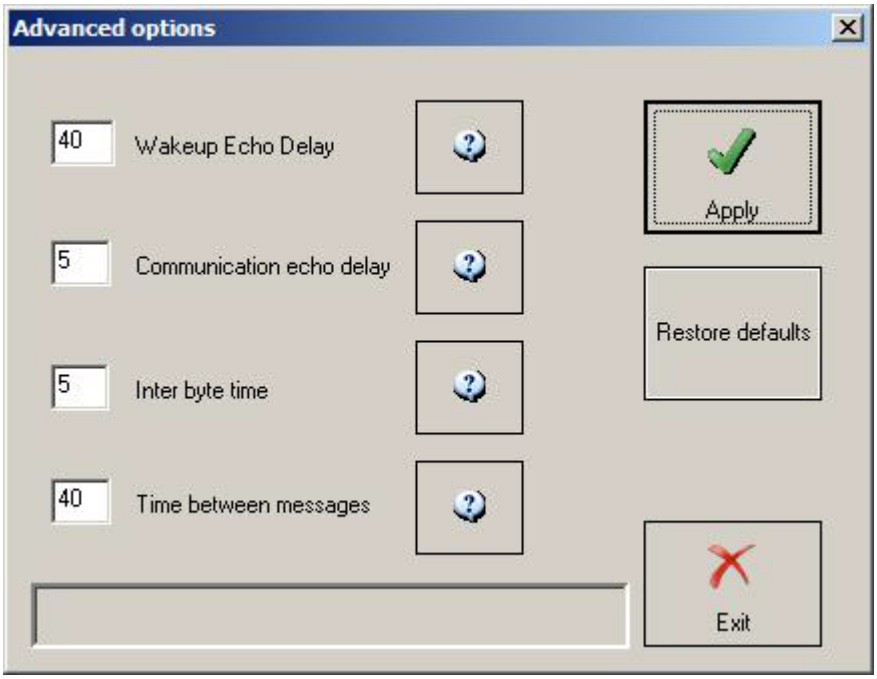
***Hint**: If you are not sure which is the port used by the interface, just unplug and then plug it into the USB slot observing "Ports" section in "Device Manager". The corresponding port will disappears and appears again.*

4.5 K-Line baud rate sequence

When trying to connect to a device in the vehicle over K-Line, the Abrites Commander 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 commander 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 commander 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.

4.6 Advanced



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.

5. Troubleshooting

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

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

Solution:

- Please, make 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 Commander for NISSAN".
- If the interface is not recognized (the USB interface appears with a 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 the problem is still present, you can try to set the used port manually as follows:
    - Start the "ABRITES Commander for NISSAN"
    - Press the "Options" button
    - Uncheck the "Autodetect" check-box and enter the number of the port from the device manager.
    - The changes will take effect after restart of the "ABRITES Commander for NISSAN"

    NOTE: Please, take into account that the used port will change when inserting the USB interface into different USB slots, so the manual setting of the port should be repeated in this case.

Problem: When starting the "ABRITES Commander for NISSAN" on the splash screen neither "**Interface found**" nor "**Interface NOT found**" is displayed

Solution:

- Please try to unplug and plug the dongle and the USB interface again into the USB slot and restart the "ABRITES Commander for NISSAN".

Problem: When starting the "ABRITES Commander for NISSAN" the splash screen is displayed but the application freeze on this state for about 1-2 minutes. After that "Interface found" is displayed and application functions normally.

Solution: Probably there are some bluetooth devices installed on the PC. Please try to deactivate them temporally.

Problem: When starting the "ABRITES Commander for NISSAN" a message "Error code: 0x10001. Please contact 'support@abritus72.com' with the Error code in the subject"

Solution:

- Please, contact support@abritus72.com and request and update for your interface.

Problem: When starting the "ABRITES Commander for NISSAN" a message "Error code: 0x10002. Please, contact 'support@abritus72.com' with the Error code in the subject"

Solution:

- Probably the dongle is not inserted into the USB slot or it is not recognized by the device manager. You can check in the device manager whether it is recognized. It should appear as "HID-compliant device" in the "Human Interface Devices".

Problem: When starting the "ABRITES Commander for NISSAN" a message "Error code: 0x10003. Please contact 'support@abritus72.com' with the Error code in the subject"

Solution:

Probably SW dedicated for another interface was run on your interface. Please contact 'support@abritus72.com' with the Error code in the subject"

Problem: When starting the "ABRITES Commander for NISSAN" a message "Error code: 0x10004. Please contact 'support@abritus72.com' with the Error code in the subject"

Solution:

Please contact 'support@abritus72.com' with the Error code in the subject"

Problem: When starting the "ABRITES Commander for NISSAN" a message "Error code: 0x10005. Please contact 'support@abritus72.com' with the Error code in the subject"

Solution:

Please contact 'support@abritus72.com' with the Error code in the subject"

Problem: When starting the "ABRITES Commander for NISSAN" on the splash screen "**Interface found**" is displayed, but is not possible to connect to devices (especially through K-Line)

Solution:

Make sure that if you run the “ABRITES Commander for NISSAN” from a shortcut the “working folder” is set to the folder where the “ABRITES Commander for NISSAN” executable is placed.

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: Please enable the logging as described in chapter “Logging group” and send the corresponding log-file to support@abritus.com .