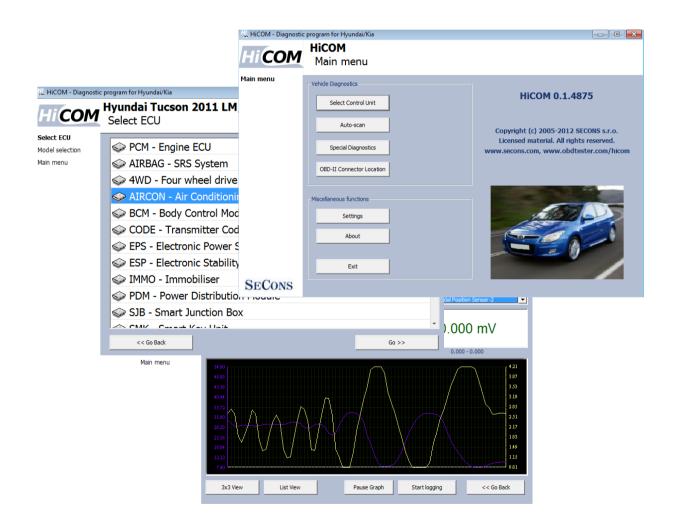


www.obdtester.com/hicom



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# CE

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## **1** Introduction

Thank you for purchasing the HiCOM diagnostic interface and software. HiCOM is professional tool for diagnostics of Hyundai and Kia vehicles. Please read carefully this User Manual before using the product.

We hope you'll find our products useful. In case you have any questions, problems or feedback please contact as at <u>support@secons.com</u>. We're here to help!

## 1.1 Key features

- Fully multiplexed all-in-one smart USB2.0 interface
- Automatic ECU recognition
- Automatic vehicle scan
- ECU Identification
- Fault code (DTC) reading
- Fault code clearing
- Measured values / live data
- Live data recording
- Diagnostic protocol printing
- Actuator tests

The HiCOM system works with Hyundai and Kia vehicles.

List of supported vehicles and control units including diagnosis capability can be found at <u>http://www.obdtester.com/hicom-eculist</u>

## 1.2 Software updates

Updates of purchased software version are available for free download at <u>www.obdtester.com/downloads</u>. User name = serial number of HiCOM diagnostic interface. Password leave blank. The serial number can be found on a silver label of the interface or in settings of HiCOM after performing "Test interface". We recommend you to install updated version at least once a month, because updates provide support for new ECUs and fix various issues.

We recommend you to update firmware in diagnostic interface by clicking on *Settings*  $\rightarrow$  *Upgrade firmware* every time you update the software.



## 2 HiCOM software and driver installation

## 2.1 Microsoft Windows operating System

- 1. Insert HiCOM installation CD to your CD-ROM drive
- 2. Run installation file HiComSetup.exe
- **3.** Choose language for the installer

Installer Language 🛛 🔀						
1	Please select the language of the inst	aller				
	English	~				
	OK Cano	el				

4. Choose your destination folder for the HiCOM and click on *Install* button and after successful installation click *Close* button.

🗒 SECONS HiCo	m - Hyundai/Kia Diagnostic Tool Setup: Installation Folder 🛛 💷 🔯
	Setup will install SECONS HiCom - Hyundai/Kia Diagnostic Tool in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
	C:\Program Files\HiCom Browse
	Space required: 3.1MB
	Space available: 10.4GB
~	Cancel Nullsoft Install System v2,45

HiCOM drivers are automatically updated during the HiCOM installation. When prompted to install "unsigned" drivers, click on *Install this driver software anyway* (Microsoft® Windows® 7) or *Continue Anyway* (Microsoft® Windows® XP).



Microsoft® Windows® will automatically install drivers when you plug-in the HiCOM to USB port. Driver installation isn't required for operation on GNU/Linux system.



## 2.2 Microsoft Windows 8 driver installation

In case of problem with installing drivers on Windows 8, please follow these steps:

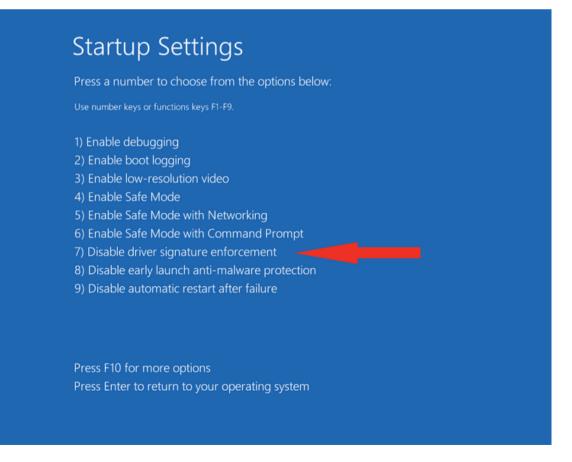
- 1. Press Windows Key + R
- 2. In the window that appears, type: "shutdown.exe /r / o / f / t 00"
- 3. Press "OK" button
- 4. The System will restart to a "Choose an option" screen
- 5. Select "Troubleshoot" from "Choose an option" screen
- 6. Select "Advanced options" from "Troubleshoot" screen
- 7. Select "Windows Startup Settings" from "Advanced options" screen
- 8. Click on "Restart" button
- 9. System will restart to "Advanced Boot Options" screen

10. Select "Disable Driver Signature Enforcement" (press number on keyboard for option shown on screen)

11. Once the system starts, install the diagnostic interface drivers as you would on Windows 7



Windows Vista & 7 required signed all .sys files (we use usbser.sys shipped by Microsoft with valid digital signature). Final version of Windows 8 requires also signed .inf file (which is not in our case). The above procedure helps to override unsigned .inf file. Once driver is installed, the program will work properly.





## 2.3 Interface busy issue [Microsoft Windows]

In case you receive error "Interface busy" while testing your interface, please make sure:

- 1. You're not running any modem, mobile phone, or printer monitoring application that blocks "COM ports" from being used by other applications.
- 2. You're not running Hella Gutmann software on the same PC. Process called "GMPortal.exe" prevents SECONS diagnostic applications from properly accessing the diagnostic interface. You may temporarily resolve this problem by running "Windows Task Manager", right-clicking on GMPortal.exe process in "Processes" tab and selecting "End process".
- 3. Software modem drivers do not block COM ports.
- **4.** You have selected correct COM port (use "Device manager" button to find port number under "Ports (COM & LPT)" group.

### 2.4 GNU/Linux System

Our diagnostic application are tested to work under Linux. The applications can be run under Linux, BSD or Apple OS/X on Intel x86 using Wine environment. The installer and applications perform fully automated installation under these operating system.

#### **Important information:**

- Only Ubuntu distribution 19.10 or later is supported using this guide, however other distributions that meet our requirements may work. For more information see <a href="https://www.ubuntu.org">www.ubuntu.org</a>
- The diagnostic application runs under Wine which must be installed on the system. For more information see <u>www.WineHQ.org</u>
- Bluetooth connection is NOT supported natively on Linux (however with some effort you might be able to get it running, just instead of /dev/ttyACMx device use /dev/rfcommx.
- It is highly recommended to try the diagnostic application first under Microsoft Windows operating system to get familiar with it.

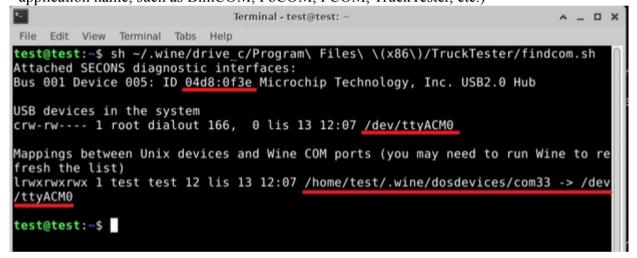
#### **Installation procedure:**

1. Wine 4.0 or later on an x86 system is required. You can install Wine on Ubuntu using "sudo apt install wine"). You can verify Wine version by running "wine –version" from terminal. If you are running 64-bit system you must have 32bit libraries installed (which is usually done automatically when installing Wine from repositories). Other Debian-derived distributions use similar commands.

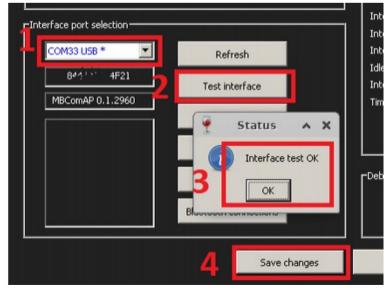
-						Ter	minal - test	@test:
File	Edit	View	Terminal	Tabs	Hel	р		
sud	o] pa	t:∼\$ asswo t:~\$	rd for t	ermod est:	- a	- G	dialout	test



- 2. Add users who need to access the diagnostic interface to the 'dialout' group. Type "sudo usermod -a -G dialout username" (replace 'username' with you username, in the screenshot we have used 'test' user)
- 3. Log off from Xwindow session and login again.
- **4.** Install the diagnostic applications (either using correct file manager association or from terminal, e.g. "wine ~/Downloads/PoCOMsetup.exe"). After the installation you should see the diagnostic application icon on the desktop and in start menu.
- 5. Now you need to figure out assignments between emulated "COMx" ports and respective Unix devices. For this we have created diagnostic script called "findcom", which you can run in terminal using comand "sh ~/.wine/drive\_c/Program\ Files\ \ (x86\)/APPNAME/findcom.sh" (replace APPNAME with actual diagnostic application name, such as BimCOM, PoCOM, FCOM, TruckTester, etc.)



6. When you know COM port used in Wine (in the screenshots com33), configure the diagnostic application and test the interface





- 7. Save settings and you should be ready to go.
- 8. Optional. To override Wine's default device mapping, run wine regedit and create string entries in HKEY\_LOCAL\_MACHINE\Software\Wine\Ports where the entry name is the Windows device name and the entry value is the path to the Unix device. To make COM1 the first USB-attached serial port, create an entry with the name COM1 and the value /dev/ttyACM0. After editing the registry, shut down Wine with wineserver -k and the next time Wine runs a program, your changes will take effect.



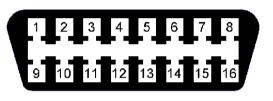
## 3 Diagnostic connectors used in Hyundai/Kia vehicles

Location of OBD-II and manufacturer-specific (OBD-I) connectors is available in DLC location database available from the HiCOM main menu.

## 3.1 OBD-II

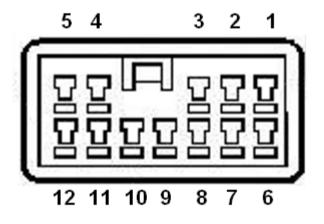
Standard OBD2 connector is used usually since 1996 models to present (please note that some models manufactured after 1996 still may use 12 or 20pin connector).

-	1	9	ISO9141 K Line
-	2	10	-
ISO9141 K Line	3	11	ISO9141 K Line
Ground (GND)	4	12	ISO9141 K Line
Signal ground (GND)	5	13	ISO9141 K Line
HS CAN High	6	14	HS CAN Low
ISO9141 K Line	7	15	ISO9141 L-Line
ISO9141 K Line	8	16	Battery voltage



## 3.2 Hyundai 12-pin connector

Pin	Description			
1	Engine K-Line			
2	Airbag K-Line			
4	ABS K-Line			
6	Gearbox K-Line			
10	Engine L-Line			
11	Speed signal			
12	Ground (Battery-)			





## 3.3 Kia 20-pin connector

	•			
Pin	Description			
1	Power after fuel pump			
2	Cooling fan signal			
3	Engine rotation speed / ignition signal			
4	Ground			
5	Battery positive voltage			
6				
7	Initial ignition management (coil 2)			
8	ABS L-Line			
9	Engine K-Line			
10	Automatic transmission failure code			
11	Blink code / Check Engine indicator			
12	Ground			
13				
14	Airbag K-Line			
15	ABS K-Line			
16	Initial ignition management (coil 1)			
17	Cruise-control K-Line			
18	Automatic transmission L-Line			
19	Engine L-Line			
20	Engine monitor output			

1 2			3 4				
5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20



## 4 Information about Hyundai/Kia control units

ECUs are usually identified and distinguished by:

- Territory (e.g. MEX=Mexico, India, Turkey, etc.)
- Selected features (e.g. ISG+, CPF-, etc.)
- Engine type (Leaded, Unleaded EOBD, Unleaded ALL, ...)
- Installation date range (e.g. 2009/05/01-, ...)

#### Feature list

Feature	Meaning
CPF	Diesel particulate filter
ISG	Idle Stop and Go
ESP	Electronic stabilization system
ETC	

#### Engine type examples

Type example	Description
ENGINE Leaded	Leaded gasoline engine
ENGINE Unleaded OBD-II	Unleaded gasoline engine, OBD2 compliant
ENGINE Unleaded EOBD	Unleaded gasoline engine, European OBD2 compiant
ENGINE Unleaded MEX	Unleaded gasoline engine, Mexico market

ECUs do not have capability of self-identification and if multiple choices are possible, user must select proper control unit.

## 4.1 Hyundai ECU naming terminology

РСМ	Engine ECU control unit
IMMO	Immobilizer control unit
AT	Automatic Transaxle
SMARTRA	Smart Transponder Antenna
SMK	Smart key unit
IPM	Instrument Panel Module
BCM	Body Control Module



## 4.2 Communication protocol

HiCOM supports these communication protocols:

Protocol	Diagnostic bus	Production	Usage
KW71 (Bosch)	ISO9141	1991 – 2001	Engine
ISO9141	ISO9141	1996 – present	Engine, ABS, Airbag
KWP2000,	ISO9141	1996 – present	All systems
ISO15765	CAN-BUS (ISO 11898)	2005 – present	All systems
UDS (ISO 14229)	CAN-BUS (ISO 11898)	2011 – present	All systems

## **5** Preparation to diagnose

Before starting diagnosis, make sure that car ignition is turned ON. Connect your HiCOM diagnostic interface to PC / laptop via USB. Interface test in settings of HiCOM must pass successfully (more information in chapter <u>Settings</u>). Connect your HiCOM diagnostic interface to OBD-II connector in the vehicle. You can find the OBD-II connector using HiCOM <u>OBD-II</u>. <u>Connector Location</u> image database.



## 6 HiCOM main menu

HiCOM main menu is divided into two parts  $\rightarrow$  Vehicle diagnostics and Miscellaneous functions. Descriptions of single functions are given below.

HiCOM - Diagnosti	c program for Hyundai/Kia	- • •
Hi COM	HiCOM Main menu	
Main menu	Vehicle Diagnostics Select Control Unit Auto-scan Special Diagnostics OBD-1I Connector Location	HiCOM 0.1.4875 Copyright (c) 2005-2012 SECONS s.r.o. Licensed material. All rights reserved. www.secons.com, www.obdtester.com/hicom
SECONS	Miscellaneous functions  Settings  About  Exit	

## 6.1 Select Control Unit

Using this function you can connect to a specific control unit you wish to diagnose. You can choose the control unit after exact selection of tested vehicle. Correct model year and model code selection is essential for proper diagnostic functions.

We recommend to always try to identify vehicle based on VIN code.

All control units present in tested vehicle can be detected by Auto-scan function.

HiCOM - Diagnost	ic program for Hyundai/Kia HiCOM Model selection	- 0 <b>-</b>	HICOM - Diagnostic program for Hyundai/Kia HICOM Hyundai Tucson 2011 LM/EL G Select ECU	1.6 GDI
Model selection Main menu	<ul> <li>𝔐 Hyundai</li> <li>𝔐 Kia</li> <li>𝔐 Dodge</li> <li>𝔐 Inokom</li> </ul>	Use VIN code           Image: Solution of the second secon	Select ECU Mode selection Main menu Main menu Main menu Main menu Main menu Main menu Main menu Main menu Main Main Main Markov Main Markov Main Main Markov Main Main Markov Main Main Markov Main Main Markov Main Markov Main Main Markov Main Main Markov Main Main Markov Main Main Markov Main Main Markov Main Markov Mar	-
SECONS	Image: Sorento       Image: Soul       Image: Soul       Image: Sportage       Image: Sportag	Gasoline 2.0 DOHC     Gasoline 2.4 DOHC     Gasoline 1.6 GDI     Diesel 2.0 TCI-R     Diesel 1.7 TCI (II2)     settore     Satover     Go>>	<ul> <li>ESP - Electronic Stability Progra</li> <li>IMMO - Immobiliser</li> <li>PDM - Power Distribution Modu</li> <li>SJB - Smart Junction Box</li> <li>CMV - Create Variable</li> </ul>	m

SECONS

Incorrect model selection may result in wrong or incomplete live data, improper function of actuator tests and coding functions, possibly resulting in damaged car components.



#### www.obdtester.com/hicom

## 6.2 Auto-scan

This function scans for all known ECUs in selected vehicle, and shows the list of ECUs present in vehicle along with number of present or stored fault codes (DTCs).

It is necessary to select exact vehicle type before starting the auto-scan.

Some ECU types are "shared", which means that one ECU is performing two functions (e.g. ENGINE has also immobilizer function). In that case both ECU types return same fault codes.

<ul> <li>CODE - Transmitter Code Saving</li> <li>IMMO - Immobiliser</li> <li>SJB - Smart Junction Box</li> <li>BCM - Body Control Module</li> <li>EPS - Electronic Power Steering</li> <li>AIRBAG - SRS System</li> <li>ESP - Electronic Stability Program</li> </ul>	SJ	MO - Immobiliser	-	
<ul> <li>SJB - Smart Junction Box</li> <li>BCM - Body Control Module</li> <li>EPS - Electronic Power Steering</li> <li>AIRBAG - SRS System</li> </ul>	s کې			
<ul> <li>BCM - Body Control Module</li> <li>EPS - Electronic Power Steering</li> <li>AIRBAG - SRS System</li> </ul>		8 - Smart Junction Bo		
<ul> <li>EPS - Electronic Power Steering</li> <li>AIRBAG - SRS System</li> </ul>		5 Sindle Sunction De	DX	
AIRBAG - SRS System	S BC	M - Body Control Mo	dule	
	I EP	5 - Electronic Power	Steering	
🗇 ESP - Electronic Stability Program	IA 🧼	RBAG - SRS System		
	S ES	P - Electronic Stabilit	y Program	
SPCM - Engine ECU	S PC	M - Engine ECU		

## 6.3 Special Diagnostics

You can find here menu of special diagnostic functions.

*CAN BUS Analysis* functions is described in our manual "CAN-BUS analysis information" available at <u>obdtester.com/downloads</u>.

	program for Hyundai/Kia	
HiCOM	HiCOM Special Diagnostics	
Special Diagnostics	CAN BUS Analysis	
SECONS	<< Go Back	60 >>

## 6.4 OBD-II Connector Location

Using this database you can check a location of OBD-II connector in the vehicle. The database is constantly updated.

HiCOM - Diagnosti	ic program for Hyunda/Ka <b>Data Link Connector Location</b> Find DLC			cprogram for Hyundai/Ka
Find DLC Main menu	Choose a car from this tree to view OBD-II connector location		DLC Image Find DLC Main menu	This picture shows location of OBD-II connector in the selected vehicle (c)SECONS 2011-12
	<ul> <li>Hyundai</li> <li>Accent 1997</li> <li>Accent 2003</li> <li>Accent 2005</li> <li>Atos 2005</li> <li>Elantra</li> <li>Grandeur XG</li> <li>HD Coupe 1997</li> <li>HD Coupe 2003</li> <li>HD Coupe</li> <li>i10 2011</li> <li>i20 2011</li> </ul>			
SECONS	Go Back Show Im	age	SECONS	Go Back

Page 15 / 25



## 6.5 Settings

All functions in settings are described below.

🚟 HiCOM - Diagnostic	: program for Hyundai/Kia		
HiCOM	<b>HiCOM</b> Application Settin	gs	
Application Settings Main menu	Language English	Units type Metric Development functions Refresh Test Interface Activate license Upgrade firmware	Protocol settings       KWP2000         Protocol init idle time       -         Initialization timeout       -         Keyword delay       -         Delay after init       -         Inter-byte delay       -         Inter-byte timeout       -         Inter-packet delay       -         Idle-packet delay       -         Inter-packet timeout       -         Timer       -
		Device Manager Bluetooth Manager	Debug Functions Save Debug
SECONS		Save Changes	Cancel Apply Changes

#### Language

Choose language of HiCOM user interface in the drop down menu.

#### Units type

You can choose metric or imperial unit system for measured values.

### Interface port selection

**Refresh** - this button refreshes COM port selection drop down list. Correct COM port number should be already chosen after connecting diagnostic interface via USB to PC and clicking on *Refresh* button. If not, choose correct COM port number from the list. It is needed in order to perform successful interface test.

**Test interface** – before each use of program, please test proper function of your connected interface by clicking this button. After successful test, you can see a serial number of your interface displayed below the COM port field, then firmware version and information about active licenses.

**Activate license** – this button is used for activating new license/s to use the program or special functions. Internet connection is required. Standard license is already activated for all interfaces before purchase.



**Upgrade firmware** – use this button to upgrade firmware in your diagnostic interface every time after installing the latest software version (available at <u>www.obdtester.com/downloads</u>). Do not disconnect your interface during upgrading the firmware.

**Device Manager** – is used to finding out correct COM port number, or to reinstall drivers. Your device appears as "ELM-USB Interface (COMx)" under "Ports (COM & LPT)".

**Bluetooth Manager** – is a preparation to upcoming bluetooth feature. The button is currently inactive.

## **Protocol settings**

You can set various timings for each communication protocol. This is advanced feature used for example when problems occur with connection to control unit caused by slower ECU response and the like.

**Restore Defaults** – this button restores all modified timings of all protocols to default values.

Changing protocol settings is not required before normal use of the program. You will be asked to make changes by our tech. support when solving your issue at <u>support@secons.com</u> if necessary.

## **Debug functions**

By clicking on **Save Debug** button, you can capture the latest data from elapsed communication between control unit and program into one file. Providing this file is required only by our technical support. Based on these data, we are able to monitor the whole process of performed operation and its correctness.



Use of debug function is important for successful resolution of any program failure or verifying its causes. For more information on how to proceed, please read the following chapter <u>#8.Reporting bugs and improvement requests</u>.

## 6.6 About

After clicking on "About" button, you can read a license agreement or check application version.



## 7 Diagnostic functions

After connecting to chosen control unit, the following diagnostic menu is displayed. The diagnostic menu is divided into three parts. Basic functions, Advance functions and Expert functions.

HiCOM - Diagnostic	Eprogram for Hyundai/Kia ENGINE Siemens SI Control Unit Diagnost		2006 MG G 2.4 DOHC
Control Unit Diagnostics Select ECU Model selection	Control Unit Identification	INE Siemens SIM2K-140, IS	014230
Main menu	Basic functions Control Unit Identification	Advanced functions Measured Values	Expert functions ECU Programming/Coding
	Read Fault Code Memory	Actuators activation	Flash programming
	Clear Fault Codes	Go Back, Close session	

If control unit was identified uniquely, diagnostic menu will be available immediately, otherwise it is necessary to select control unit variant as described in next chapter <u>Unrecognized Control Unit</u>

## 7.1 Unrecognized Control Unit

In a case of more ECU variants are applicable for selected ECU type, the following screen is displayed and user must select correct ECU variant.

You can get more information about ECU by clicking on *Show ECU Identification* button.



• It is important choose correct ECU for proper display of measured values.

🕬 HiCom - Hyundai/I	Kia Diagnostic program 📃 🔳 🛋
	Hyundai Santafe 2011 CM D 2.2 TCI-R Unrecognized Control Unit
Unrecognized Control Unit Select ECU Model selection Main menu	There is more control units for the selected vehicle. HICOM can not automatically detect them. Please select from the list below the control unit you are going to connect.
	Sive ECU Information Sive ECU Identification Sive ENGINE D 2.0/2.2 Hi-Power (CPF+) - Bosch EDC17 ENGINE D 2.2 Hi-Power (CPF+) - Bosch EDC17
	<< Cancel Use generic access >> Use selected ECU >>

• If you make a mistake in identification, you shouldn't perform any of coding or programming functions.



- 0 **X** 

## 7.2 Control Unit Identification

# Works only on selected ECUs, mainly engine control modules. Other control units usually do not support identification functions.

This function can display only identification data accessed by ECU, for example:

- Identification data
- ECU part number
- serial number



Please note that many vehicles do not have programmed VIN code or other data (such as programming date/etc).

🔐 HiCOM - Diagnostic program for Hyundai/Kia

Control Unit Identification

ontrol Unit Jentification				
	Kalibrace opravny/Seriové číslo	testeru		
Control Unit Diagnostics	Calibration Programming Date		15151515151	51515
Select ECU	VIN Code		KNAGE12336	5035007
Model selection	HME Hardware number			
Main menu	Repair shop code/tester name			
	Programming date		15151515151	51515
	ECU bootloader number		65778852_C1	6
	ECU software number		6577885135-	-
	Calibration number		G6C4MK1A	
	Unknown 8F		671K1010	
	HME Hardware number			
	<< Go Back	Save ECU Information	Copy Values	Print Values

You can print identification by clicking on *Print Values* button or you can copy to clipboard by clicking on *Copy Values button*.

*Save ECU Information* button is used to save "ECU snapshot". Purpose of this file is explained in chapter <u>#8.Reporting bugs and improvement requests</u>.



## 7.3 Read fault code memory

This function allows to read and display diagnostic trouble codes saved in control unit memory.

🙀 HiCOM - Diagnostic	program for Hyundai/Kia 📃 🔍 💌
Hi COM	ENGINE Siemens SIM2K-140 - Magentis 2006 MG G 2.4 DOHC Fault Code Memory
Fault Code Memory Control Unit Diagnostics Select ECU Model selection Main menu	P0123       Throttle Position Sensor (TPS) Circuit: High Input Test not complete, DTC Present.Warning lamp illuminated for this DTC         P2106       Throttle Actuator Control System - Forced Limited Power Test not complete, No DTC.         P0222       Throttle/Petal Position Sensor/Switch B Circuit: Low Input Test not complete, DTC Present.Warning lamp illuminated for this DTC         P2110       Throttle Actuator Control System - Forced Limited RPM Test not complete, DTC Present.Warning lamp illuminated for this DTC         P0560       System Voltage: Malfunction Test not complete, DTC Present.         Functions       Summary         Re-read fault codes       Freeze Frame         Copy Codes to Clipboard       Print fault codes         V       Print fault codes          V

Note: Not all ECUs support fault code reading. In case Fault code memory reading is not available, error message is displayed. Use live data or actuator tests to diagnose ECU problems in such case.

## 7.4 Clear Fault Codes

This function clears fault codes stored in ECU memory.

Fault codes might appear again or under some conditions isn't possible to clear fault codes at all. It is possible that in the presence of some faults control unit doesn't allow to clear fault codes or fault is in no time written back to memory.

It is recommended to read memory by clicking on Re-read fault codes button again.



## 7.5 Freeze Frame

Freeze Frame (also known as Snapshot or Environment data) function display selected measured values as present at occurrence of selected diagnostic fault code (DTC). This function is available from fault codes window.



Please note that HiCOM is not capable of decoding freeze frames on all ECUs. In such case raw hex dump is displayed. Please note that even dealer-level tool (Hyundai/Kia GDS) suffers from similar issue. In order to improve this function, please report such ECUs to support@secons.com.

HiCOM - Diagnostic program for Hyundai/Kia

<b>HiCOM</b>	ENGINE Siemens SIM2K-140 - Magentis 2006 MG G 2.4 DOHC Freeze Frame
Freeze Frame	

Fault Code	Freeze Frame Data	57
Memory	Freeze Frame Data	01
Control Unit Diagnostics	Freeze Frame Data	21
Select ECU	Freeze Frame Data	10
Model selection	Freeze Frame Data	F1
Main menu	Freeze Frame Data	4F
	Freeze Frame Data	00
	Freeze Frame Data	00
	Freeze Frame Data	9D
	Freeze Frame Data	00
	Freeze Frame Data	00
	Freeze Frame Data	00
	Freeze Frame Data	16 -
	<< Go Back	Copy Values Print Values



HiCOM - Diagnostic program for Hyundai/Kia

獩 HiCOM - Diagnostic program for Hyundai/Kia

Canister Purge Duty

Canister Purge Phase

3x3 View

- - - X-

<< Go Back

### 7.6 Measured values

#### 7.6.1 **Graph display**

This function displays two measured values (also known as live data or sensor values) simultaneously. Measured parameters can be chosen from selectors at the top of the window.

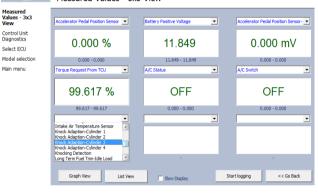
Buttons + and - allow to accelerate or decelerate speed of graph.

#### COM ENGINE Siemens SIM2K-140 - Magentis 2006 MG G 2.4 DOHC Measured Values - Graph View Measured Values - Graph View Control Unit Diagnostics 0.000 % 0.000 mV Select ECU Model selection Main menu Pause Graph Start logging <<< Go Back 3x3 View List View

**Display 3x3** 7.6.2

For measuring 9 value simultaneously, click on 3x3 View button.

HiCOM - Diagnostic program for Hyundai/Kia ENGINE Siemens SIM2K-140 - Magentis 2006 MG G 2.4 DOHC СОМ Measured Values - 3x3 View



#### 7.6.3 **Display list**

measure all То available values simultaneously, click on List view button.

Please note values means slower refresh rate.

ured s - List		
	A/C Compressor	OFF
ontrol Unit lagnostics	A/C Status	OFF
	A/C Switch	OFF
U	Accelerator Pedal Position Sensor	0.000 %
action	Accelerator Pedal Position Sensor-1	0.000 mV
n menu	Accelerator Pedal Position Sensor-2	0.000 mV
	Air Flow Rate from Mass Air Flow Sensor	0.000
	Air Flow Rate from Mass Air Flow Sensor	0.000 kg/h
	Battery Positive Voltage	11.849
	CVVT Adaption PWM	11.501 %
	CVVT Control State	PASSIVE
	CVVT Valve Duty	0.000 %
	Camshaft Position Setpoint	60.000 '

Сору

Print

4.999 %

Start logging

OFF

#### 7.6.4 Save to log

Measured values can be saved/logged to a file by clicking on Start logging button. The log file is standard csv file and it is compatible with VagScope or can be imported to Microsoft Excel or OpenOffice Calc.



## 7.7 Actuators activation

This function can activate actuators and perform some actuators actions.

🚻 HiCOM - Diagnostic	program for Hyundai/Kia 💼 📼 💌
HiCOM	ENGINE Siemens SIM2K-140 - Magentis 2006 MG G 2.4 DOHC Actuators Tests
Actuators Tests Control Unit Diagnostics Select ECU Model selection Main menu	A/C COMPRESSOR RELAY Canister Close Valve Canister Close Valve-Clocked Canister Purge Valve Cooling Fan Relay-High Actuator
	Actuator was turned ON



Make sure you understand consequences of activating ECU components. Also make sure that activation conditions (engine idle, engine running, etc.) are met. Always consult all tests with car repair handbook.



## 7.8 ECU Programming/Coding functions

This feature allows to run coding functions. Note that some of the coding functions can not be run when the engine is running and vice versa (some coding functions can not be run unless the engine is running).

More information about programming functions is available at <u>www.obdtester.com/downloads</u>. Please note that this function is currently under development.



## 8 Reporting bugs and improvement requests

Our customers can take advantage of our full technical support for free. In case you have any difficulties with using HiCOM, do not hesitate to contact us directly at <u>support@secons.com</u> or through your distributor.

Please read carefully this chapter in order to provide us with all information so as we can resolve your problem quickly.

Note:

Before sending support request for failing operation, please make sure you have met all conditions required for the operation (e.g. you are entering correct data, correct engine temperature for DPF regeneration, correct number of keys for engine start, etc).

In case of communication issues we recommend to check diagnostic plug connection and retry procedure at least once, connection problems may result in erratic communication issues.

In case you encounter to failure of any program functions (e.g. fault codes reading/clearing, coding functions, actuator tests, connecting to ECU ...), or you're missing some function or some function does not work sufficiently, please prepare the following data in your email before sending your request to our technical support:

- 1. Detailed description of failure or your improvement request
- 2. Vehicle description VIN code, model, manufacture year, engine type
- **3.** Attach **Debug Log** (in case that required function doesn't work properly). This file captures data from the latest communication between program and ECU, so we can detect failure causes.
- 4. Attach Snapshot of tested ECU this file contains important information about tested control unit.



## 8.1 How to create Debug Log

It is necessary to perform operation that is not working correctly first. Once failure occurs, go back directly to settings in main menu (do not close the program). Click on "Save Debug" button. Name and save the file into well known directory in your computer.

HiCOM - Diagnostic	program for Hyundai/Kia			×
ні СОМ	HICOM Application Settin	gs		
Application Settings Aain menu	English  Expert Functions Expert Mode	Units type Metric	Protocol settings KwP2000 Protocol init idle time Initialization timeout Keyword delay Delay after init	
	Interface port selection	Refresh Test Interface Activate license	Inter-byte delay Inter-byte delay Inter-byte timeout Inter-packet delay Inter-packet timeout Timer Restore Defaults	
		Device Manager Bluetooth Manager	Debug Functions Save Debug Debug mode	
SECONS		Save Changes	Cancel Apply Change	s

Enable "Debug mode" check box only at our special request.

This function is used to tell program enable special functions in diagnostics interface and to log more data than required for normal operation.





## 8.2 How to create ecu Snapshot

After connection to related control unit, click on "Control Unit Identification". In the following window click on "Save ECU Information" button. Choose a directory to save the file and confirm. Saving may take a few minutes.

1				
Kalibrace opravny/Ser	iové číslo testeru			
Calibration Programm	Calibration Programming Date		1515151515151515	
VIN Code		KNAGE123365035007		
HME Hardware numbe	er			
Repair shop code/test	er name			
Programming date		15151515151	151515	
ECU bootloader numb	er	65778852 C	16	
ECU software number		6577885135-	-	
Calibration number		G6C4MK1A		
Unknown 8F		671K1010		
HME Hardware numbe	er			
<< Go Back	Save ECU Information	Copy Values	Print Valu	

Please send all support requests along with required data attached to <u>support@secons.com</u>. Your case will be assigned with unique ticket number in order to communicate efficiently with you.

Also feel free to contact us with any suggestions for improvements in the software on the same email address. Your feedback is greatly appreciated.



## 9 Known issues

- Freeze frame functionality is not guaranteed on all ECUs
- Communication with Hyundai Trajet 1999-2000 Gasoline 2.0 DOHC engine is not possible.
- Communication with Hyundai SantaFe 2001-2006 ABS 2WD control unit is not stable.

## **10 Planned improvements**

The following improvements of user interface are planned for next release:

- Font size change option
- Screenshot to PDF or PNG
- Improved live data display
- Metric and imperial conversion
- Connection to online services