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KIA

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# APPLICATIONS

# A

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RIO	ADC110-B / ADC132
SEPHIA	ADC110-B / ADC132
SHUMA	ADC110-B / ADC132
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OPTIMA/MAGENTIS	ADC110-B / ADC132
ELAN	ADC110-B / ADC132
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TOWNER	ADC110-B / ADC132
PREGIO	ADC110-B / ADC132
FRONTIER	ADC110-B / ADC132
PICANTO	ADC110-B / ADC132
AMANTI	ADC110-B / ADC132

**Note:** Use ADC132 if there is a 20 pin socket fitted in the engine bay.

# GENERAL OPERATION

# B

## INTRODUCTION

The Kia Immobiliser system called the SMARTRA manufactured by Bosch consists of the SMARTRA ECU which has its own CPU which controls the vehicles immobiliser in conjunction with the engine management ECU.

There are 3 basic systems used on the range of vehicles :-

### *SYSTEM 1*

*BLACK key system—TEXTON Read only key head*

Minimum keys required for programming 2.

Maximum keys programmed 5.

### *SYSTEM 2*

BLUE key system—ENCRYPT key system

Minimum keys required for programming 2.

Maximum keys programmed 4.

### SYSTEM 3

GREEN key system—SHINCHANG ENCRYPT

Minimum keys required for programming 2.

Maximum keys programmed 4.

## **PIN CODE ENTRY**

On earlier vehicles the pin code is a 4 digit code, which is standard and set to 2345.

On later systems the pin code can be either:

- a) 6 digit code, and available from the dealer.
- b) 5 digit code, which is the last 5 digits of the chassis number.
- c) Converted from the chassis number. See Pin Code Converter in the Special Function section.

# SPECIAL FUNCTIONS



## KEY PROGRAMMING—SYSTEM 1

### DIAGNOSTIC MENU

ECU IDENTIFICATION  
FAULT CODES  
SPECIAL FUNCTIONS

From the main DIAGNOSTIC MENU select the SPECIAL FUNCTIONS.

**PRESS ENTER KEY**

### DIAGNOSTIC MENU

> PROGRAM KEYS  
> CLEAR KEYS  
> KEYS PROGRAMMED

Select PROGRAM KEYS.

**PRESS ENTER KEY**

SECURITY CODE

-----

Enter security code.

NOTE : This code is normally 2345

NOTE 2 : If this is incorrect then the dealer who supplied the vehicle may have changed it. If this is so, please contact the dealer.

SECURITY CODE

2 3 4 5

IS THIS CORRECT  
OK = ENTER CLEAR =BACK

If key programming is successful, then procedure complete is displayed.

PROCEDURE COMPLETE

NOTE : REPEAT PROCEDURE FOR ALL ADDITIONAL KEYS REQUIRED.

# SPECIAL FUNCTIONS

# C

## KEY CLEARING—SYSTEM 1

### DIAGNOSTIC MENU

- > PROGRAM KEYS
- > **CLEAR KEYS**
- > KEYS PROGRAMMED

Select CLEAR KEYS from SPECIAL FUNCTIONS menu.

### PRESS ENTER KEY

Enter security code.

### SECURITY CODE

-----

NOTE : This code is normally 2345

NOTE 2 : If this is incorrect then the dealer who supplied the vehicle may have changed it. If this is so, please contact the dealer.

### SECURITY CODE

2 3 4 5

IS THIS CORRECT  
OK = ENTER CLEAR =BACK

### PROCEDURE COMPLETE

When all keys are cleared PROCEDURE COMPLETE will be displayed.

# SPECIAL FUNCTIONS

# C

## KEY PROGRAMMING—SYSTEM 2

### DIAGNOSTIC MENU

ECU IDENTIFICATION  
FAULT CODES  
**SPECIAL FUNCTIONS**

From the main DIAGNOSTIC MENU select the SPECIAL FUNCTIONS.

**PRESS ENTER KEY**

### DIAGNOSTIC MENU

> **PROGRAM KEYS**  
> KEYS PROGRAMMED  
> LIMP HOME MODE

Select PROGRAM KEYS.

**PRESS ENTER KEY**

**SECURITY CODE**

-----

Enter 6 digit security code.

**SECURITY CODE**

1 2 3 4 5 6

**IS THIS CORRECT**  
**OK = ENTER CLEAR =BACK**

NOTE : The 6 digit code is available from the vehicle dealer.

**SWITCH IGNITION ON**  
**AND THEN PRESS ENTER**

Switch IGNITION ON and press the **ENTER** key.

# SPECIAL FUNCTIONS

# C

## KEY PROGRAMMING—SYSTEM 2

PROGRAM KEYS  
INSERT NEXT KEY  
& THEN PRESS ENTER

The key in the ignition will be added to the system.

To program additional keys press the **ENTER** key, or **BACK** to exit programming.

PROGRAM KEYS  
PROCEDURE COMPLETE

If **ENTER** is pressed then additional keys can be programmed.

Repeat for all additional keys.

If **BACK** is pressed and all keys have been programmed the **PROCEDURE COMPLETE** is displayed.

## LIMP HOME MODE—SYSTEM 2

### DIAGNOSTIC MENU

ECU IDENTIFICATION  
FAULT CODES  
**SPECIAL FUNCTIONS**

From the main **DIAGNOSTIC MENU** select the **SPECIAL FUNCTIONS**.

**PRESS ENTER KEY**

Select **LIMP HOME MODE**.

### DIAGNOSTIC MENU

> PROGRAM KEYS  
> CLEAR KEYS  
> **LIMP HOME MODE**

Insert security code 2345 and this will enable one start to get the vehicle to a dealer or workshop if further testing is required.

**PRESS ENTER KEY**



# SPECIAL FUNCTIONS

# C

## PIN CODE CONVERTER

### DIAGNOSTIC MENU

EURO  
USA  
KIA SYSTEMS

From the main DIAGNOSTIC MENU select the KIA SYSTEMS.

**PRESS ENTER KEY**

### DIAGNOSTIC MENU

PINCODE  
TYPE 1  
TYPE 2  
TYPE 3  
TYPE 4

Select PINCODE.

**PRESS ENTER KEY**

PINCODE CONVERTER

Press the **ENTER** button

**PRESS ENTER KEY**

SECURITY CODE

1 2 3 4 5 6

IS THIS CORRECT  
OK = ENTER CLEAR =BACK

Insert the last 6 digits of the VIN or CHASSIS number.

Then press **ENTER**

VIN TO PINCODE

PLEASE WAIT

.....

Please wait for program to convert the number, this will take 5 minutes.

The 6 digit Pin code will then be displayed for use on key programming.

VIN TO PINCODE

PIN : 582656

**NOTE : This will use a token.**

## TIPS & HINTS

When programming keys, please note the following:

1. The transponder aerial has a resistance of 21.5 Ohms
2. The immobiliser control unit does not return any information to the tester about the key programming procedure, therefore it is possible to input an incorrect security code and continue through the programming procedure.
3. When programming a key, the horn will sound for 0.2 second to signify the key programming action.
4. Once the first key has been programmed you should turn the ignition on with a second key and wait for 10 seconds, the horn should again sound- if it doesn't, switch on the HRW (Heated Rear Window Switch) to complete the programming phase.
5. NOTE :-2 keys must be programmed to close the procedure.
6. On Hyundai & Kia vehicles the Clutch must be depressed to start the vehicle.
7. The cooling fan may run on some vehicles when the TESTER is connected.
8. Damage to the immobiliser control unit if the incorrect transponder is used. Crypto transponders are used.
9. A minimum of 2 keys must be programmed to close the system.

### PIN CODE CHANGES

On the vehicles listed below, the immobiliser code will be the last 5 digits of the chassis number except if there is a zero, in which case it (the zero) will be changed to a 1 (one) :-

**Mentor 2 from Ch no Y5611567 to Y5612159**  
**Shuma from Ch no X541438 to Y5420580**  
**Clarus from Ch no Y5623152 to Y5623519**  
**Sportage from Chassis number X5441627 to Y54439004**

On the vehicles listed below, the immobiliser code will be the last 5 digits of the chassis number except if there is a zero, in which case it (the zero) will be changed to a 2 (two)

**Pride from Ch no YK267870**  
**Mentor 2 from Y5612160**  
**Shuma from Ch no Y5420581**  
**Clarus from Ch no Y5623520**  
**Sportage from Ch no Y5443905**  
**Sedona from Ch no Y6104205**  
**Carens up to 2003**  
**Rio all models**

On Sedona models from Ch no Y6111120 to Y6118310 the zero remains a zero.