

33

VW

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AUDI

SEAT

SKODA

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# APPLICATIONS

# A

VEHICLE	IMM	IMM + INSTR	YEAR	CABLE
<b>AUDI</b>				
A2	Y	Y	ALL MODELS	ADC110-B
A3/A4	Y	Y	ALL MODELS	ADC110-B
A6	Y		< 96	ADC112
A6		Y	> 96	ADC110-B
A8	Y		< 96	ADC112
A8		Y	> 96	ADC110-B
COUPE	Y		< 97	ADC112
80/90	Y		< 97	ADC112
TT		Y	ALL MODELS	ADC110-B
<b>SEAT</b>				
ALHAMBRA	Y		ALL MODELS	ADC110-B
AROSA		Y	ALL MODELS	ADC110-B
ALTEA	Y		ALL MODELS	ADC110-B
CORDOBA	Y		ALL MODELS	ADC110-B
IBIZA	Y	Y	ALL MODELS	ADC110-B
INCA	Y		ALL MODELS	ADC110-B
LEON	Y		ALL MODELS	ADC110-B
TOLEDO	Y	Y	< 97	ADC112
TOLEDO	Y	Y	> 98	ADC110-B
<b>SKODA</b>				
OCTAVIA		Y	ALL MODELS	ADC110-B
FABIA	Y		ALL MODELS	ADC110-B
FELICIA		Y	ALL MODELS	ADC110-B
SUPERB	Y		ALL MODELS	ADC110-B
<b>VW</b>				
BORA	Y		ALL MODELS	ADC110-B
LUPO	Y		ALL MODELS	ADC110-B
CADDY	Y		ALL MODELS	ADC110-B
GOLF	Y		< 95	ADC112
GOLF		Y	> 95	ADC110-B
PASSAT		Y	ALL MODELS	ADC110-B
NEW BEETLE		Y	ALL MODELS	ADC110-B
PHAETON		Y	ALL MODELS	ADC110-B
POLO	Y	Y	ALL MODELS	ADC110-B
SHARAN	Y		ALL MODELS	ADC110-B
TRANSPORTER	Y	Y	ALL MODELS	ADC110-B
TOURAN		Y	ALL MODELS	ADC110-B
VENTO	Y		ALL MODELS	ADC110-B

VEHICLE	CAN SYSTEM	INFORMATION	YEAR	CABLE
<b>AUDI</b>				
NEW A3	Y	8P CHASSIS	2005 >	ADC110-B
NEW A4	Y	8E CHASSIS	2005 >	ADC110-B
NEW A6	Y		2005 >	ADC110-B
NEW A8	Y	4E CHASSIS	2005 >	ADC110-B
<b>SEAT</b>				
NEW ALTEA	Y		2005 >	ADC110-B
<b>SKODA</b>				
NEW OCTAVIA	Y		2005 >	ADC110-B
<b>VW</b>				
GOLF 5	Y	1K CHASSIS	2005 >	ADC110-B
TOURAN	Y	1T CHASSIS	2005 >	ADC110-B
NEW CADDY	Y	2K CHASSIS	2005 >	ADC110-B

# GENERAL OPERATION

# A

## SYSTEM DESCRIPTION

The VAG group immobiliser system consists of an immobiliser ECU which controls the recognition of keys and the Engine Management ECU system.

The Immobiliser ECU enables up to 8 keys to be programmed and are recognised via the transponder aerial mounted around the Ignition lock.

If the keys are lost or a replacement Engine Management ECU is fitted then the transponder keys will need programming so that the ECU memories recognise the codes.

## PASS CODE

The pass codes are now being refused by VW and AUDI dealers which is causing major issues for customers and other diagnostic users. If you do get a 7 digit code, this can be converted using the FREE 7 to 4 digit converter on our web site.

If you have Pin code extraction software, you may also be able to read the 4 digit code from the ECU memory, further work and development on this is on an ongoing basis.

## SYSTEM IDENTIFICATION

To identify the correct system, check to see whether the Dashboard has the following symbol when the ignition is on :



**SYSTEM 1 : DOES NOT HAVE THE SYMBOL**

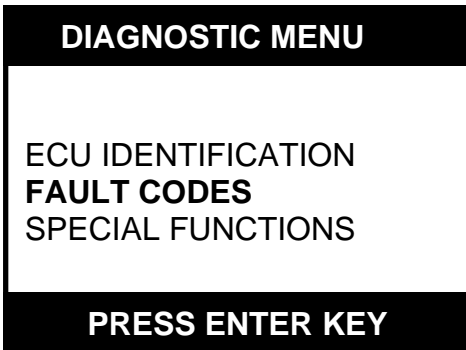
**SYSTEM 2 : DOES HAVE THIS SYMBOL**



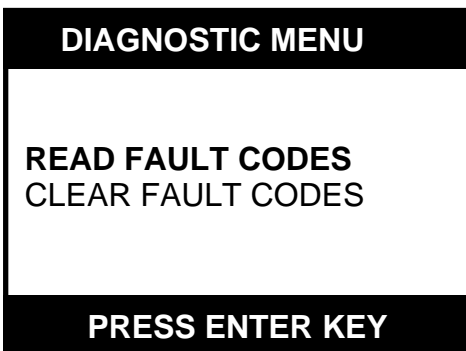
# FAULT CODE OPERATION

# B

## READING FAULT CODES

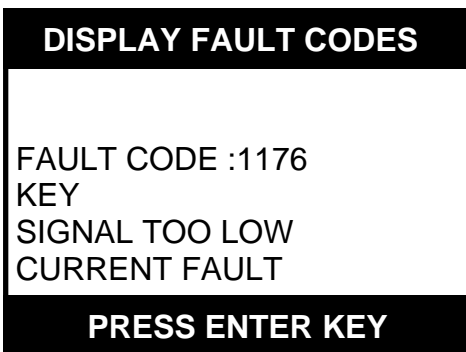


Using the **UP** and **DOWN** keys select the **FAULT CODES** selection. Then press the **ENTER** key.

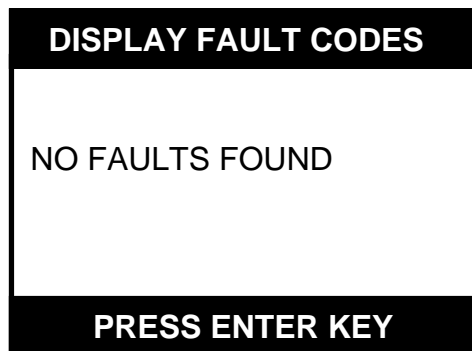


Using the **UP** and **DOWN** keys select the **READ FAULT CODES** selection. Then press the **ENTER** key.

Depending on how many fault codes are set, will depend on how many screens are displayed, however two examples are shown below.



## CLEARING FAULT CODES



# FAULT CODE OPERATION

# C

## DIAGNOSTIC MENU

READ FAULT CODES  
CLEAR FAULT CODES

PRESS ENTER KEY

Using the **UP** and **DOWN** keys select the **CLEAR FAULT CODES** selection.

Then press the **ENTER** key.

## CLEAR FAULT CODES

PROCEDURE COMPLETE

PRESS ENTER KEY

If all the fault codes have been cleared the screen will display **PROCEDURE COMPLETE**.

# SPECIAL FUNCTIONS

# D

## PROGRAMMING KEYS

### ECU IDENTIFICATION

SYSTEM 1  
> SYSTEM 2

PRESS ENTER KEY

Using the **UP** and **DOWN** arrows select the correct vehicle system as outlined in the previous section.

Then press the **ENTER** key.

PLEASE WAIT  
TRYING TO COMMUNICATE

The tester will try to establish communications with the Immobiliser ECU.

If it is unsuccessful try the other system as outlined in the previous section.

### ECU IDENTIFICATION

IMMO-IDENTNR  
: VWZ720W049  
5589

PRESS ENTER KEY

If successful the ECU identification will be displayed. An example is shown.

**NOTE** : This is the 14 digit code required by VAG to obtain the 4 digit security access code if not available.

### DIAGNOSTIC MENU

ECU IDENTIFICATION  
FAULT CODES  
SPECIAL FUNCTIONS

PRESS ENTER KEY

Select **SPECIAL FUNCTIONS** from the Diagnostic Menu using the **UP** and **DOWN** arrows.

Then press the **ENTER** key.

### DIAGNOSTIC MENU

PROGRAM KEYS  
KEYS PROGRAMMED

Select **PROGRAM KEYS**.

Press the **ENTER** key

# SPECIAL FUNCTIONS

# D

SECURITY CODE

----

Enter the 4 digit security code.

SECURITY CODE

1 2 3 4

IS THIS CORRECT

**NOTE :** You are allowed 3 attempts to enter the correct code. If the code is entered incorrectly 3 times the ECU will lock out communication for 35 minutes. To reset the ECU the ignition must be left on for 35 minutes without any interruptions.

PLEASE WAIT  
TRYING TO COMMUNICATE

If code is correct press the **ENTER** key. If code is entered incorrect then press the **BACK** key to reset the code.

KEYS PROGRAMMED : 3  
TOTAL KEYS REQUIRED :

The tester will now establish communication again to check whether the code is correct.

PROGRAMMING KEYS  
TOTAL KEYS REQUIRED : 3

If the code is correct the tester will display how many keys are programmed into the system.

PRESS ENTER KEY

Enter the required number of keys to be programmed.

PLEASE PROGRAM  
ADDITIONAL KEYS

**NOTE :** All programmed keys will be erased, so any existing keys available will need to be re-programmed.

PRESS ENTER KEY

Press the **ENTER** key.

The tester will now enable programming of existing and new keys.



## PROGRAMMING ADDITIONAL KEYS (Contd)

### Procedure

1. The Key already in the ignition will now be programmed, ie. Key 1
2. Remove Key 1.
3. Insert Key 2 and turn ignition on. for 2 seconds. Then remove key
4. Insert Key 3 and turn ignition on. for 2 seconds. Then remove key
5. Repeat for all keys.
6. Try all the keys to ensure they work.
7. Check for any fault codes that may have been set, and clear the memory.

NOTE : The maximum number of keys that can be programmed is 4.

# SPECIAL FUNCTIONS

# D

## PROGRAMMING KEYS (CAN BUS SYSTEMS)

### ECU IDENTIFICATION

IMMOBILISER  
PLIP FUNCTIONS  
AUTO GEARBOX  
PROGRAM ECU  
PIN CODE READING

**PRESS ENTER KEY**

To select VAG CAN bus systems, select Immobiliser from main menu.

### VEHICLE MENU

SYSTEM 1  
SYSTEM 2  
**VAG CAN**

The systems list will appear and select the VAG CAN system.

NOTE : This will only be displayed if you have purchase the VAG CAN BUS update. If not please contact your distributor.

SWITCH IGNITION ON

Switch IGNITION ON and it will attempt to communicate with the vehicle.

**PRESS ENTER KEY**

PLEASE WAIT  
TRYING TO COMMUNICATE

### ECU IDENTIFICATION

ID : 1K0 920 972 B

If OK, the ECU identification will be displayed.

**PRESS ENTER KEY**

# SPECIAL FUNCTIONS

# D

## PROGRAMMING KEYS (CAN BUS SYSTEMS)

### DIAGNOSTIC MENU

SECURITY ACCESS  
ERASE KEYS  
KEY PROGRAMMING  
KEY COUNT

Select SECURITY ACCESS .

### PRESS ENTER KEY

SECURITY CODE

Enter the security code

-----

SECURITY CODE

1 2 3 4

IS THIS CORRECT  
OK=ENTER CLEAR=BACK

SECURITY ACCESS

ACCESS GRANTED

If the PIN CODE is OK, then ACCESS GRANTED will be displayed.

### PRESS ENTER KEY

## OTHER FUNCTIONS

ERASE KEYS = Will erase ALL Keys

KEY COUNT = Will display number of keys programmed.

# SPECIAL FUNCTIONS

# D

## PROGRAMMING KEYS (CAN BUS SYSTEMS)

### DIAGNOSTIC MENU

SECURITY ACCESS  
ERASE KEYS  
**KEY PROGRAMMING**  
KEY COUNT

Select KEY PROGRAMMING .

### PRESS ENTER KEY

NUMBER OF KEYS

—

Insert the number of keys that are required to be programmed.

NUMBER OF KEYS

2

Confirm number of keys are OK.

OK=ENTER CLEAR=BACK

PLEASE WAIT

PROCEDURE COMPLETE  
PLEASE CYCLE ADDITIONAL  
KEYS

If all OK, the key in the ignition will be programmed and additional keys need to be cycled in the ignition to program.

### PRESS ENTER KEY

# SPECIAL FUNCTIONS

# D

## PIN CODE READING

Blank area for PIN code reading.



# SPECIAL FUNCTIONS

# D

## ECU CODING

### VEHICLE SELECTION

> PROGRAM ECU

Select PROGRAM ECU from the vehicle selection menu.

**PRESS ENTER KEY**

### VEHICLE SELECTION

> SYSTEM 1  
> SYSTEM 2

Select the required system.

**PRESS ENTER KEY**

**PLEASE WAIT  
TRYING TO COMMUNICATE**

### DIAGNOSTIC MENU

ECU IDENTIFICATION  
FAULT CODES  
**SPECIAL FUNCTIONS**

**PRESS ENTER KEY**

### ECU IDENTIFICATION

> PROGRAM ECU

**PRESS ENTER KEY**

# SPECIAL FUNCTIONS

# D

## SECURITY CODE

1 2 3 4

IS THIS CORRECT  
OK=ENTER CLEAR=BACK

You will be asked to enter the 4 digit security code to enable Program ECU.

## SYSTEM 1

Goes straight into learning process as no vehicle selection needed. User will see text "READING ECU DATA" and "SAVING ECU DATA" FLASH on screen as process is carried out. If successful this screen is displayed.

RECODE ECU/IMMO  
SUCCESSFUL

PLEASE TURN OFF  
IGNITION FOR 15 SECS

**PRESS ENTER KEY**

RECODE ECU/IMMO  
FAILED

If not successful screen displayed is shown.

**PRESS ENTER KEY**

RECODE ECU/IMMO  
VEHICLE SELECTION  
1: AUDI  
2: VW  
3: SEAT  
4: SKODA  
PRESS BACK TO EXIT

If **AUDI** selected then the following procedure will be followed.

If any other selection is made then the coding routine **System 1** will be executed (as above).

**PRESS ENTER KEY**

RECODE ECU/IMMO  
SUCCESSFUL

PLEASE TURN OFF  
IGNITION FOR 15 SECS

**PRESS ENTER KEY**

## AUDI SELECTED

RECODE ECU/IMMO  
FAILED

If not successful screen displayed is shown.

**PRESS ENTER KEY**

## VW-AUDI-SEAT-SKODA

1. When reading Pin codes from vehicle memory, if loss of communications is experienced, try reading fault codes, then clearing fault codes then read the pin code.
2. If when programming keys, the tester displays the following :—

### **KEYS PROGRAMMED : 136**

This means the incorrect PIN CODE has been entered.

### **KEYS PROGRAMMED : 0**

3. This means that the PIN CODE has been entered incorrectly more than three times, and the system will need resetting by leaving the ignition ON for 35 minutes.
4. PIN code reading cannot be immediately followed by coding a key. You must first disconnect the tester and turn ignition on first.
5. Immobiliser warning light on all the time (engine starts and runs) - a correct security code has been entered but the session has not been closed by programming the keys.

## **EMERGENCY START**

1. Switch IGNITION ON and turn the clock set button to the right and at the same time press and hold the trip reset button for 1 second.
2. "0000" appears on the display, press the trip button to input the first digit of the pin code. Turn the clock set button to the right to move to the next digit. Repeat for all 4 digits.
3. Then with the correct pin code entered turn the clock set button to the right and press the trip reset button for 1 second.
4. The Immobiliser light will stay on, and the car can run for 45 minutes.



## VW-AUDI-SEAT-SKODA

### Damage to Tester

Some cases of internal damage to the tester have been traced to a radio wiring fault on VAG vehicles.

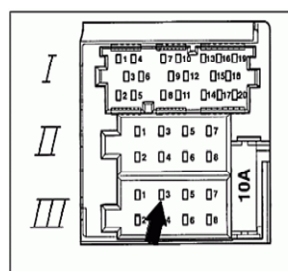
VAG cars from 1997 onwards have the ability to code/fault code read the radio and therefore the diagnostic wire or K line that is used to connect all of the control units on the car (including the immobiliser) goes to the radio. If an aftermarket radio has been fitted, it is possible that this K line may have inadvertently been shorted to 12v by the after-market adapter harness. This will not cause any running faults etc with the vehicle, but when you come along and plug in your tester it will fail to communicate and can end up permanently damaged.

To test for this problem on vehicles later than 1996, either use a multimeter carry out the following or use ADC116:

Measure the voltage on pin 7 relative to earth with the ignition and radio on, if it's below 9 volts then you are OK to connect the tester, if it is 12 volts you will need to wire a bulb up between earth and pin 7. If the bulb does not illuminate it is OK to proceed with the tester, however if it illuminates then you have a wiring fault to the radio DO NOT CONNECT THE AD 100!!!!



- 4 - Ground / Masse
- 7 - K-Line
- 15 - L-Line
- 16 - +12 (Vbatt)



#### Service

- Prior to connecting a VAG 1551/1552 scan tool to a vehicle, check the vehicle radio.

If the radio is not the correct radio for the vehicle:

- ◀ - Remove the radio and make sure that the (DLC) K wire (location 3) -arrow- in the radio wiring harness Black 8 Pin multi-connector III -T8 has been removed from the connector and taped back to the harness.

## ***Remote Control Programming (1997 ON)***

### *Procedure*

1. Switch Ignition ON and leave the key in the ignition.
2. Mechanically lock the vehicle using the Drivers door using a second key.
3. Using the remote control press the Unlock button once, and the horn will sound once.
4. Wait 6 seconds and press the unlock button once to activate the coding procedure. The remote control will now be programmed.

NOTE : When performing programming on additional remotes the procedure is the same, except you press the unlock button 2, 3 or 4 times for the different remote.

For example : If programming 2 remotes press the unlock button twice with a 1 second interval between each press, repeat for 3 and 4 remotes.

5. Switch Ignition OFF.
6. Remove key from ignition and check for operation.
7. The coding procedure can be repeated up to 4 times for additional remotes.
8. The ignition must be switched OFF between programming each remote control.

## ***Remote Control Erasing (1997 ON)***

### *Procedure*

1. Switch Ignition ON and leave the key in the ignition.
2. Mechanically lock the vehicle using the Drivers door using a second key.
3. Press the remote control lock button 5 times in 1 second intervals. A short horn will sound.
4. Wait 6 seconds and press the unlock button once to activate memory erase.
5. Switch ignition OFF, all remotes are now erased.

## *Remote Control Synchronisation (VAG CAN Vehicles)*

### *Procedure*

1. Open the car using the drivers door.
2. Press the remote control **unlock** button once.
3. Put the key into the ignition and switch on.
4. Switch ignition off and remove the key.
5. Press a button on the remote control.
6. Procedure Complete